QPR 2012

Quality in Postgraduate Research

10th

QUALITY IN POSTGRADUATE RESEARCH CONFERENCE:

Narratives of Transition:
Perspectives of Research Leaders, Educators & Postgraduates

17-20 April 2012
Stamford Grand Adelaide,
South Australia

www.qpr.edu.au/2012

Conference Proceedings • *Edited by Margaret Kiley*

QUALITY IN POSTGRADUATE RESEARCH

Narratives of Transition:
Perspectives of Research Leaders, Educators and Postgraduates

PROCEEDINGS OF THE 2012
QUALITY IN POSTGRADUATE RESEARCH CONFERENCE

Adelaide, Australia

April 17-19
2012

Edited by
Margaret Kiley

PUBLICATION INFORMATION:

ISBN: 978-0-646-57957-3

Published by: The Centre for Higher Education, Learning and Teaching. The Australian National University. Canberra

Format and layout: Michael Tornabene

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Editorial

MARGARET KILEY
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Australia

Regular participants at the QPR conferences would be aware that there has usually been a specific national or international development in research education that has been the focus of the conference. For example, the first conference in 1994 related to the introduction in Australia *of the quality agenda, hence the name of the conference. Then in the late 1990s, the agenda* related to the changes in funding research education through the Research Training Scheme. However, for this year's conference the organisers chose the more general theme of Narratives of Transition: Perspectives of Research Leaders, Educators and Postgraduates. This theme might suggest two things. Firstly that there was no specific agenda or secondly that there are so many current agendas in research education that there were too many to select just one, hence the focus on transition and perspectives. You might draw your own conclusions as you read the papers included in these proceedings.

One thing that the 2012 conference had in common with previous conferences was the quality of the international speakers invited to address participants. This year we were very fortunate to have two speakers: Professor George Walker and Professor Eli Bitzer. Professor Walker, previously Director of the Carnegie Initiative on the Doctorate, walked us through the development and implementation of the Carnegie project and encouraged us to consider similar activities. Professor Bitzer from Stellenbosch University, South Africa took us through a vivid portrayal of education in southern Africa and the various achievements and challenges facing the education systems in those countries, particularly South Africa.

Again Alistair McCulloch managed to enlighten and entrain us with a hypothetical this time on university management, and again based at Arkaroola University. He had a very informative panel including:

- Terry Evans (School of Education) Deakin University
- Max King (Pro Vice-Chancellor Research and Research Training), Monash University
- Joe Luca (Dean of the Graduate Research School), Edith Cowan University
- Michelle Picard (Director, Researcher Education & Development), University of Adelaide
- Laura Poole-Warren (Dean of Graduate Research), UNSW
- Chamonix Terblanche, National President of the Council of Australian Postgraduate Associations (CAPA)

Again the conference attracted a number of international participants and presenters including from New Zealand, South Africa, Nigeria, UK, Denmarks, China, and USA.

The proceedings are formatted with the keynote/plenary addresses first followed by refereed papers, unrefereed extended abstracts and abstracts. Refereed papers have undergone peer review as outlined at the commencement of this document. Other than those who had been informed that their paper had been accepted as a refereed manuscript, presenters were invited to take their abstract and to revise it either as an unrefereed paper or extended abstract. For those who chose neither of these options, we were able to include their original abstract. The papers, extended abstracts and abstracts are published in alphabetical order.

As always it is fascinating to look at the major themes addressed in the conference papers and to note the steady increase in the number of research-based papers.

Papers related to research supervision were among the most common, along with papers on quality assurance and management. In one sense, this emphasis on supervision and quality is not surprising given the aims of the conference. Also, given the developments in many countries related to employability and skill development, it is probably not surprising that the third most common topic for papers related to employability issues. For example, the paper by Schaffarczyk and Connell addresses skill development and employability by surveying a number of Australian universities regarding the programs that they offer their candidates. Maguire and Torrie, on the other hand, outline the program designed by the Australian Technology Network of universities. From a different perspective, Hargreaves and Walsh provide insight into the employability agenda in the UK.

In a similar vein, a topic discussed by a number of presenters was coursework, but in this case not specifically related to employability skills but rather to areas such as research methods and various research training programs. As examples, Tuovinen and Buxton describe the particular courses introduced at Tabor College, and McCulloch and Weinstein describe the 'engaged PhD' at the University of South Australia.

Papers on writing were also quite common, and if papers that adopted a narrative approach are included in this category, then they should be positioned above coursework in terms of frequency. Writing has been a common theme from the early days of the conference; however, in the early days the work was often in relation to working with international candidates who had difficulty with writing. In the 2012 conference, the papers have a focus on the importance of peers in developing writing skills. For example, the paper by Yusoff and Behrend explains the value of writing circles and Gregoric and Wilson explain how working as peers in a writing group was enormously helpful in their development as researchers.

Given the sub-title of the conference, it is not surprising that a number of papers had the term 'narrative' in the title or adopted a 'narrative' approach: most of them were also narratives of candidate and/or supervisor experiences. For example, Bowden et al used narratives to examine the various perspectives of candidates, supervisors and editors and Fadliadi, Habiburrahim and Bartholomaeus wrote regarding their experiences as candidates (and supervisor). Nguyen presented a narrative of her journey from lecturer in her home country to research candidate in Australia. In a different vein, Symons had two papers related to the analysis of narratives as a means of evaluation.

A final group of papers provide some insights into current debates in doctoral education, for example: the use of technology; monitoring progress and providing feedback; risk; and issues related to the disciplinary and multidisciplinary nature of doctoral education.

Organising a conference is never an easy task and this one had an additional challenge in that for personal reasons the Chair, Professor Tania Aspland from the University of Adelaide had to hand over to Professor Alistair McCulloch from the University of South Australia only a matter of weeks prior to the conference. Members of the committee and the conference organiser worked hard to ensure that the event progressed without a hitch. The staff, particularly the technical staff, at the Stamford Grand assisted in the smooth running of the conference as did many of the 'old hands' at the conference who made sure they introduced some of the newer participants to others.

A particularly exciting development was the creation of the Doctoral Writing Special Interest Group (SIG). Sincere thanks to Claire Aitchison for this excellent initiative. Certainly this marks a new development for QPR and hopefully is the beginning of a number of other SIGs.

The conference evaluation gave the Conference Committee a number of issues to consider for the future. One in particular relates to the different of the participants, who include for example both administrators to researchers. The suggestion is that the program give more details about the papers being presented, including by providing the abstracts in advance of the conference.

The Conference Committee is meeting soon after these proceedings are published to decide on dates for the 2014 conference, although they have already decided that it will be in Adelaide and so details will be forthcoming through the QPR Mailing List (see http://qpr.edu.au/?page_id=6804).

One person I anticipate will definitely be attending in 2014 is Sofie Kobayashi whose poster *Supervisors' approaches to supervision and how these relate to conceptions of research* (with Østerberg Rump and Brian Grout) won the conference poster award which is free registration for the next conference. Congratulations Sofie and team!

Keynote Addresses

Lessons from the Carnegie Initiative on the Doctorate

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Thank you very much. It's a great pleasure to be here. I especially want to thank Margaret Kiley and the organising committee for inviting me.

I know enough about the field we're going to talk about today to know that, generally speaking, many of you in the audience are extraordinarily accomplished and are ahead of the curve in many of the things that we're going to be talking about compared to, let's say, the United States. Sometimes it's not a curve, it's a spike. It's not a hurricane, it's an earthquake. It's hard to be ahead of the spike or the earthquake.

I do want to focus just a little bit on student learning; a little more than, maybe, we're used to. The other night, at 9:30pm in Los Angeles Airport, I was getting ready to board a flight to come to Sydney. I left at 11pm.

Two fellows came over to see me—young men in their middle 60s. They were very informally dressed, very burly fellows in shorts. They took their shoes off and so were bare footed. One of them had a mandolin and the other one a ukulele, and they started to play in the airport.

I was about five feet, away from them. I was encouraging this wonderful spectacle. Like many of you, I love music. They were playing away and making an otherwise drab experience, getting ready to go across the seas in an airplane, endurable.

People were clapping after a while in the airport for these two Australians that were playing the music. Then two ladies came over and said keep it down, you're making a spectacle of yourself. That would be the spouses.

I was wondering—because I've experienced this situation. But of course, spouses are always right. Then a little boy and his parents came over. It turned out they were from New York City; looked very wealthy; looked very educated as a family. The little boy was about six, seven, eight.

This one fellow who was playing, I think, the tenor ukulele, spotted a ukulele case that the little boy was carrying. It turned out they'd just bought this ukulele for him recently, probably one of the more modest ukuleles you would ever see.

The gentleman motioned him over, tuned the ukulele, and for the next half hour gave him a master lesson for a person who had never played the ukulele before, in front of us all. I have to tell you that everybody—spouses included—were very moved to watch this gentleman take this novice and gently move the fingers, encourage, give insights, look at the parents knowingly every once in a while, look at the child and teach him. It was an incredible teaching moment and it was an incredible mentor/student moment that brought everyone together in a way that I believe most of us who were there will remember for a very long time.

I've seen that happen before, where you have a learning or teaching moment between a mentor and a student that transcends all of the issues of class, economics, country, everything, because there's something extraordinarily, my opinion, something extraordinarily sacred about learning, about the experience when information and wisdom, in some cases, knowledge, is transferred from generation to generation. It's something we all have a common cause in and it's something that all of us that are in this room have, essentially, dedicated our lives to improving, and

studying, and enhancing. It is, I think, in the human condition, for me, one of those sacred things that we can do.

Now, I want to destroy any image you have that I have any competence at all by saying a little bit about myself as a little boy. Then we'll get on to the real work here.

I was, perhaps a strange little kid, we lived on a farmlet for a while. Let's say I'm about five or six years old; no other kids around; no television. The radio's got one station, very boring. There was really nothing to do, a boy and his dog.

Part of my job was to take care of the pigs. Our family was not a sophisticated family. I'm the first one to go beyond the eighth grade in my family, so it was a pretty simple but a wonderful situation. Now, the pigs were really smart: a little hole in the fence and those pigs were out of there; and guess who had to catch them. So I went to my dad and I said: “Daddy, pigs are really smart.” My dad said: “No son, pigs are animals. Animals cannot be smart. They have instinct. Only people can learn.”

I thought about that. Now, my dad had been wrong about Santa Claus, the Easter Bunny, a lot of other big universal things, so I wasn't so sure. I wanted to make sure, since this seemed to be a human thing, that I was learning and it wasn't just instinct; because I didn't have the words. I didn't think about it like I'm saying it now. Basically, I didn't want it to be something that I was just programmed to do and I wasn't really learning. I wanted it to be learning, value added. I don’t know why.

So I would go around, and whatever my dad or mom taught me I would try to figure out if I'd learned it or if it was just instinct, a real neurotic kid. So, I made up a rule. I didn't have the right words then, again, but the idea was if I could use it in an entirely different way, entirely different circumstance than my daddy or mom taught me, then maybe I've learned it. That was my little rule of thumb. Again, I didn't have quite the vocabulary for that.

So you can imagine this little kid going around, trying to apply things in entirely different ways when he's learned something from his parents. That's part 1.

Part 2 - since there was nothing else to do and it was hot and there was no air conditioning and no entertainment, when it got time to go to sleep at night I had these five or six ongoing daydreams. I would decide which channel I was going to watch. That is, which daydream a boy and his dog, a boy out west and all that kind of stuff. I would turn it on and listen to it, if you like, because your subconscious has its own way of doing things and it's like I was watching a story. That's how I'd go to sleep at night.

I probably did this for three or four years. Now, the reason I mention this is because, as you see when we come back to certain things associated with learning and with the kind of work we're doing at the frontiers of knowledge, the idea of daydreaming, of visioning, and the idea of using something in an entirely different way to assess the degree to which we've learned it can be very useful, and probably plays into my supposedly more sophisticated learned ways of doing things now.

It was probably in the years between I was five to eight I formed the basis for two thirds of everything I'm going to tell you now, from things that are my experience.

One of the things that I tell people with regard to the PhD is that you have to take some of these characteristics I was talking about, and be able to use things in entirely different ways and finally don’t expect somebody else to be able to learn from you unless you have learned something from yourself. You've got to be an auto-teacher first.

If you expect people to follow you and to be disciplined in certain ways, then it is important for you to have been able to change your life with regard to some things that you know you should change. If you can't lead yourself how you can you lead others?

If you haven't gone through that kind of experience with regard to yourself, in terms of what's the most effective way for you to auto teach and lead yourself, then how can you expect to be able to be effective in teaching and leading others?

Even psychiatrists have to go through some sort of experience before they can become therapists. They have to go into therapy themselves. So I would just ask you to think about, first, your own beginnings. What's the equivalent of your pig story and daydreaming yourself to sleep? What important changes have you made in your own life that you would make you credible when you ask other people to follow you? How do you best learn? What are those techniques?

So with that as a background let's get to work. When we first started the Carnegie Initiative on the Doctorate we reviewed about 50, actually it was 60 years of perceived challenges developing the next generation of scholars. There are some things that were in the literature from the time I was born. They tend to be things like the following.

Faculty and students; even though they're working with each other, tend to have cross purposes in the priorities of the interaction. The faculty members, after all, are interested in themselves in many ways, whereas the students, of course, are interested in themselves.

Quality of mentoring; I used to say that the only thing that was more private in the United States, more private than a relationship between a PhD thesis advisor and the students, was the American bedroom. That's not true anymore. The American bedroom is much more public.

So we tend to have this situation of 'there's a bit of the luck of the draw'. We don't get between a faculty member and their student often, or we're reluctant to. They're colleagues, so very uneven mentoring is allowed to exist. Sometimes we get wonderful mentors and sometimes we get, really, people that shouldn't be allowed to endanger the next generation of scholars.

Attrition; Worldwide maybe two out of three who start a PhD finish it. It can vary quite a bit. There's good attrition and bad attrition and all that, but in medical school and in other professional areas two out of three would be a terrible result.

I worry, suppose there was a virus that was killing one out of three people. I would worry about the two out of three that survived but had been scarred by that virus and were passing it on to the next generations.

Diversity; diversity means different things to different people. The wonderful advantage of diversity is that we have a very, very varied intellectual gene pool. So diversity; gender diversity, culture diversity, background diversity, age diversity, disciplinary diversity and diversity in what you've learned and how you've learned it, all those things are extraordinarily important.

Pedagogy of research; There are certain words that, generally speaking, people don't like, pedagogy: assessment: Oh my God, here we go again; Curriculum, strategic planning.

As a Vice-President for Research at several institutions I often say to people if you want to be able to hire faculty or obtain research funds you need to have a strategic plan for your research. Work it out, come to me and we'll see, when you make a request, how it helps your strategic plan. I thought, that would force them to have a strategic plan because they wouldn't get any money. The result was they didn't ask for money anymore.

What are you going to do? (I like to put words that people like next to words that people hate) pedagogy of research. Just when you were about to throw up from pedagogy, research comes in and you're all happy again, you see.

What I mean by the pedagogy of research is how you prepare new people; people who are relatively new in a field so that they will be empowered to be creative in whatever area they're in: scholars, idea leaders, lifelong first learners as researchers. What's your approach? What's your pedagogy of developing the next generation of scholars?

The typical theory we have is osmosis: follow me around, some of it will sink in, you become like me. What a low goal. Become like me, then you can be a PhD and you can do well. Of course if you don't put the right things next to each other, even osmosis doesn't work.

Real world effectiveness; how can many of us know what real world effectiveness is, since we've never been in the real world? So we have to get some help on this. These were some of the motivations for the Carnegie Initiative on the Doctorate.

If some of those things that we mentioned in the slides at the beginning are true, then there will be changes in doctoral education. The question is: are they going to be changes for better or worse? That depends on whether they're changes you want or changes I want. Who's going to make the changes?

Now, let's go back to the ukulele a minute. Somebody could make a rule, and as a result of that rule you wouldn't have any resources, so you couldn't buy a very good ukulele. Somebody might tell you that you need to string the strings on the ukulele differently. They might even try to get you to play certain kinds of music, but once you've been allowed to have a ukulele of some kind, and you have people that want to learn it, then what you do with the student, that moment of intimacy is up to you.

That's the one important thing, when you get down to it. It's the interaction between the mentor and the student that we are in control of; that little piece there, that little intimate piece. That's what we want to get right.

You see, we often talk about technology, making sure that people understand their field, that they can use technology adroitly, that they're articulate in various ways. If you just teach somebody to make a gun, and they use their communication skills to be a propagandist and the gun to be a bully or worse, that's not progress!

You see, there's more to it, as you know, than having somebody be extremely skilled in their discipline and very articulate. There is something else. I'm going to talk about it in terms of being a steward of their discipline.

In the future there will be increased competition for graduate students. It's very interesting: in the United States though, just this last year, we're up about 11 or 12 per cent in applications from all over the world, particularly from China, India, 10 to 18 per cent in almost every discipline.

There will be increased competition in various job markets, more and more, at least in the United States. The new jobs, even in the Academy will not be jobs that are associated with being the kind of scholar that we traditionally were. It's either a lecturer without tenure or a part time instructor. Unfortunately, most of the jobs are not going to be traditional faculty jobs.

Maybe one out of 10 of our students who want to be an academic, will end up at an institution where research will have some relevance to their promotion and tenure and their job situation.

There will be increased competition for resources. There will also be increased information for all stakeholders. Everybody's going to know more about what's going on. That can be good, if you're doing a pretty good job and if the statistics look right compared to what people think ought to look right.

There's going to be increased opportunities for those who can make believable sustained improvement in their doctoral education programs. So what we do now, and the advances you contribute, will be very important in the area of attracting and retaining outstanding students and also getting reasonable first jobs after they graduate from your institution.

Feedback from employers is important, but they often don't know any more about the long than we do. Employers will tell you they want this, this, this and this. Then later, after you talk about it a little more, there are other more fundamental skills that they really are interested in. They just don't want us to spoil them while they're in the Academy.

I was talking to a publishing house leader. He was lamenting that the English majors that were getting PhDs, were spoiled by us in the Academy. The story he told was he had an intern who had worked with him while she was getting a PhD. He thought she was great, so they hired her. She comes in a freshly minted PhD, really looked great. He sat her down. He had this great idea for her. He wanted her to work as part of a team to figure out all the different kinds of literature that you could think about, and then think about which ones would be more marketable by doing focus groups and various kinds of information gathering by survey. He needed her to explain to him the various genres and nuances and to work as head of this team.

The more he explained this great idea to her, remember this was 25 years ago, the more she got a frown. She was really depressed. So what's wrong? She said I have a PhD in English. Good people find their own ideas. You don't tell them what to do. He said: “Silly me. I thought since I was paying her salary I would have some input into this.”

There are some very positive and interesting things happening internationally in doctoral education. The Ruhr University in Bochum Germany and the Technische Universitat in Munich (TUM) have been given very serious money by the German Government to create a graduate school and to think about how they can, as a centralised graduate school, enhance the learning experience of graduate students. I would recommend to you to go online and look at some of the things they're doing.

The Council of Graduate Schools is terrific. I know many of the institutions here are members of the Council of Graduate Schools. I brought a lot of their literature along on organising a graduate education and good practices in graduate education, assessment of graduate education. They've carried out a lot of research on the retention, the time to degree; all of the kinds of things that we're thinking about, trying to make progress on. There's a lot of literature there, and I would say (based upon my almost 50 years now of being involved in higher education) the Council of Graduate Schools, is the best professional organisation of the types that I know in the United States. It's very helpful to graduate education.

One of the things that we're encouraging now is that every university would list on its website, for each PhD program, time to degree, attrition rates and job (sectors) that people obtain. All kinds of information, that some universities seem reluctant to release. The way you get more universities on board would be by shame, because some people have a good story to tell. They get it out there and tell the story and we tell everybody else: “Isn't it strange that your university doesn’t do that? Why aren't they doing it?”

Now, people will typically say: “We don't have good data.” Well, put up what you have, with your definitions, and put a little asterisk there saying this might be wrong. It's 14 years to the PhD, but it could be 13 and a half. It's okay, I can live with that.

Now I would like to turn to the Carnegie Initiative on the Doctorate (CID).

I'd been at Indiana for about 34 years and was a Vice-President for Research and Dean of the Graduate School for about 12 years. I got the wonderful opportunity to go to the Carnegie Foundation to direct the Carnegie Initiative on the Doctorate. They wanted to do something different than the infinite number of studies and reports that had been done over the preceding decades that were like strategic plans that just sit on the shelf. The previous reports were very learned, but they didn't have much of an impact.

In the case of the CID it was decided there would be no direct money to universities. You hear the name “Carnegie” and you think: “Ah, money; we'll pretend to do what they want us to do, but we'll do our own stuff and we'll attract external money.” “There's no money” we said. “In fact, it's probably going to cost you a few hundred thousand dollars for every university that agrees to do this, and it's going to have to be your money, and you're going to have to engage in ‘unnatural acts publicly’”. That is, you're going to have to talk about your weaknesses and work closely with your competitors as critical friends to evaluate the improvements that you think you need to make after doing a careful student centred self-study.

“We want you to at least say you'll do this for about six years, and graduate students need to play at least as important role as faculty in all of this rethinking. Students have this incredibly important advantage: they've never been through the program once. You see, that's a great advantage in many cases. You need the faculty too. We need each other”.

As a theoretical physicist my belief is that one of the reasons the folks in my discipline, and in my own case too, tend to do our best to work in the first 10 to 20 years that we've been in the field is because after that time we begin to take the existing paradigms too seriously. It's a human condition. In order to do something, you have to understand the field well enough. Once you understand the field well enough you begin to have these hidden bars that make it impossible for you to think really outside the box. You may think you are, but you tend not to be.

It is a great advantage to have students that you empower and listen to. They can keep your career going, if you're trying to do seminal work and new creative things, you may last another 10 or 20 years if you listen to them. So we need the students and we need the students empowered.

Similarly, we need the students and we need to listen to them so that we don't repeat the same old mistakes in our doctoral programs. It's like we put new clothes on, but we're still the same old body with regard to our doctoral programs. We need to listen to students and engage them.

Often we are not self-reflective about the things we are doing or learning. When a student goes to their doctoral program they're conscious about getting an A and being able to do the homework problems and getting the thesis done, but the self-reflection about what they've learned and how they're developing as scholars and developing new habits is not present. It's almost like we (students and faculty) haven’t eaten of the tree of knowledge of learning.

Students are often not aware of their own development in ways that could be very powerful to them. This awareness has a lot to do with them being able to be thought leaders and the kind of people that we want to have in our next generation of scholars, of stewards. We need to think about that because we faculty have never thought about it either.

The Carnegie Initiative on the Doctorate was a five year partnership. We had over 100 programs or departments chosen from six disciplines: chemistry, education (including writing and science education) English, history, mathematics and neuroscience (which is intrinsically interdisciplinary).

Fortunately, universities realised this was an opportunity. They could use the Carnegie ability to convene. This was an opportunity for us all to really think about and change doctoral education for the better.

But in a sense we had hired a band and rented a room, but didn't know if anybody was going to show up because some people said nobody in their right mind was going to pay a lot of their own money to reveal their darkest secrets and to take the time to think about this sort of initiative in a public way. They were wrong.

We requested that university departments submit a proposal; convince the Carnegie Foundation that, based upon what you say now and what you've done in the past, you're really ready to embark on this initiative. Are you worthy of the CID?

It was a gamble because people could have just not shown up. But we couldn't beat them off with a stick. We had Chancellors and Graduate Deans and all kinds of people making a special trip to the Carnegie Foundation, to say: “Please include us; we’ll put up the resources and commit to the time investment”. It was amazing and very encouraging.

We were originally going to have 16 departments. In the end we had over 100.

I want to acknowledge that any of the good ideas in this talk come from the work of the CID team and from the “action” project. It’s wonderful when the team is so close you don’t know where ideas initially came from.

The people who really did a great job in this initiative and that were part of the team were Chris Golde, who was the research. Chris comes from a disciplinary way of thinking which is much more horizontal than mine. You have many, many different ideas. You don't have a hierarchy. You don't have that sort of thing, and so that's a way of empowering people.

So when she and I came together it was tremendous. We had these long walks where we would learn from each other. It was a great experience.

Laura Jones, literally knows where all the bones are buried at Stanford, she's the archaeologist there. So if you want to change the sixth hole on the golf course you're going to have to go through Laura and several of the native American tribes to figure out if you're going to be able to do that. I have been told that part of Stanford is built on sacred burial grounds for indigenous people.

Andrea Bueschel, who's now at the Spencer Foundation, Andrea got her PhD also at Stanford, in Education. Andrea currently works at the Spencer Foundation. Another crucial member of the team was Pat Hutchings, who was vice-president of the Carnegie Foundation, and a wonderful wordsmith.

Our approach was to engage departments in a process of self-discovery about their doctoral program.

Getting Started

Let's talk a bit about this business of thinking about your doctoral program. We asked departments to consider that they wanted their students to be able to do or have experienced, what are their habits of mind, what skills, what content knowledge should be when they leave the program? The idea was, after you've thought about that, then maximise the possibility of students being formed like this by your curriculum, your high stakes testing, your thesis, your recruiting, by everything you do.

First, what habits of mind do you want the people to have to help them be lifelong learners. Most of what they learn (in many fields) will be out dated, irrelevant or wrong in five years. So, clearly, they're going to have to be able to learn new things. What habits of mind do you want them to have in order for them to be able to do that? What content knowledge? What skills and what experiences do you want them to have? Departments should think about that and write it down in the form of a purpose or student outcomes statement.

The first thing that some of the scholars asked was: “How long does it have to be”? (Just long enough to be useful to you.) They went off and they tried. They took it very seriously. Many did okay, but some found it very difficult. They came back and some said: “We cannot agree. The faculty just cannot agree about some of these purposes”.

I said well, “I don't think dysfunctional parents should have children; I don't want my grandchildren to go to your institution if you can’t even agree on these fundamental ideas, because it's going to take an intellectual community working together to be able to do these kinds of things. So make some compromises, you're going to have differences, but there's got to be some fundamental things you agree on”.

Note we worked at the departmental or program level. Some bet we should be looking at interdisciplinary program only. I understand that the cutting edge of most of the things that we do in some fields cut across disciplinary lines. Think of that as molecules. Most of the world's work is done by molecules, but if you don't have good atoms, you will have trouble when you try to form your molecules because they'll come apart.

Molecules have to have the advantage that you can form them relatively easily together, but that you can also take them apart easily when there's new work to be done. Atoms are more fundamental. They stick around longer. So I didn't want to just talk about interdisciplinary activities.

One of the concerns that neuroscientists had for those trained in neuroscience in interdisciplinary programs was that the students hadn’t understood what one of the main purpose of the interdisciplinary program was.

If you are in a program where you used a third psychology, a third chemistry, a third biology in your neuroscience thesis, then God help you if anybody comes to a student who's been in that program and says for the next problem maybe you ought to consider anthropology, or anatomy. You see, the student knows what an interdisciplinary program is. It's a third psychology, a third biology and a third chemistry. How dare you introduce anthropology. It's as though they were trained in an ivory tower that just happened to be on adjoining pieces of property. They still didn't get the point about the trading zones, the important ideas that happen where various disciplines come in contact with each other. They had been vaccinated, in a way, against the broader idea of interdisciplinarity.

The graduate students and a critical mass of faculty engaged in three to five years of departmental and university discussions. Our job, was to be provocateurs, to talk to them not unlike the way I'm talking to you now, to try to be encouraging and at the same time, pushy.

We made site visits and we had convenings at Carnegie. It's beautiful, on the Stanford campus with good wine, good food. We would tell them, when they convened, you are the department. Don't worry about money. Don't worry about the rules. What is your vision?

We suggested they think about it as if they could do anything you wanted to improve the learning of your students. What would you do? How would you do it and how would you assess it? From the very beginning, how will you know that this intervention that you're trying is useful? Many interventions may have negative consequences, they may not work as well as planned, but you've got to try them to know that.

We also carried out surveys, interviews etc. The details are in a couple of books that some of you have read for example *The Formation of Scholars*.

We focussed on the idea of Stewards of the Discipline. I'm going to define steward in a moment. At first some were troubled by our use of the word “steward”.

A steward is not the owner of the mansion. The steward is the chief employee. So steward, some people thought, was just another way the administration was trying to make the faculty feel like employees.

But we are responsible to the discipline, not another human being, not the administration. We owe a certain allegiance to try to make our discipline better, to protect it and to move it ahead, to criticise it appropriately. Steward of the Discipline, not the steward of General Electric, the steward of your discipline of your program or your area of scholarship.

PART became an acronym that we used: Purposeful, Accessible, be able to Reflect and go back and change things, and to be Transparent.

One of the characteristics of the CID was that the programs would agree to be very open with each other. Like in a fish bowl. They would report to and work with each other all the time. The students and faculty, of course, were naturally very accountable and transparent because they were working together.

The programs often interviewed alumni about what they thought were the best things to do. We commissioned people who were the thought leaders in the field to write essays. These essays served as grist for the mill and were often hotly debated.

It's like you're selling encyclopaedias: if you can get somebody to argue with you, once you're in the door you've almost got a sale.

Accountability; the participants were engaged in critical self-examination publicly. They worked with their major competitors, back and forth, to be critical and helpful. They developed a vision regarding their doctoral program and then they engaged to make that vision a reality by looking at all the evidence.

Often we maximise an intervention over too small a space. We look at our curriculum by itself. We say we have to have curriculum reform, but we don't, at the same time, think about our high stakes testing, the thesis, what kind of people we recruit, the mentoring, the various other things that go into the whole learning experience.

So you have to maximise your efforts over all that you're doing. The departments understood this point. They looked at everything they were doing and figured out, based on evidence what areas, if any, they needed to change. Then they picked two or three things that they were committed to changing, developed an approach to change it, (and how they would assess those changes); pretty straightforward stuff but not commonly done.

For most of them it was something they hadn't done before. It's what they do in their disciplinary field, but it's not what they do with their graduate education. The idea was to develop individuals then who would be scholar practitioners/stewards of their discipline.

Steward of the Discipline

Creating Knowledge; first, a steward should be able to generate new knowledge and critically evaluate new knowledge claims. It doesn't mean that everybody is always doing this, but they should have been developed so they could do it.

Stewards are able to generate new knowledge and critically evaluate new knowledge claims, empowered with an understanding of existing theories and practice. Scholars create new ideas, theories and evidence to add to the body of knowledge.

Conserve knowledge; this means when to hold them and when to fold them. Scholars become familiar with knowledge in their area of expertise and identify the most useful.

Now, for many of us, we think we need to teach everything we learned. The older we get the longer it takes people, because everything we learned, obviously, is still important! We expect people to absorb it. In fact, one person said to me the reason it takes seven years now to get a Physics PhD and it used to take three is because there's so much more to know. That's not right in terms of developing the next generation of stewards.

Transforming knowledge; scholars become familiar with knowledge in their area, those that are most useful in a setting, an institution. They analyse and apply related ideas to meaningful situations. By applying and teaching these ideas we ensure the conservation of knowledge.

Teaching is terribly important. You might wonder about a theoretical physicist who had been mainly a university administrator, why the Carnegie picked a person like this to be director of the project.

I was very interested, always, in the scholarship of teaching. When I was an administrator I allowed the scholarship of teaching to compete directly with all the other forms of scholarship for funding, internal funding, because the scholarship of teaching, is one of the most important and most difficult of all of the creative acts. It's much harder than physics because there are many more variables and much more that you have to control.

People often ask me what's the five most important specific things that people should do differently than they do now in doctoral education? We have a couple of books about that. In questions we can also talk about that but, basically, it's not so important how to do a particular homework problem, is it? It's to understand the theory, the understanding of the concept, so that you can do whatever homework problems that will be important for you.

Concepts and Themes

Here are the main concepts that need to be understood: scholarly integration, intellectual community and stewardship. I argue that scholarship segregated is scholarship impoverished. I

mean segregated from other disciplines, segregated from different sectors of employment, segregated by gender, segregated by culture, segregated by age, everything. Scholarship, which is so close to learning, thrives best when you have an extraordinarily rich gene pool.

Scholarly integration; in some fields while you learn the theory you don't get a chance to actually use it until later. Somebody was teaching me golf one time. They wouldn't let me hit the ball. I said I know when I try to hit the ball it's going to be different than just saying I should keep my eye on the ball. He put his head down on the tee so I couldn't hit the ball. Oh, I was tempted.

So early grounding, applied or clinical studies, whatever is appropriate for your discipline is helpful in really beginning to get grounded. There is a benefit from a progressive development that uses both theory and application together early on, that is, Integrative learning.

Collaborative learning; we don't call them laboratories anymore. We call them collaboratories. It's the right word, collaboratories. It's a way to think about that in whatever area you're in; that you're getting your practical training in collaboratories; whether you're working with industry, with other disciplines, with other fields across disciplinary boundaries.

We say we learn much from failure. Well, how in heaven's name are we going to fail when we're a student and our success is important to the thesis advisor getting their next grant? Faculty often have to intervene and make it right before students get a chance to fail. It is an art, being able to give a student enough rope and enough opportunity that they genuinely can fail when there's a safety net and they can learn from it. It's extraordinarily important. Ideas above that came out of a lot of study.

Intellectual community; this tends to be a group of people who have a common intellectual theme or goal where they have something they're working on together. It's not just pizzas. It's an intellectual activity where you're working together as a village, as a commons, to help each other achieve intellectual goals.

It's important because, at least for the people I have met, by and large if we work together we develop more effectively and broadly. This was hard for me because the only people I collaborated with before I went to college were pigs on the farm. There were a few in the Academy when I worked there but, generally speaking, I had to work with people.

How to foster intellectual community: Lets talk a little bit about that for a moment. Have you ever gone into a seminar, and sitting in the front row are the senior faculty? They're just waiting for the seminar to be over so that they can get up and reduce the speaker to a puddle of water, to show how smart they are and that the speaker didn't get it right. They're showing off. We all do it, I suspect; or many of us do it.

The effect of this on graduate students is just devastating. They come in with the idea that the seminar is where you have outside speakers that will create wonderful learning experiences. But then reality strikes and they see it as a place where people are just showing off, and they don't raise their hands anymore. They don't get involved. It's a terrible way to model.

There's a great modelling opportunity there, and we turn it into something negative. The ability to ask questions and to get people stimulated to think together for progress and not attacking the person but working on improving the idea is really hard, it is an art that not all of us have at the beginning; to be able to ask questions in that way, and to be able to model that for the next generation of us who we want to be better stewards. This is a wonderful opportunity. Generally speaking, we screw that up big time. Intellectual community is robust in those seminars when people are really working together. That's very important.

The Pea Brained Seminar: I would like to mention the snake pit and the pea brain seminar. These are things that are useful to do in the beginning, have groups of faculty and students who

come into the room with the idea was you were supposed to have read something, like in a journal club or something like that, but it is important that everybody in the room doesn't know very much about the particular research they were talking about.

Then you could encourage arguments and talk back and forth regarding the material. Every once in a while you could say to the Nobel Prize winner next to you: "You know that won't work because momentum is conserved, and you just violated that".

I'm not trying to get people to be lax in their thinking. I'm trying to get people to understand how they can work together and overcome these different levels and feel comfortable being wrong in public. In that way when we make ourselves vulnerable, we make a lot of progress as an intellectual community. That's the pea brain seminar.

After you've done that for a couple of years, then there's the snake pit. Think of it this way. Suppose we're a team (our department). Somebody's going out to give a job talk or a talk at an international conference. They are representing the whole department. You want to make sure, before you leave your institution you've had people really grill you. So you get up in front of your intellectual community who have learned how to be constructive, and they attack you like snakes. They go to the heart of everything, but it's in the spirit that we want to help you deliver a better talk. That's tremendously important. That's intellectual community.

Apprenticeship; students should not be apprentice to a faculty mentor, they should apprentice with several mentors. I believe graduate education is more like polygamy than monogamy. Yes, you want to have special deep relationships with an individual that's your mentor, but no one person will have the chemistry, the experience, the knowledge to be your mentor in all things. It shouldn't be one of these things: how dare you talk to my colleague without asking me (because I'm jealous of my colleague).

You've got to break that down to where the students feel comfortable talking to anybody in the department. That takes grown up faculty. All of this is really about faculty. We say today that we're talking about the students, but we're also talking about the faculty attitudes. (Multiple relationships are important and require trust, respect and reciprocity).

The good news is there's a few thousand students and some who are now faculty who went through this program. You think they have a different point of view than their predecessors?

Passion

We had a group of fantastic historians that were involved with the CID. We asked them at one convening what was their biggest disappointment in their academic career? They had tenure at top institutions. They had won prestigious awards. They had written many books, in some cases Pulitzers. Many of them mentioned: "We've lost our passion for the field. We know familiarity breeds contempt, but I had a romantic, passionate view of my field when I got into it. Now, 30 years later, I just don't have that passion."

In the other room we had wonderful graduate students in history from those institutions. We were talking to them about what was most disappointing to them in their graduate program. They said: "Well, we've lost some of our passion for history. When we came here we had a lot of ideas, but now it just seems like a bureaucratic job. Don't tell the faculty, whatever you do. They'll think we're sissies."

We said why don't you tell them? We had this coming together. We talked them into it. The students got up and said: "There's one thing that was suggested we tell you about. We don't

want you to take this too seriously, but we did talk about how we've lost some of our passion for history while we have been in graduate school. We're sure that's the way it has to be."

There was laughter from the faculty. The students misinterpreted it. They thought they were being ridiculed. It was a great moment together. The faculty, men and women, most of them had tears in their eyes because they realised, because of the things they had done, they had contributed more to that loss of passion than needed to be. Here they were thinking about loss of passion in their own careers when, in fact, they had been doing that to the best of the students that they had. They were motivated to make a difference in the future. Remember these are wonderful stewards who want to do the right thing.

You have to learn to learn. Some of us learn to learn easier and earlier than others, but we have to learn to learn. That's what doctoral programs are about. You have to have the confidence to learn. People told me when I was young your kind of people don't belong in college; because when I got to the college as an undergraduate I didn't have the same degree of sophistication that other people had. They didn't care about pigs. Most of them have gone to private school. They didn't even know what a pig was, they thought it was a policeman.

You have to have the desire and ability to help others learn and the ability to apply your learning. So, it's a call to action; the call to action 10 years ago and the call to action now. In general, departments do not have a clear nuanced set of purposes involving student outcomes.

If you read the graduate bulletins: we want to produce thought leaders. But what does that mean? What kind of thoughts? How will you know you have thought leaders? What are you doing about that? How do you do that? Do the students know how you do that? Do the students, each year, keep a diary and think about what new learning they've done; how they are better than they were the year before? I suggested that students should keep diaries, where they write: "What have I really learned in this course that I can apply to different situations"?

The aims of doctoral programs are often not transparent to either faculty or students. We asked the faculty in one room why they did what they did in their PhD program. Most of the answers were: "That's the way it's been for 20 years". In another room students thought the faculty knew something, so they made up these incredible logical reasons why the faculty were torturing them in this way.

We showed the faculty this and they said: "Oh my God, yes, that's probably it "

It's frightening the lack of self-consciousness we have in many of our programs. Because of that it's difficult to evaluate program progress or student development. If you don't know what you're aiming for it's hard to assess. We don't have much practice in assessment for this kind of material. Thus, we had to have this kind of initiative where people had to assess, from the very beginning, the new things they were doing. This is not just about assessing what you used to do. It's assess these new things that you've decided you want to do. It's your work. It's not Carnegie's work. You're paying for it.

One last point about becoming a steward of the discipline, students may gain the judgement or experience to ask good research questions but the ability to envision a good research program is often not even discussed. How many of us know the difference between a research question and a research program? You see, a research program can have a real impact in the world over a period of time. It is a group of research questions with a common theme.

You may have certain investigations that are very quantitative, they may be relatively straightforward. Some things are risky. Some things are qualitative - a whole mixture. It's like a tool kit. You're doing several studies of these at the same time or over time. That's a research

program. We often focus on the research question. We don't talk very much about a research program, which as mentioned above allows you to have an impact over a period of decades.

Students are often concerned they don't have the experience to ask good research questions. They don't learn to become effective teachers or mentors. (How many people have you met who have said I'm never going to have children. My parents did a terrible job with me and I'm not going to put that on the next generation.) I hear it much more from graduate students, who say they're never going to have graduate students because they feel the way they were treated was really terrible and they don't want to add to that they didn't have any positive role models.

Assessment evidence and remedial action regarding those areas are lacking because we didn't know what we were aiming for. So what can be done? Obviously, we want to get the local faculty and students engaged in self-evaluation. We did that in controlled ways in the Carnegie project and at the institutions that I've been able to lead in the years since the Carnegie Foundation.

There's a clear need for scholarly formation evidence. More evidence based research is needed. The kind of things that you're doing is vitally important in a very under-represented research area. The pedagogy of research, in the broader sense, being one of the most important areas, is greatly underserved by scholars.

A combination of faculty, disciplinary leadership and administrative co-operation is needed. The people like me who have gone over to the dark side of administration need to co-operate with you in making sure that you can really work on the pedagogy of research. You need the resources and the rewards system to do it.

The apprenticeship model, the polygamous two-way model should be embedded in a robust, responsible and purposeful intellectual community. Programs should be regularly self-studied in the way that we will discuss at this conference, not the typical assessment of how many publications does the faculty have and how much money do they bring in. That's like saying the parents are rich, so the kids must be really doing well.

Finally, I have been working with programs across the United States implementing a one year program. It is honed down to where you can go through the self-study in one year and get many of the advantages. That's something to think about and work on in the future at your institution.

There are advantages for programs that go through this - if you need advantages, other than the fact that you're doing a wonderful job in facilitating learning of the next generation of us. The funding comes easier. The faculty hires may come quicker. Student enrolment and successful lifelong learning improve. I have seen it happen.

I find this a labour of love. It's easy to get discouraged because it's like teaching the first grade every year. Didn't I teach them that last year? There's always new people coming on. That's the good news, there's new people coming along.

When I read the kind of things that you folks are working on I'm very optimistic because we're in really good hands - your hands. Thank you very much.

Transitions in Postgraduate Research: Stories from African Higher Education

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Abstract

In correspondence with the conference theme, *narratives in postgraduate research*, my paper entails five sections. The first section addresses transitions in the wider context of postgraduate research internationally, mainly as derived from publications on the topic in the past five years. These transitions provide a backdrop to explore, secondly, some issues that have emerged and are still emerging in several African countries. Perspectives are offered in view of several reports that have appeared recently and take into account the wider socio-political and economic climate that currently influence higher education in Africa. The third section of the paper addresses postgraduate issues and, in particular, doctoral education in South Africa as reported by two main sources: a recent report on doctoral education by the Academy of Science and a collection of papers published in a special edition of the journal 'Perspectives in Education' in 2011. A fourth section turns the spotlight on doctoral education and accounts in this respect in the Western Cape Province and more particularly, at one institution, Stellenbosch University. Three recent sources of information are highlighted. One is a report on cooperation among universities in Africa to address urgent developmental issues; another entails the recently (2010) established African Doctoral Academy (ADA) at Stellenbosch University which provides for studies by doctoral candidates from Africa across disciplines in the Social Sciences. A third source refers to a research project on how doctoral studies may impact on successful doctoral completion by interviewing successful completers, their supervisors and their 'significant others'. The fifth and final section of the paper draws a number of conclusions from the previous sections.

Introduction

10 January 2012 was an exceptionally sad day for higher education in South Africa and in particular for Kgotsisile Sekwana, an 18-year old applicant to the University of Johannesburg (UJ), one of the larger universities in the Gauteng Province. This is what happened: UJ announced in the open press early in January that a number of unassigned positions were available for late student applications – something in the order of 800. Students could apply for these positions on a first-come, first-served basis on Tuesday, 10 January. By dawn of that day, more than 6 000 prospective hopefuls were gathered in front of the University gates and the crowd was growing.

University security officials were caught by surprise by the huge turnout and attempted to let the students in five at a time. However, by late morning the crowd got restless, angry at the slow progress and as some members of the crowd started jumping fences, they attempted to force the gates open. Kgotsisile and his mother, Gloria, were close to the front of the crowd. Gloria, a qualified nurse in Psychiatry, was working in England since 2001 to generate money for her two children's education. She returned temporarily to South Africa to assist her son with his university applications. But, on that day, they found themselves in a crowd where some people were starting to faint for lack of oxygen. The pushing increased and the security guards inside the gates, who were too few to control the outside crowd, looked on in horror as those

gathered were trying to flatten the fence. When the fence eventually gave way, Gloria Sekwana was trampled to death and at least 20 prospective students were seriously injured. In the ensuing turmoil would-be applicants stormed the admission offices, but were kept at bay by security reinforcements.

On closer inspection it appeared that many prospective students and their relatives were actually sleeping in front of the gates since the previous night without any support or amenities. The Minister of Higher Education and Training, who earlier described the chaotic scenes outside UJ as a 'wonderful problem' being indicative of a thirst for learning, responded immediately by announcing that his department would move to a central application process to alleviate the annual last-minute rush, as well as possibly outlawing walk-in applicants. However, more difficult to address are the current statistical realities: universities and colleges have only 180,000 places for first-year students while in December 2011 some 250,000 students passed their final high school exams at a level that qualified them for admission to tertiary education. Also, the University of Johannesburg received 85,000 applications for 11,000 first-year positions.

This story serves to illustrate, among other things, the need for proper admission planning and practices, but also points to a grave need for study opportunities at all levels of higher education, including postgraduate studies, as increasing numbers of local (South African) postgraduate students, as well as those from other African countries, apply to South African universities for admission. Factors at play are increasing costs and distance, making it more difficult to afford postgraduate studies in other parts of the world.

Global Trends in Higher and Doctoral Education

In this section I want to refer to a number of sources that have continued to pose important questions considering global trends in higher education and in particular, quality in doctoral education.

Paul Wakeling from the Department of Educational Studies at the University of York presented a paper titled '*Access to higher education after the first degree: Do background effects continue to decline?*' at the European Conference on Educational Research in Finland in 2010. In his paper, Wakeling (2010) pointed to research whereby social scientists have demonstrated a robust relationship between individuals' backgrounds, particularly in terms of social class or socio-economic status, and their educational outcomes. Those from disadvantaged contexts are typically less likely to attain educational qualifications, also less likely to attain high grades in such qualifications and less likely to make successive educational transitions to research degrees than their peers who do not suffer socio-economic disadvantage. Wakeling also indicated that in the UK there are more than sixty years' of research showing this continued relationship. This appears to be a finding that needs further exploration – particularly into postgraduate studies in unequal societies such as South Africa and Africa in general where socio-economic status, class and privilege are prevalent.

Barbara Kehm's (2006) study on comparing doctoral education in Europe and North America suggests that doctoral education is undergoing a paradigmatic change insofar as it is no longer regarded exclusively as an academic affair but has moved into the focus of institutional and national policies. She observed two prominent trends: One is that the generation of new knowledge has become an important strategic resource and an economic factor. It thus becomes a commodity and its shape increasingly acquires a utilitarian approach. A second trend is that in most developed countries there has been an increase in doctoral degrees awarded over the last 10–15 years. This means that an increasing number of doctoral degree holders will not remain in academia, but seek employment on the labour market outside universities and

research institutes or academies of science. This has lead me to four published sources that are all probably well known to most of you, therefore I shall merely summarise what, in my opinion, constitute significant findings and trends that have emerged from them.

Evidence generated on doctoral education in 17 countries by Powell and Green (2007) point to the fact that doctoral student populations have changed due to wider social changes. It was also noted that the nature of the doctorate has changed - for instance, the introduction of doctoral study in the professions has meant a new kind of doctoral student with significant professional commitments and particular kinds of relationships with universities in terms of attendance, supervision and funding. Sadly, university and national systems seem not to be flexible enough to accommodate a broad range of doctoral candidates. The editors correctly point out that the rhetoric of inclusivity and lifelong learning is sometimes at odds with the practices of doctoral education providers where the model of the 'PhD student' that is acted upon is much narrower than reality.

Similarly, Nerad and Heggelund (2009) arrived at a number of characteristics which they call 'future-oriented, new doctorates' and include the following:

- Graduate students will be prepared for a variety of career possibilities in academe, government, industry or non-profit organisations, with clear benchmarks and performance standards to be met at various stages of the degree process;
- Graduate students will be encouraged to work with multiple mentors;
- Graduate education will begin with a general graduate education course on epistemology–on different ways of knowing; and
- Even within a single discipline, graduate education will include some interdisciplinary or multidisciplinary components.

In turn, Walker et al (2008) report on a five year project: the Carnegie Initiative on the Doctorate (CID). This important book explores the state of doctoral education in the United States and offers a plan for increasing the effectiveness of doctoral education. It examines the practices and elements of doctoral programmes and shows how they can be made more powerful by relying on principles of progressive development, integration and collaboration. The traditional apprenticeship model is challenged and the authors argue that creating knowledge-centred, multigenerational intellectual communities is essential to foster the development of new ideas and encourage intellectual risk-taking.

Finally, Boud and Lee's (2009) book, *Changing practices of doctoral education,* deals with a number of important issues of both theoretical and practical nature regarding doctoral education. One issue that was raised in a chapter by Brew and Paseta is that it is not only the provision of doctoral education that are being critically questioned, but also the associated pedagogy itself. Doctoral education now occupies an increasingly contested and reflexive space which operates at a number of different levels, impacting on and shaping one another. For example: (1) At the government level—to gain value for money and providing for the needs of what has been termed 'the knowledge economy'; (2) At the institutional level—In terms of the ways in which doctoral degrees are defined and managed; (3) At the faculty, school or departmental level—In terms of the research climate and facilities to be made available for doctoral candidates; (4) At the supervisor level—In terms of the kind of supervision provided; (5) At the level of students—In terms of their motivations and the anticipated rewards of candidature.

Postgraduate and Doctoral Education in Africa

I want to shift the lens somewhat now to the position of postgraduate and doctoral education within the context of African higher education by referring to five important sources.

Bloom, Canning & Chan (2006), in a report to the World bank termed *Higher Education and Economic Development in Africa,* highlighted the role of universities in economic and social development in Africa by emphasising their contribution, in concert with other factors, to the success of national efforts to boost productivity, competitiveness and economic growth. Viewed from this perspective, higher education apparently has finally ceased to compete with primary and secondary education for policy attention. Instead, it has become an essential complement to educational efforts to promote innovation and performance across economic sectors. In these efforts there seems to be an increased emphasis on postgraduate and doctoral studies in particular.

It is clear, however, that not everybody supports an unarticulated relationship between higher education and economic growth and development. McArthur (2011), in an article titled *Reconsidering the social and economic purposes of higher education,* seeks a re- consideration of the social and economic purposes of higher education. She starts with the premise that recently trends have emerged where governments tend to position higher education primarily in terms of the economic role it can fulfil. McArthur argues, however, that such a trend has attracted considerable criticism. The problem for higher education is not it having an economic role, but the narrowness of the way in which such a role is often conceptualised.

In another World Bank working paper on *Differentiation and articulation in tertiary education systems: A study of twelve African universities*, edited by Ng'the, Subotzky and Afeti (2008), it is suggested that institutional and programmatic differentiation appears to be increasing within African higher education, driven by both market forces and government policies. Yet, the extent to which articulation is becoming operational appears to be slow, even though formal channels for such articulation between the university and non-university sub-sectors exist. Consequently, differentiation and articulation within African higher education systems remain vital, but largely unused policy instruments for enhancing equity and contributing effectively towards national development goals.

This position was further emphasised by a study undertaken by Cloete, Bailey, Pillay, Bunting and Maassen (2011), *Universities and economic development in Africa,* which involved case studies of eight African universities in terms of their perceived contributions to economic development and provides a more detailed account of postgraduate education, research and the role of doctoral education. The institutions studied were: (1) The University of Botswana (Botswana); (2) The University of Ghana (Ghana); (3) The University of Nairobi (Kenya); (4) The University of Mauritius (Mauritius); (5) Eduardo Mondlane University (Mozambique); (6) Nelson Mandela Metropolitan University (South Africa); (7) University of Dar es Salaam (Tanzania); (8) Makerere University (Uganda).

The study involved the notion of a 'pact' between different role players, where a 'pact' is defined as: *"…a fairly long-term cultural commitment to and from the university, as an institution with its own foundational rules of appropriate practices, causal and normative beliefs, and resources, yet validated by the political and social system in which the university is embedded*" (after Gornitzka et al. 2007: 184). The assumption is that the stronger the pact between universities, university leadership, national authorities and society at large, the better universities will be able to make a significant and sustainable contribution to development. The two key questions addressed in the study were therefore: (1) Is there a role for knowledge

production and universities in the national development plan? (2) How do the relevant national authorities and institutional stakeholders conceptualise the role of universities, and is there consensus or disjuncture?

Table 1: African countries and universities' scores on pact indicators

Indicators	Max. score	Botswana	Ghana	Kenya	Mauritius	Moz.	South Africa	Tanzania	Uganda
NATIONAL LEVEL	**6**	**4**	**3**	**6**	**6**	**5**	**4**	**5**	**4**
The concept of a knowledge economy features in the national development plan	**3**	2	1	3	3	2	2	2	2
A role for higher education in development in national policies and plans	**3**	2	2	3	3	3	2	3	2
UNIVERSITY LEVEL	**6**	**5**	**2**	**4**	**5**	**3**	**3**	**3**	**5**
Concept of a knowledge economy features in institutional policies and plans	**3**	3	1	2	3	2	2	2	3
Institutional policies with regard to the university's role in economic development	**3**	2	1	2	2	1	1	1	2
TOTALS	**12**	**9**	**5**	**10**	**11**	**8**	**7**	**8**	**9**

The role of knowledge and universities in national and institutional plans were then translated into a series of indicators which were rated by the researchers for each country and university in the study, built around the concept of a 'pact' between universities and governments.

As can be seen from Table 1, overall, Kenya and Mauritius exhibited the strongest awareness of the concept of the knowledge economy and a role for higher education in development, followed by Botswana and Uganda. However, with the exception of Mauritius, this awareness was not reflected across policies, but was predominantly found in science and technology policies or in national vision statements. Most problematic, again with the exception of Mauritius, was that the concept of a knowledge economy and a role for universities in development was absent from the policies of ministries responsible for higher education as well as from many of the universities which featured in the study.

The analytical framework used for addressing the two research questions comprised four notions of the relationship between higher education (especially universities) and national development (see Figure 1). These four notions emerged from an interaction between the following two scenarios: (1) Whether or not a role is foreseen for new knowledge in the national development strategy (on a vertical axis) and (2) Whether or not universities, as knowledge institutions, have a role in the national development strategy (on a horizontal axis). The four quadrants created by these two dimensions point to the position whether universities are seen by governments and themselves as (a) ancillary, (b) self-governing, (c) instruments for development agendas, or (d) engines of development.

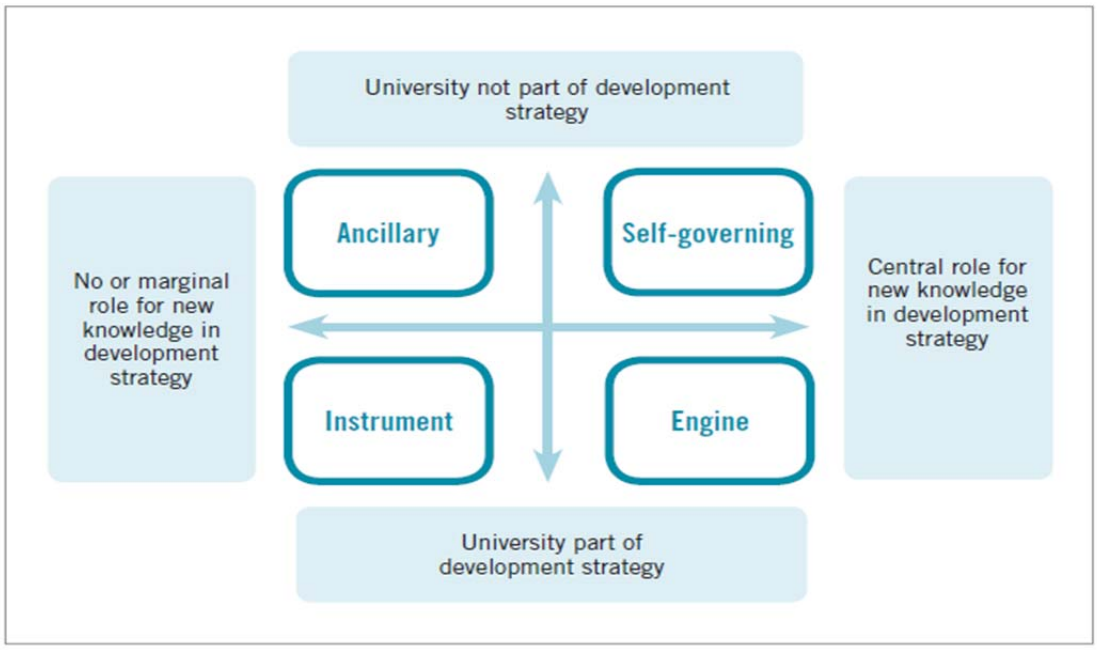

Figure 1: Four notions of the role of new knowledge and universities in development

The two areas of greatest concern, especially on the input side of these scenarios, were found as being the low levels of doctorates produced by universities and the lack of research funding provided to universities. A striking feature was a dramatic increase in master's graduations, but there were two sides to this. On the positive side, coursework master's degrees contributed to increasing the pool of highly-skilled workers beyond the bachelor degree, which is a feature of many knowledge economies. On the negative side, these mainly coursework master's programmes did not seem to prepare students adequately for doctoral studies, particularly the research and dissertation components. Very poor throughput rates—in some cases more than 50 master's students for every doctoral enrolment—attested to this.

Similarly, a recent Report by Kotecha, Walwyn & Pinto (2011), *Deepening research capacity and collaboration across universities in the Southern African Development Community,* has focused on countries in the Southern African region and points out how many universities in Southern Africa have been weakened by a combination of bad political management, insufficient public investment and the loss of talent to developed nations. As a result, universities are well below optimal performance levels in terms of research output and human capital development. To challenge the problem, the *Southern African Regional Universities Association (SARUA)* has proposed at least one possible solution, namely to establish a regional University Research and Development Fund to support regional collaborative projects. The proposal points to some broader issues which requiring fundamental re-alignment. I shall only mention a few:

(1) A striking feature of the Southern African context is the dominance of South Africa within the various categories, including producing scientific (ISI) articles, Fulltime Equivalent (FTE) researchers, and doctorates per FTE researcher, both in terms of real numbers and proportional output (see Figure 2).

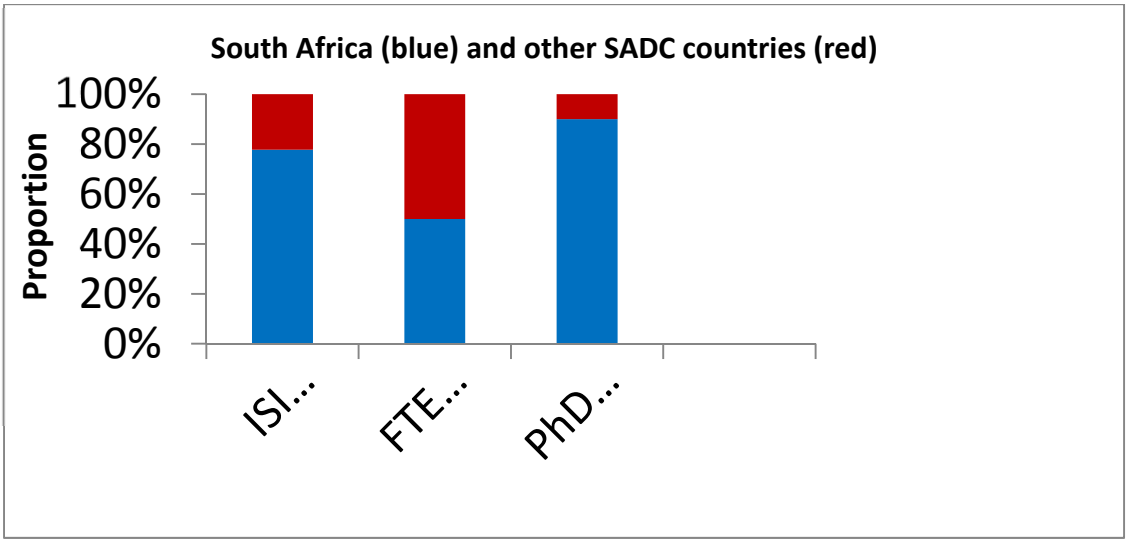

Figure 2: Research outputs in South Africa and the rest of the SADC countries (2000 – 2007)

(2) It also points to a low research output in SADC countries in general, both in real publication terms and the number of publications per FTE researcher - clearly a major challenge for all countries in Southern Africa which requires urgent intervention (see Figure 3).

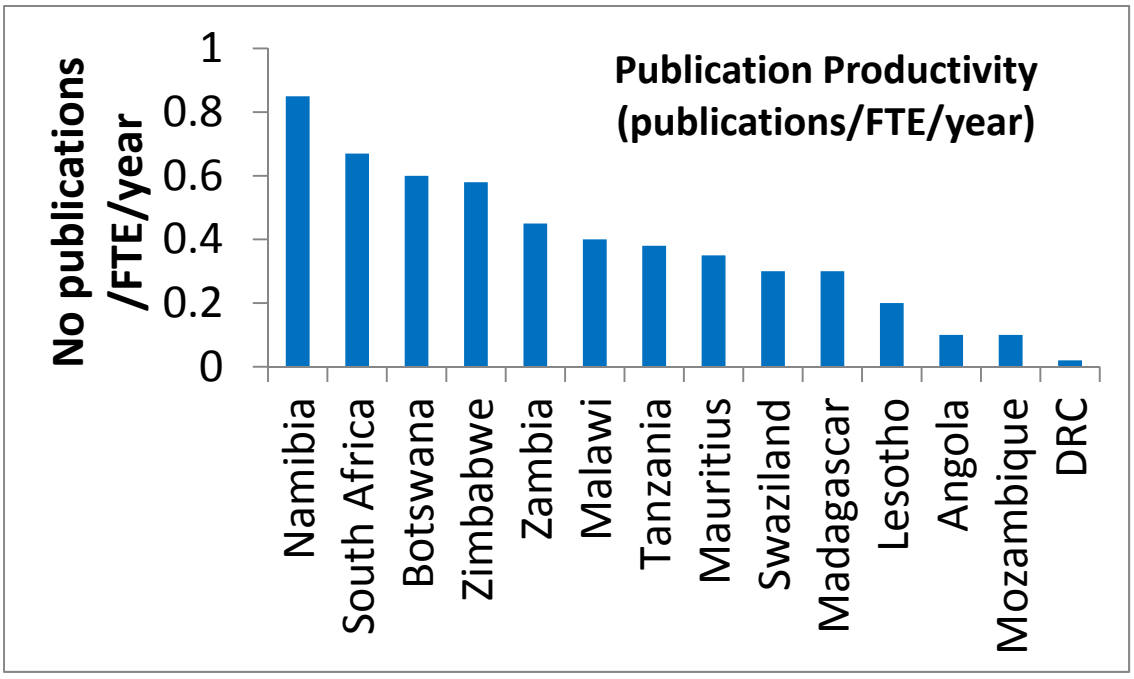

Figure 3: ISI articles per FTE researcher per year for SADC countries (2000 – 2007)

(3) Collaboration and partnerships in the production of new knowledge is widely acknowledged as being not only important, but in many respects essential. There is evidence of extensive North-South collaborations (for instance science and engineering articles from several SADC countries have more than a 90% foreign co-authorship), but the same cannot be said of partnerships within Africa (see Figure 4).

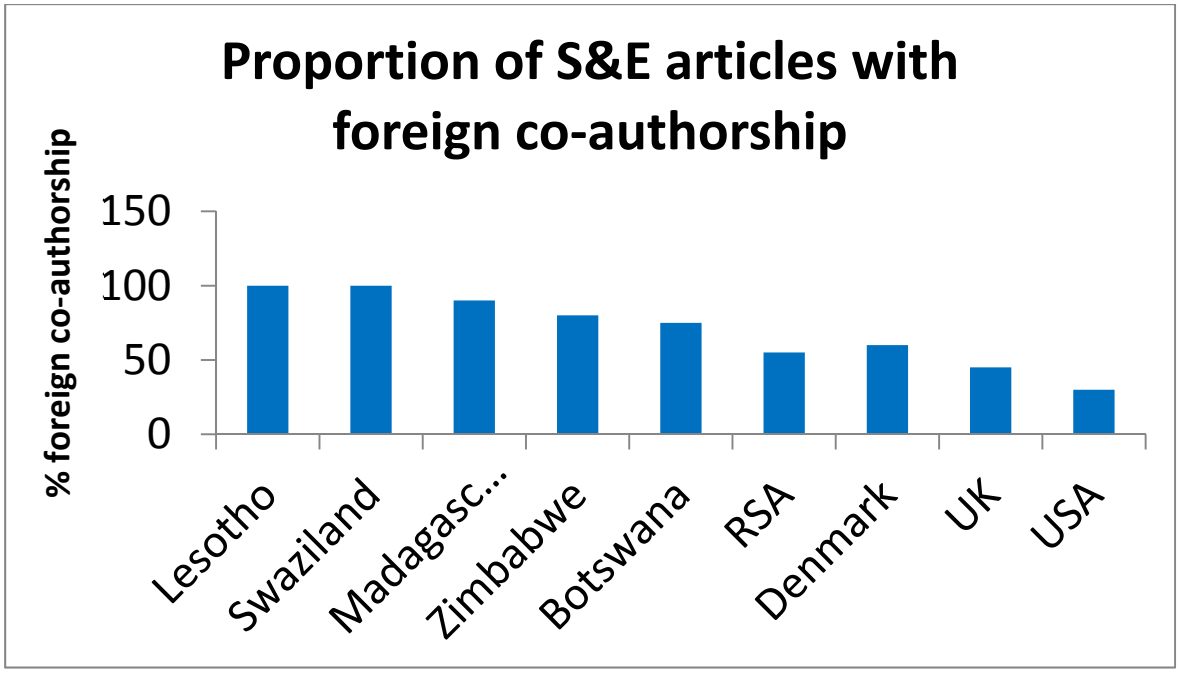

Figure 4: Foreign co-authorship in science and engineering articles in some SADC countries compared to other countries (2000 – 2007)

(4) To emphasise this further, there seems to be co-operation only within four distinctive clusters (northern Arabic countries, the former French colonies, former British colonies excluding South Africa and her neighbours, and the remainder). This data, extracted from the *Thomson Reuters report on Science in Africa*, illustrates limited inter-cluster partnerships - especially between the northern Arabic countries and the former French and British colonies (see figure 5).

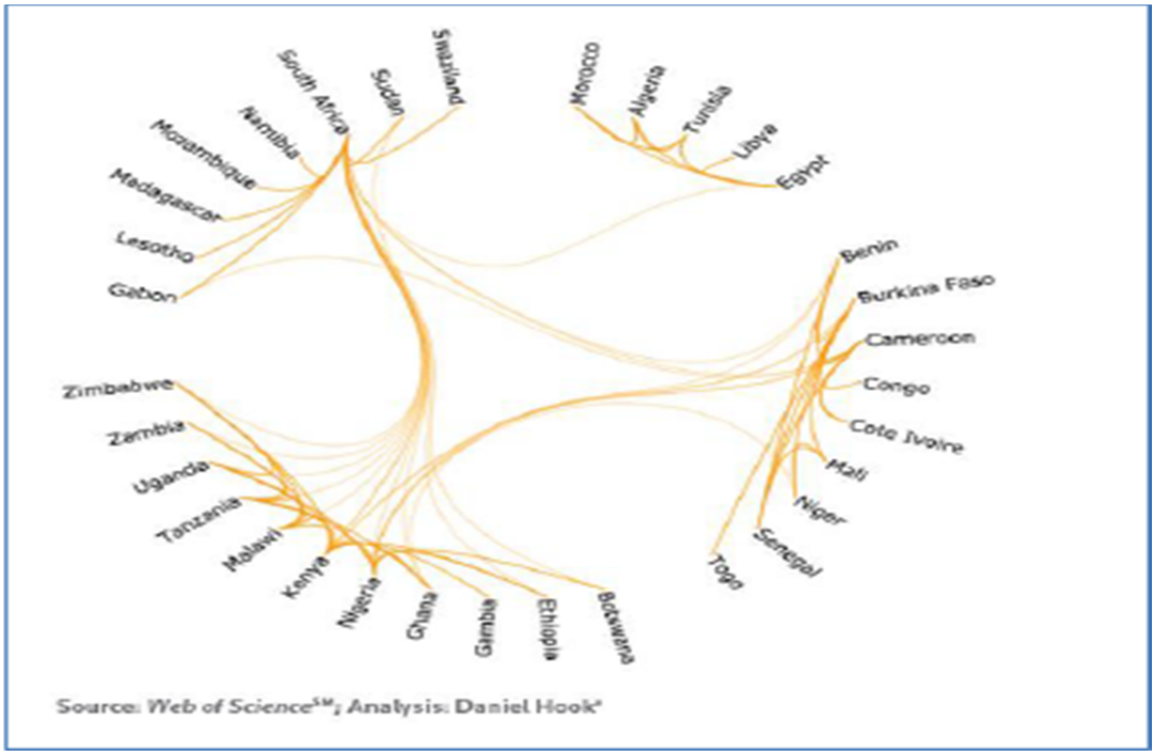

Figure 5: Science collaboration clusters in Africa (2000 – 2007)

Other quite recent developments in African postgraduate education involve a project which aims to enhance cooperation on doctoral education between Africa, Asia, Latin America and Europe (abbreviated as CODOC). This project aims to provide opportunities for enhancing collaborative doctoral education between European universities and their partners in Southern Africa, Asia and Latin America. A final conference to disseminate the results and recommendations to a wide policy and institutional audience from around the world will take place in Stockholm, Sweden, in September 2012. Another development is the establishment of the Pan-African University (PAU) to enhance regional thematic hubs for increasing intra-African mobility of researchers and postgraduate students. This project was launched in December 2011 in Addis Ababa, Ethiopia. Nodes for co-operation are in the areas of (1) Science, Technology and Innovation (Kenya); (2) Water and Energy (not yet allocated); (3) Life and Earth Sciences (Nigeria); (4) Space Sciences (not yet allocated); (5) Governance and related issues (Cameroon).

Higher and Doctoral Education in South Africa

I would like now to turn to doctoral education in South Africa and point to four contributions relating to doctoral education in particular.

(1) A report on doctoral education in South Africa by the Academy of Science (2010), a non-profit scholarly organisation consisting of academics from universities across the higher education spectrum in South Africa, appeared in 2010. This report rendered a number of important findings to which I want to refer briefly.

In its first finding the ASSAf Report indicated that South Africa produced 1423 doctorates across all fields in 2010, up from 1247 in 2007. This represents roughly 26 doctorates per million of the country's total population of around 50 million. Most of the recipients of doctorates were white males in their thirties. If one compares this to doctoral outputs in other countries as such as Portugal (569 doctorates per million of the population), Switzerland (454), Sweden (427), Finland (375), Germany (297)(top five); UK(288), Australia (264), Norway (208), the United States (201), France (172) and Japan (132), it is evident that South Africa resides in the bottom five countries (under 50 PhDs per million), namely Turkey (48), Iceland (32), Mexico (28), South Africa (26) and Chile (13).

Although this was not part of the ASSAf findings, I have looked at the a comparison of doctoral output for different countries against the number of people imprisoned in each country, which provides for interesting data (see Table 2): For instance, in the USA the ratio between doctorates awarded (in 2007) and people imprisoned (in 2008) is 1:38. For Germany the ratio is 1:3, for Japan 1:5, for France 1:6 and for Mexico 1:74. The figure for South Africa is 1: 134 (IOL News 2008; Time, 2 April 2012).

Table 2: Doctorates produced annually per million of population versus prisoners 'produced' per million of population (2007/2008)

Country	Doctorates per million of population	Prisoners per million of population	Ratio of doctorates to prisoners
USA	201	7 600	37.8
Germany	297	900	3.0
France	172	960	5.6
Japan	132	630	4.8
Mexico	28	2 080	74.3
South Africa	26	3 478	133.8

(Sources: IOL News 2008; Time, 2 April 2012)

Taking into account that the annual state subsidy for a doctoral student in South Africa is roughly about R 120 000 (16 000 AUS$) and the cost to keep one person in prison for a year is R 65 000 (about 8 000 AUS$), the picture becomes quite disturbing in terms of its social and economic implications.

To return to other findings from the ASSAF Report: Finding 8 shows that the top 9 universities (out of 23) were responsible for 83% of doctoral graduates in 2007. This has not shifted much in 2010; Finding 10 indicates that about one third of all permanent academic staff at public universities holds a doctoral qualification. This number is steadily rising. Findings 14 and 15 in turn highlight that between 2000 and 2006 the average conversion rate from master's to doctoral studies was estimated to have been approximately 37%. The average time to degree for doctoral students was 4.8 years in 2007, up from 4.6 years in 2000. In Finding 16 four major risk factors for non-completion were found to be:

- Student age and professional as well as family commitments;
- Inadequate socialisation experiences;
- Poor student-supervisor relationships;
- Insufficient funding.

Finding 18 of the ASSAf Report indicated that employers of doctoral students noted salient weaknesses in the skills and abilities of doctoral graduates. For instance:

- A lack of exposure to international expertise, theories and debates;
- Methodological incompetence;
- A lack of 'real world' relevance.

The Report made 24 findings in total and recommended ten key actions to promote the production of high quality doctoral graduates in South Africa. These include strengthening of the higher education system, increased levels of funding at the doctoral level and to recognise and reward a greater diversity of doctoral programmes.

In 2011, a special issue of the South African Journal *Perspectives in Education* was devoted to doctoral education (consisting of 11 articles dealing with a number of doctoral education issues). In the editorial article, Jonathan Jansen, a well-known commentator on educational matters in

South Africa who wrote the editorial to the issue, proposed six new directions for the next level of research into doctoral education. This included the following:

- To investigate the supervisory capacity of universities;
- To explore the epistemological depth of doctoral theses;
- To look into the comparative quality of the doctorate (within and outside of South Africa);
- To investigate the levels of support available and allocated to higher levels of education; and
- To look into the reasons why the doctorate is valued economically and socially.

Also, recently, an article appeared by Chaya Herman (2011) on South Africa's aspirations to increase the production of doctorates fivefold by 2025. In real terms this accrues to more than 7 000 doctorates per year. She has pointed to the removal of several barriers that may hinder this kind of expansion and challenges the issue by asking whether such doctoral expansion targets are realistic or merely wishful thinking.

Higher and Doctoral Education in The Western Cape and Stellenbosch University

This brings me to some details on higher and doctoral education in the Western Cape and Stellenbosch. There are four universities in the Western Cape in a radius of about 50 kilometres (three universities, one university of technology). These institutions have initiated a regional co-operative body called the *Cape Higher Education Consortium (CHEC)* that works for the co-ordination of services and planning in a number of areas without jeopardizing the autonomy of the four constituting institutions.

At Stellenbosch University in particular there have been three recent initiatives that may be worth mentioning in terms of their contribution to a better understanding of doctoral education and its practices, both in terms of quantity, quality and strategic initiatives.

The first is the formation of a consortium of six African universities that have been granted 2.3 million Euros for a ground-breaking academic mobility scheme to assist 72 postgraduate students and eight academics to cross national and disciplinary borders to help the continent address the twin challenges of climate change adaptation and the depletion of natural resources. Another project has been the establishment of *an African Doctoral Academy* in the graduate school of the Faculty of Arts and Social Sciences as a mechanism for the provision of doctoral education related to research methodology and the skills necessary to supervise and execute research, analysis and writing at the doctoral level. This project will also contribute to building capacity to provide for Africa's next generation of academics. An intake of 30 doctoral students per year is the aim, which has been partially met in the second year.

Also, recently, at Stellenbosch, several studies have been undertaken to investigate doctoral attrition and success. One of these studies (Vandenbergh & Bitzer 2011) on doctoral success across a number of faculties and disciplines involved six triangulated cases of doctoral students who have successfully completed their studies in 2010 and 2011. Doctoral graduates, their supervisors and their 'significant others' were interviewed on how they have experienced their studies and what factors contributed to their success. At least four interdependent factors were shown to contribute to doctoral success: (1) Increasing levels of scholarly independence and self-confidence; (2) An increase in levels of transformative learning (i.e. a change in learning orientations and approaches); (3) Increasing the levels of creativity as studies progress; and (4) continuous levels of personal and psycho-social support throughout doctoral studies.

Conclusions and Final Remarks

From the studies and reports I have referred to, I have drawn at least six conclusions to conclude the paper.

Firstly, changes in doctoral education worldwide will continue to have an impact on those in Africa and South Africa. One thing it has done so far is to bring more firm critique to the quantity and quality of doctoral output as well as to reconceptualising new forms of doctoral study options such as professional doctorates and structured programmes to better prepare candidates for doctoral studies. Also, the effects of socio-economic background status and the participation of first-generation candidates in postgraduate programmes need more in-depth investigation.

Secondly, from most of the research reports the link between universities, governments, research education programmes and economic development seems clear. How doctoral education can and should contribute in more direct ways to addressing pressing issues or alleviating Africa's multiple challenges is inevitably high on the agenda and university research needs to be better aligned to national and regional priorities.

Thirdly, pressures towards access into higher education and opportunities for doctoral studies in particular in Africa seem to be on the increase. Doctoral students from Africa find it increasingly difficult to study abroad due to rising costs and lack of support and funding. There also seem to be a significant number of barriers to be overcome if the number of doctoral candidates should increase in the next ten to fifteen years. These include sufficient levels of funding, building adequate supervision capacity, increasing the quality of preparation of candidates and rethinking models of supervision.

Fourthly, regional cooperation within Africa seems important with regard to doctoral education. More productive results may be achieved through joint and coordinated efforts than by individual institutions or countries. However, healthy competition among institutions and countries also seems important and should be maintained.

Fifthly, most current research point to the fact that doctoral education is no longer in the exclusive domain of students and supervisors. Doctoral studies have international, regional, national and institutional dimensions which cannot be ignored. These levels are interconnected in dynamic ways as they influence those who want to study, student numbers, the ways in which studies are conducted and the contents of studies.

Lastly, most doctoral graduates are currently employed by higher education institutions, but the picture seems to be changing as increasing numbers are being employed in business, industry and professional organisations to cater for knowledge-driven economic activities. This trend asks pertinent questions about the doctoral curriculum and epistemological concerns as well as the nature of knowledge contributions. In the African and South African contexts these issues are of particular importance as resources are limited and expertise not widely dispersed.

I want to end my account on African higher education by coming back to the story of Kghotsitsile Sekwana. In spite of the tragic events of 10 January 2012, there was some relief for the Sekwana family in that the funeral expenses of the mother was covered by the University of Johannesburg, who admitted their role in poorly managing the application situation. Also, they offered Kgotsisile a bursary for his undergraduate studies. At the national level a committee was set up to investigate improvements in the application and admission systems of universities and the University of Johannesburg in particular.

So, there was some respite and hopefully such incidents will not happen again in future. What has not been resolved, however, is how universities in South Africa (and Africa, for that matter) will succeed, not only in increasing their numbers of doctoral students, but even more importantly, increase the quality of studies and supervision to benefit the aspirations of Africa in

moving into knowledge-driven economies and social upliftment to make the most of their own natural and human resources.

References and Additional Sources

Academy of Science of South Africa (ASSAf). 2010. The PhD study. An evidence based study on how to meet the demands for high-level skills in an emerging economy. Pretoria: Academy of Science of South Africa. Consensus Report. September.

Adams J, C King and D Hook. 2010. Global Research Report, Africa. Evidence (Thomson Reuters). Available from http://science.thomsonreuters.com/info/grr-africa/ (last accessed on 4th March 2012).

Bloom D, D Canning and K Chan. 2006. Higher education and economic development in Africa. Cambridge, Massachusetts: Harvard University.

Bitzer EM (Ed). 2009. Higher education in South Africa: A scholarly look behind the scenes. Stellenbosch: African Sun Media.

Bitzer EM and RM Albertyn. 2011. Alternative approaches to postgraduate supervision: A planning tool to facilitate supervisory processes. South African Journal of Higher Education, 25(5): 875-888.

Boud D and A Lee (Eds). 2009. Changing practices of doctoral education. London: Routledge.

Clark B. 1983. The higher education system: Academic organization in cross-national perspective. Berkeley: University of California Press.

Cloete N, T Bailey, P Pillay, I Bunting and P Maassen. 2011. Universities and economic development in Africa. Wynberg, Cape Town: Centre for Higher Education Transformation.

Douglass JA, CJ King and I Feller I. 2009. Globalization's Muse: Universities and higher education systems in a changing world. Berkeley: Center for Studies in Higher Education, Institute of Governmental Studies, Public Policy Press.

European University Association. 2010. White Paper on Africa-Europe Higher Education Cooperation for Development: Meeting Regional and Global Challenges. Available from http://www.eua.be/news/10-09-28/White_Paper_outlines_future_of_higher_education_cooperation_between_Europe_and_Africa.aspx (last accessed on 13th February 2012).

Gilbert R. 2009. The doctorate as curriculum: a perspective on goals and outcomes of doctoral education. In Boud D and A Lee: Changing practices of doctoral education. London: Routledge.

Gornitzka A, P Maassen, JP Olsen and B Stensaker. 2007. 'Europe of knowledge': Search for a new pact. In P Maassen and JP Olsen (eds): University Dynamics and European Integration. Dordrecht: Springer.

Grant B. 2011. The bothersome business of curriculum in doctoral education. In Bitzer E and N Botha: Curriculum inquiry in South African higher education – Some scholarly affirmations and challenges. Stellenbosch: African Sun Media.

Herman C. 2011. Expanding doctoral education in South Africa: pipeline or pipedream? Higher Education Research and Development, 30(4): 505-517.

Jansen JD. 2011. Editorial – What would second generation research on the doctorate be like? Perspectives in Education, 29(3): vi-viii.

Kehm B. 2006. Doctoral education in Europe and North America. Kassel: International Centre for Higher Education Research, University of Kassel.

Kotecha, P. 2008. Revitalising Higher Education in the SADC Region. In: Towards a Common Future: Higher Education in the SADC Region. Johannesburg: SARUA Study Series.

Kotecha P, D Walwyn and C Pinto. 2011. Deepening research capacity and collaboration across universities in SADC: a Southern African Universities Regional fund. Pretoria: Southern African Regional Universities Association.

McArthur J. 2011. Reconsidering the social and economic purposes of higher education. Higher Education Research and Development, 30(6): 737-749.

Mouton J, N Boshoff, L de Waal, S Esau, B Imbayarwo, M Ritter and D van Niekerk. 2008. The State of Public Science in the SADC Region. In: Towards a Common Future: Higher Education in the SADC Region. Johannesburg: SARUA Study Series.

Nerad M. 2011. What we know about the dramatic increase in PhD degrees and the reform of doctoral education worldwide: Implications for South Africa. Perspectives in Education, 29(3): 1-12.

Nerad M and Heggelund M (Eds). 2008. Toward a global PhD? Forces and forms in doctoral education worldwide. Seattle: University of Washington Press.

Ng'ethe N, G Subotzky and G Afeti. 2008. Differentiation and articulation in tertiary education systems. A study of twelve African countries. Washington: World Bank Working Paper no. 145.

Park C. 2005. New Variant PhD: The Changing Nature of the Doctorate in the UK. Journal of Higher Education Policy and Management, 27(2): 189– 207.

Pfeffer F. T. (2008). Persistent inequality in educational attainment and its institutional context. European Sociological Review, 25 (5): 543 – 565.

Powel S and Green H. 2007. The doctorate worldwide. Maindenhead: Society for Research into Higher Education & Open University Press.

Shavit Y, R Arum and A Gamoran. 2007. Stratification in higher education: a comparative study. Stanford, CA: Stanford University Press.

Swartzman S. 2010. Changing Universities and Academic Outreach. Rio de Janeiro: IETS

Vandenbergh S and EM Bitzer. 2011. Becoming and being: Triangulated accounts of identity formation upon completion of doctoral studies – preliminary findings. Paper at the annual conference of the Higher Education Research and Development Association, Gold Coast, Australia. 4 – 7 July.

Wakeling P. 2010. Access to higher education after the first degree. Do background effects continue to decline? Paper presented at the European Conference on Educational Research, Helsinki, Finland. 26 August.

Walker GE, CM Golde, L Jones, AC Bueschel and P Hutchings. 2008. The formation of scholars. Rethinking doctoral education for the twenty-first century. San Francisco: Jossey-Bass.

Double your Money!!!! A stickybeak visits the University of Arkaroola: A hypothetical

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Australia

As is becoming tradition as QPR, we once again find ourselves able to eavesdrop on events at the well-known and highly-respected University of Arkaroola.

In Arkaroola, all is well with the world, or so it seems on the surface.

- The latest ERA outcomes have favoured the University
- The last 3-years' rains have brought greenery to the campus after a gap of more than a decade
- The Arkaroola Rangers, a footy team sponsored by the University and captained by the Vice-Chancellor's son-in-law has won the South Australian League in its first season.

But, with the demise of Autumn, clouds are developing on the horizon. As we begin to listen in, we find a meeting taking place between key players in the University's search for academic excellence. An external facilitator has been brought in at great expense and can be heard addressing the most senior of those present.

"DVC-Research, your Vice-Chancellor is ambitious. She has been in charge of the University for 5 years and has overseen the development of a new, significantly enlarged Graduate School building designed by a thrusting Young Turk of the new school of architecture. She has just signed a new five-year contract, but has started thinking about where her next post (possibly at another more highly-ranked institution) will be when her current contract ends. She and you have just had a breakfast meeting where she informed you that she thinks it would be a very, very, good idea to double the number of research students in the University over the coming 5-year period".

What goes through you mind, and which of your colleagues do you see as being key to making sure your Vice Chancellor's every desire is satisfied?'…….

Unfortunately, our eavesdropping technology has hit another glitch in the National Broadband Network and it is time to leave the discussion. There is no doubt, however, that the conversation will continue both in Akaroola and also other Universities across this fair land. All that remains is for me to thank the participants for their insightful contributions to the debate.

See over for the cast of 'players'.

ROLE	PLAYED BY
DVC-Research	Max King (Pro Vice-Chancellor Research and Research Training), Monash University
Associate Dean Research, Faculty of Almost Everything	Joe Luca (Dean of the Graduate Research School), Edith Cowan University
Dean of Graduate Studies	Laura Poole-Warren (Dean of Graduate Research), UNSW
Learning & Teaching Unit representative focussing on supervisor and research student support	Michelle Picard (Director Researcher Education & Development), University of Adelaide
A senior supervisor and Chair of the University HDR Supervisors Standing Panel	Terry Evans (School of Education) Deakin University
A current student and Chair of the University HDR Students' Association	Chamonix Terblanche, National President of the Council of Australian Postgraduate Associations (CAPA)

Refereed Paper

Shifting Sands: Narratives of Quality and Compromise in Timely Postgraduate Research Supervision and Outcomes ®

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Abstract

A more highly regulated academic environment impacts student and supervisor expectations about the postgraduate research supervision process. Increased pressure on academics and postgraduate research students to build personal and institutional research profiles while undertaking their other designated academic and life roles, coupled with increasing internationalisation of postgraduate research degrees inevitably impacts supervisors' and students' supervision experiences. This, in turn, impacts the quality of supervision and students' work.

The aim of this paper is to generate further debate and research about postgraduate research supervision issues encountered over many years by supervisors, students and support service personnel as they strive—mostly together but often very much individually—to ensure worthy presentation and dissemination of the final research output.

The paper presents narratives from supervisors, students and higher degree research editors in response to the broad research question: What, from your experience, are the major challenges to working effectively to achieve successful, timely postgraduate research outcomes? Issues discussed include: supervisor-student relationships; power differentials; international students; time; personal and professional principles and cultures; supervisor, student and institutional expectations; student and supervisor agency and resilience; policies; feedback; and finance. Discussion takes the form of commentary followed by a brief summary of lessons learned from each narrative, linked to relevant literature on narrative inquiry and doctoral research.

The key stakeholders who have contributed their experiences to this paper with the objective of improving the supervision process conclude that achieving successful postgraduate research outcomes is very much a case of 'survival of the fittest'.

Introduction

The current performance-based research Higher Education Provider funding and policies, which focus on rapidly developing a skilled workforce for Australia's growing knowledge-based economy (Edwards, Radloff, & Coates, 2009), have placed added pressure on HDR supervisors and students through greatly increasing the number of HDR students, extending the Australian Postgraduate Awards (APA) scheme to include international students and tightening timeframes for domestic student completions (Australian Government Department of Industry, Innovation,

Science, Research and Tertiary Education, 2012). The authors of this paper feel it is particularly timely, in light of these changes, to raise issues of concern that have been frustrating them for many years but have remained silent, hidden under the weight of the day-to-day work of progressing thesis completions.

The narrative research presented herein arose from conversations between an HDR thesis editor and supervisors, students and other editors over an eight-year period. It focuses on issues that commonly cause concern for all three roles in the HDR process, regardless of the different individuals involved over that time. The narratives highlight the emotions and dilemmas experienced while working to achieve timely, high quality HDR completions. The authors' desire to raise these issues for discussion stems from their commitment to developing better HDR practices within an environment of constantly changing government and institutional policies.

Method

The authors adopted a 'critical events' approach to narrative inquiry (Webster & Mertova, 2007) to discover the thoughts and experiences of students, supervisors and editors about their roles, dilemmas and power-differentiated positions. They thought this was the most suitable strategy for "try[ing] to make sense of the [HDR supervision] practice from the perspective of the participants" (Clandinin & Connelly, 1989, p. 16) by providing a catalyst for reflection on past and present practices to inform future practice (Schön, 1983). The main author also felt that narrative inquiry fitted well with the way some HDR editors work with students and supervisors as an unofficial source of support and a friend. Talking and working together, rather than editing in isolation, opens a multidimensional view of the HDR project and its end product. Narratives work their way into editor-supervisor-student consultations, enabling the editor to understand the students' and supervisors' concerns, attitudes and emotions, which inform and facilitate the editing process so that it becomes more than merely imposing "a foolish consistency [which] is the hobgoblin of little minds, adored by little statesmen and philosophers and divines" (Ralph Waldo Emerson in Cohen & Cohen, 1988, p. 155).

The research proceeded in a somewhat back-to-front manner. Its basis lay in what Webster and Mertova (2007) call 'other' data, collected through conversations with various work colleagues and students whilst undertaking HDR work, or in social settings such as having lunch or dinner, or "in the corridor" (Clandinin & Connelly, 2000). Instead of collecting 'other' data at the same time as inviting colleagues to volunteer narratives, the authors had been casually generating this data over many years. They had already identified common recurring themes from conversations, largely about frustrations: time; feedback; changing policies; power differentials; international students; personal and professional principles and cultures; supervisor, student and institutional expectations; and finance. When the main author received an email advising her of the QPR conference for 2012, she seized the opportunity to make public this hidden knowledge. She suggested the themes as topics when she invited (by email) other supervisors, students and editors to volunteer narratives for the study, answering the question: What, from your experience, are the major challenges to working effectively to achieve successful, timely postgraduate research outcomes? Thus, although potential narrative contributions were free-form, and submitted as written documents, they were constrained by the themes suggested.

Lorna, Margaret H. and Soon were keen to contribute narratives and be co-authors, as they felt very strongly that their stories should be told. Like the main author, with whom they had positive collegial relationships, they wanted to share their experiences as well as thoughts about future directions for the HDR process. All four authors believe they share an identity as members of a community of practice (Wenger, 1998), which consists of HDR stakeholders

working toward the common goal of successful HDR completions. However, they are aware that "cooperation and conflict need to be viewed as complementary components of a broader concept of doctoral enterprise" (Cumming, 2008, p. 8). All four also feel they have created a smaller community of practice by taking part in the "mutual engagement, joint enterprise and shared repertoire" (Wenger, 1998, p. 73) of writing this paper to be presented to a like-minded larger community of practice striving to achieve quality in postgraduate research. All four authors subscribe to similar pedagogies of adult learning (Brundage, 1980; Kolb, 1984), learning as an experiential, social activity (Dewey, 1938; Wenger, 2000), situated learning (Lave & Wenger, 1991), learning through reflection (Boud, Keogh, & Walker, 1985; Schön, 1983), and learning influenced by the cultures of different communities of practice (Wenger, 1998). All recognize the importance of individual life narratives to learning and relationships, and hold the ideology that collegiality and collaboration are essential elements of all learning and teaching. They also believe that the HDR journey cannot be separated from their lives as a whole; it cannot be placed in a box labelled 'HDR life' and worked on in isolation.

While Lorna, Margaret H. and Soon talk from the insider perspective of students and supervisors who have undergone the PhD experience, the main author (Margaret B.) does not. She works as a support person who does not have the same emotional investment in the whole HDR process, but believes all knowledge should be shared, particularly in the interests of improving the HDR experience.

The narratives presented here were selected because the authors feel they best "exemplify the nature of the complexity and human centredness of an event, as seen through the eyes of the researcher in collaboration with the people involved in those stories" (Webster & Mertova, 2007, p. 87). All narratives that were volunteered were read with the filter of representing as many different critical events and issues as possible from a diverse range of contributors within the context of the HDR process within higher education institutions. The narratives were also read with a view to extrapolating hidden texts: What is behind this? What is missing? The authors reflected on what they thought each narrative might mean. They used this reflective process to reduce the risk of intersubjectivity (Connelly & Clandinin, 1990), comment on their interpretation and ponder the lessons learned from each narrative.

All authors feel it is important to keep the narratives as raw data to convey the contributors' own words and emotions; a warts and all approach aimed at reducing the risk of smoothing the data to "invoke only a positive result" (Webster & Mertova, 2007, p. 109). They believe that turning the raw data into "case narratives", as used by Cumming (2007) in his research into HDR student experiences in Australia, while reducing the risk of intersubjectivity, removes the immediacy of the narratives and imposes an additional layer of author interpretation in summarising them. Each individual's story has already been removed from its original context through the contributor's reflection and telling it in retrospect.

The selection of mostly mature age, female narratives was not intentional. It reflects the main demographic of the colleagues with whom the main author works, the contributions received and the time limitations within which data were sought, collected and analysed for presentation at the conference. A conscious effort was made to include narratives from outside Australia.

The narratives

'The fittest who survive are those who have colleagues who work and walk with them; collegiality offers fitness'

Supervisor 1 (mature age female academic, Australia)

My view of myself as an educator, who is open to learning from difference, and exhibiting a willingness to share power, was shaken and ultimately transformed when I entered a supervisory relationship with a male student from a very different religious, cultural and political background. I spent the four years of our shared endeavour variously furious with myself for reacting so strongly to my student's attitudes and behaviours and furious with my student for impinging on my feminist understandings of myself as a professional woman. In particular we clashed over my expectations about the role of supervisor as guide and challenge, as someone to draw out the student's critical and creative capacities; to enable them to expand their academic, research and language skills while gaining independence, confidence and competence. Yet, I honestly think that the student thought I would somehow 'do it' for him. That, as a woman, my role was ordained as subservient. My student felt that he lost face when his work was critiqued by a woman. This threatened the efficacy of the relationship, especially as I came to accept that my often painful 40-year struggle against the patriarchal ideology and practice within my own culture and religion was a more powerful determinant of my reactions than my avowed empathetic liberalism.

The student has now completed and awaits graduation. We both learned that a conversation across such divides requires strategies that are more sophisticated than the bland injunction that those of us from The West (whatever that is) need to know about important religious festivals and practices, and put aside our urge to dominate, making ourselves open to the 'truths' of others.

There are some 'truths' that cause pain, often mutual pain, that I found I needed to resist to preserve my integrity. After more than a year of strain, my Department enlisted a calm, aware and clear speaking associate supervisor who, as a male, could 'translate' my feedback such that the student saved face but could benefit from my close reading of his work and advice about the next stages.

Here I have addressed the disruptive cultural and religious clash that we had to navigate. I have not addressed the language difficulties we encountered or the differences in academic traditions and expectations that were often the subject of our conversations. My Department was less supportive in this area and I found myself alone dealing with a text that required extensive editing to make it accessible to a reader in English. It was here that I learned of the vital skill set and capacities of those with long experience in this area. I was blessed because the editor we worked with saw herself as a support to both of us, enabling us to preserve the student's thinking and findings while producing a document that conformed to the university expectations about quality presentation.

So my story is finally one of coming to see that the most significant relationships in such situations are with those who will work on the shared project of helping the student learn and successfully complete. The extant model of the centrality of a primary supervisory relationship is just not strong enough to meet the student's and the university's goals.

Commentary

In the context of the HDR supervisor-student relationship in the institutional setting, this supervisor appears to have learned more than her student during the HDR process. The critical event of working with a student whose cultural, religious and political narratives resulted in behaviours that caused her to question her lifetime of personal narratives, particularly those based on strong feminist ideologies, from which she has created her identity, forced the supervisor to undergo a four year period of painful self-reflection. The supervisor's narrative resonates with the supervisory process as a battleground; a far cry from her stated ideology of her role as a guide and critical friend, and her implied ideology of the student's role of collegial reciprocity and appreciation of her critical interest. The "general understandings" the supervisor would expect within the HDR context – the "social or cultural beliefs and assumptions that are pervasive within a given community" (Schatzki, 2002, pp. 77-86, in Cumming, 2007, p. 116)—are missing. While this supervisor's narrative highlights that she was working across all three roles students expect of HDR supervisors—"thesis orientation", "professional orientation" and "person orientation" (Murphy, Bain, and Conrad, 2007, p. 211)—the student only wanted their thesis completed; they did not want to engage in professional or personal development.

The narrative hinges on the supervisor's need to maintain integrity in the supervisor-student relationship, and personal integrity, which appears paramount to her self-narrative of the supervisor's role. It acts as the catalyst for the supervisor seeking departmental support with supervision of this particular student, who does not fit any of her pedagogical assumptions. Her determination to stick with the student despite a culturally and linguistically generated communication chasm between them demonstrates commitment to the student and the supervision role, and resilience in seeking support from the department and elsewhere to ensure the student completes their thesis. Cumming (2007) found that HDR students felt their greatest support, after that of their supervisors and peers, came from people 'beyond the academy' who had expertise in areas they needed. The supervisor in this narrative demonstrates similar agency, seeking expertise from outside her department in areas beyond the scope of standard departmental support.

What is implied, but not stated, is that the supervisor is determined not to fail either herself or her student. She has never before experienced the position of being unable to guide or control the supervision process. While she hints that the student should not have been admitted to the HDR program, she does not elaborate on his academic background or enrolment details. As Cumming (2007) found, some students can circumvent the standard rules and regulations of admission to HDR. Perhaps the supervisor does not elaborate this point because she feels uncomfortable questioning the institutional HDR enrolment process without having the facts of the student's case.

Lessons learned

While this narrative raises questions about the efficacy of the single supervisor model, supervisor and student cultural 'fit', clarification of 'orientations' at the beginning of the supervisory relationship, the motivation level of each to complete the HDR process, commitment to the supervisor-student relationship, understanding of HDR conventions in particular institutions, and institutional processes for accepting HDR students, it also provides some solutions. Identifying and reflecting on problems in supervisory practice and the HDR process, and being proactive in addressing those problems, can surmount seemingly unsurmountable chasms. Seeking and gaining strategic support from both within and outside the institution in the form of co-supervision and an editor led to successful HDR completion for

the supervisor, student and institution, and a transformational learning experience for the supervisor.

Even if the student had had access to institution-led writing programs, would he have attended? What is not told in the narrative is that he knew the editor who worked on his text, having been in the adjacent room when she worked at the institution. Their relationship had been purely one of exchanging daily pleasantries about his family. He was happy for her to work with the supervisor, co-supervisor and him to facilitate his completion. It is possible he saw the editor's role as subservient and, therefore, acceptable.

'A dose of Australian policy wouldn't go astray'

Supervisor 2 (mature age female academic, Canada)

I was asked to supervise an international student from an African nation. He came from an elite and traditional family and had come into conflict with a male supervisor who said the student was not doing the work as directed. It was a very difficult situation for the student. In my assessment, there were power differentials, cultural differences and also gender issues. I did not have any difficulties … but I was the Dean ... but others did experience problems. The difference here, compared with Australia, is that there is a panel of supervisors, not one supervisor, and a chair. I was the chair.

The other issue for students here is the lack of financial support. I have first-hand appreciation of that! When financial support is provided, students are expected to work as a Teaching Assistant (TA), whereas Australian students have a choice. This TA work involves work not related to their academic study.

Time is not an issue here. It takes over five years to complete a doctorate. There is a lot of coursework and the comprehensive; a lot of hoop jumping. I think they are taking far too long to complete. I don't think you need more than three years to do a doctorate.

Commentary

Supervisor 2 constrained her narratives to three of the topics suggested by the main author, possibly reflecting her desire to participate but lack of time to elaborate due to her position within her institution. While the first narrative relates a critical event, the second two are more comment rather than narrative. However, the main focus of her narratives is the difference between aspects of the HDR process in Canada and Australia.

The critical event raises some of the same issues identified in Supervisor 1's narrative. Culture and gender appear to have created problems in a supervisor-student relationship, and interfered with the HDR practices and process. However, Supervisor 2, from her powerful position of Dean and Chair of a panel of supervisors, reflects that perhaps her position is a reason why she does not have a problem supervising a student about whom other supervisors have complained. Perhaps the student, himself in a powerful position in life outside the institution, respects her status. What is not stated is that Supervisor 2 is a highly experienced supervisor and examiner. To use one of Gayle, Speedy and Wyatt's (2010, p. 21) metaphors, she is a "gatekeeper" of the "oasis"; the "community of academia".

Having experienced both the Australian and Canadian systems, Supervisor 2 feels that HDR students (and their families) in Canada carry a huge financial burden. The tone of her comments

about a system whereby students must work as Teaching Assistants in areas not related to their academic study to receive financial support implies that this adds little to their HDR learning experience. However, one of the participants in Cumming's study (2007, p. 100), advocating that students work across disciplines, believes that "a key part of the doctorate is working in a zone where knowledge is free…You are a graduate of your university, not of your discipline".

Supervisor 2's comment about time, which you will see is a major issue for Student 1 in the next narrative, implies that the length of time allocated for full time HDR completion in Canada is far too long. Having worked in both systems, her evaluation is that the Australian timeframe is sufficient.

Lessons learned

Similar issues occur in HDR regardless of the supervisory structure or the institution's location. A supervisory panel system, implemented as a strategy to address these issues, can offer greater flexibility in meeting student and supervisor needs than the single supervisor system. Whilst there appears to be greater financial support for HDR students in Australia and the Australian Government's HDR policy may be a good thing, we should not become complacent; there is a need to constantly question, listen to stakeholders' narratives and evaluate HDR systems to improve the HDR experience and its outcomes.

'I was powerless'

Student 1 (mature age female academic; international student)

For students of the PhD journey, achieving one's goal can feel like a lifetime's worth of education in just three years. Despite the quality of supervision (or lack of) from my Principal Supervisor (PS), I went on to complete my research and amazingly did it within the stipulated time. I attribute this to the fact that I, the student, was myself a high achiever, independent and hard working in the first place; and that I had a Co-Supervisor (CS) who was a critical person and able to guide me in intellectual research matters. I also owed my PhD completion to my editor who was there for me always with support and encouragement. Here is my story.

I understand and recognize that postgraduate supervision is a process involving complex academic and interpersonal skills, and the supervisor-supervisee relationship is pivotal to the successful completion of a student's PhD. As an academic and researcher in my home country, and from my experience, I didn't really expect much with my supervisor from the start. I would think that the responsibility is on me. Also, I am very much aware that PhD students are supposed to be independent, but supervisors must have the essential skills to guide a postgraduate student towards sound proposal preparation, methodological choices, documenting, completion of a quality thesis and publishing their research. I was extremely glad when I was given an Associate Professor (AP) to be my PS. But, I did not feel too fortunate after a while because I felt she was either too busy to be effective in the supervisor's role, or racist and judgmental in her opinions when dealing with students from other countries. These are strong words but that is how it felt.

After almost a year and a half I realized that something was wrong. Although I met my PS as scheduled on a regular basis, and the PS appeared to know about my research plan and needs, it soon became clear that she knew very little about the appropriate research design methodology for my subject. Despite regular scheduled meetings and discussing the research design, including

being informed about the choice of my research methodology, I had to change the methodology. I had wasted a year and half reading, writing and working on the wrong research design. Also, I expected my PS to have a supportive and professional relationship with me but I found this lacking.

The 'failure' of not getting through a PhD award after the stipulated time frame can be devastating for a student and I started to worry. I requested a CS right from the first year, but my CS only came in during my final year. I did not think I could voice my frustration openly or in writing because I was an international student fully supported by the EIPRS. I thought it would certainly affect my student report; having a negative report from my supervisor would have an impact on the scholarship and funding to continue studying in Australia. Although I was bitter about my experience and frustrated, I understood that the supervisor was in a position of power so I had to remain silent and not raise any negative comments about the supervision until the last day to sustain this postgraduate-supervisor relationship. So, I had to adjust myself at her level in each supervisory meeting, which ended with further frustration and disappointment.

The experience was a heavy feeling. My PS' insufficient knowledge of the relevant field, research methodology and lack of constructive criticism and feedback had a profound effect on me. I frequently wondered, 'Am I going to complete my PhD journey successfully in the given time frame with this kind of supervision? A quality research thesis is important while time is a factor for me'. I worked day and night to impress her by producing high-quality work during my first and second year.

As postgraduate students, during the study, we had to present our research progress a minimum three times. My PS knew that I was presenting at research week. Prior, I had shown her my power point. I was surprised when she did not turn up for my presentation. I thought, 'She will be there for me and stand by me just like the other PS who are supportive of their students'. How wrong I was! She accepted me as her student but offered little support. I asked myself:

'Why is my PS' level of commitment and interest in me lacking?…Is it because I'm an Asian?…Is it I'm not good enough?…Each time I visit my supervisor, I have never created tension or had conflicting perspectives during the meeting…my fluency in English is good…and there is no communication problem…there are no disagreements…I never show any sign of disrespectfulness…I am always in time for the meeting…I accepted their comments. I had to…because these were the people that were going to get me through and help me to complete my PhD…why did this happen to me?'

My experience was that my PS did not reflect the behaviour of an ideal supervisor. This had far reaching consequences on my progress and the advancement of research completion within the stipulated time. Even up to my final year, I received what I thought were wrong directions. Finally, when I got a CS, I had to delete previous suggestions.

My experiences with my CS were a lot different. She was an excellent supervisor. I could fix an appointment to call via mobile phone to discuss my research work, even when she was away. She went through the final draft of my chapters and thesis via email and gave me very positive and constructive comments.

I was glad that my PS finally said I could buy my ticket to go home. I could not believe I had reached the light to submit my thesis. After setting the date and booking the ticket, my PS gave me the shocking news that I could not submit. This really worried me. I thought, 'My family back home is expecting me. What about the ticket I have booked? It is not cheap and who will refund the money to me? And if I have to change the date, I have to pay more just to change the date.

Why the sudden decision? My working institution did not support me to study and I have to go back to work.' As it was the end of my study journey, I didn't want to dispute her statement. I feel that, deep down, as a student, I was powerless!

Commentary

Student 1's highly emotive narrative, even in retrospect, highlights the complexities of the HDR experience in a context far from home. It gives the impression that the whole experience was one huge critical event made up of many smaller critical events. Emotions conveyed include powerlessness, disappointment, confusion, frustration, and fear (of speaking up, failure, and racism). Negative issues, exacerbated by her international student status and responsibility to fulfil the policy terms of her international student scholarship, include: a perceived lack of support, commitment, and encouragement from her principal supervisor; power differentials between her and her principal supervisor; lack of a collegial supervisor-student relationship; the tight timeframe; prevention from going home and back to work; time away from family; and meagre finances. Positive issues include the appointment of a dedicated co-supervisor who provided collegial support, caring support from outside the institution (editor), and achieving her goal of completing her PhD on time.

Despite being highly self-motivated, fiercely independent and determined to succeed, Student 1 felt constrained from speaking up about her worries about supervision and progress, and marked time for the first half of her candidature. This fear of speaking up may have been due to the way things are done in her home country as much as her fear of losing her scholarship. Only now that she has completed her HDR journey does she feel she can openly express her 'truth' about her experiences. As Supervisor 1 did in her narrative, Student 1 reveals that "the nature of research higher degree supervision is not always the clear, straightforward process that 'how-to-guidebooks' might have us believe" (Harbon & England, 2006, p. 91). Supervisors supervising students undertaking research in fields with which they are not familiar is a pertinent issue.

Ironically, this student's perception of 'ideal' supervisor characteristics bears a remarkable resemblance to Gayle et al.'s (2010, p. 26) supervisor, whom they describe in their narrative play as "our reader, our guide, our politically adept ambassador"; characteristics displayed by Supervisor 1 in her narrative, but which her student did not appreciate.

The unstated narrative within Student 1's story centres on visa issues. 'Other' data known to the authors through conversations includes this student's need to return overseas for data collection, and again for family duties when her father died. She had to take a short intermission, then had to reapply for her visa; a process that traumatized her because she thought she would not be able to complete her candidature. Coping with institution and government protocols at a time when she was grieving almost caused her to give up.

Lessons learned

International students face added pressure to complete their HDR candidature on time due to fear of losing scholarships, visa restrictions, and need to return to family and work. Therefore, it is imperative that supervisors are aware of the restrictions on international students in relation to gaining extensions of time for completion.

Supervisors and students need early mutual clarification of the amount of commitment they can put into the HDR journey to avoid the disappointment experienced by Student 1. While student

expectations of supervisor commitment in this narrative appear to vindicate Pearson's (1999, p. 188) argument that "for students, the PhD candidature is their major focus, while for supervisors the student is only one of many responsibilities", we argue that PhD students have equally pressing life responsibilities. The PhD cannot be separated and treated discretely from life as a whole; it is one part of the whole, not the whole.

'The shifting sands of supervisor selection; they come and they go, but I'm still here!'

Student 2 (mature age female academic, Australia)

How I set about getting a supervisor for my PhD was informed by my experience of higher degree supervision when undertaking my Masters research and thesis. This experience can only be described as little or no supervision under the guise of an adult learning model –students having the opportunity to undertake and direct their own 'journey' (education experience).

Meetings with this supervisor were not offered as a one-to-one encounter when feedback and direction were provided but took the form of monthly group meetings of four to six students with the supervisor. We were all mature aged students working full-time and studying part-time, so these meetings were held in the evenings. It could be argued that one of the benefits was the support that came from the other students. As part-time students, who were not often on the campus, the opportunity to form a sense of camaraderie was limited. However, the downside to this form of supervision was that it was not uncommon for the 'time' to be taken by one or two students who were having difficulties. I frequently came away with a sense that, while their concerns had been addressed and their work advanced, my work or concerns had not received adequate attention. In order to progress my research, I relied more heavily on the support and 'informal' supervision provided by a friend who had a PhD and was experienced in higher degree supervision. This contributed to a 'disconnect' with my 'formal' supervisor. He was essentially my supervisor in name only. When I sought advice from him his little knowledge of my work to that point meant he was either unable or unwilling to help.

After successfully completing my Masters studies I decided to embark on a PhD. I had had no choice in who was allocated to supervise my Masters work and I perceived I had been largely left to my own devices; a situation which I think had negative consequences with respect to the time it took to complete my research and write the thesis. I determined that if I was going to successfully complete a PhD it was necessary for me to choose a supervisor who would take a different approach. I had a question that I wanted to explore arising from my Masters' work and an idea of the theoretical underpinnings I thought would inform my PhD work. I identified individuals in the academy who had published work in this area and arranged meetings to discuss my ideas and ask what they could offer in the way of supervision if they accepted me as their student. I also talked with other students. As a result of these undertakings I found a person who was not only prepared to accept me as a PhD student but was someone I was reasonably sure had an approach to higher degree supervision that would facilitate my successful completion of a PhD in a timely manner.

This supervisor was supervising several PhD students. Some were linked to funded research projects and others were like me – part-time students working full-time in paid employment. The supervision style employed was a combination of fortnightly one-to-one meetings, at which feedback on written work was provided and ideas explored and discussed, and monthly group meetings at which students discussed their current work. These group meetings were more structured and more theoretical than those I had experienced in my Masters course such that they often became discussions around the strengths or limitations of particular theorists and

published works pertaining to the theorists. However, the interplay of distressing issues in my workplace and family responsibilities meant that my research proceeded slowly. When, as a result of restructuring within the school, my supervisor accepted a voluntary retirement/redundancy package, I was not in a position to complete my work before he left the university. I had to find a new supervisor.

Whereas in the beginning of my PhD studies the style and level of supervision had been a significant factor, this was no longer the case. The issues in my workplace had not been resolved and it was expedient that I shift my PhD candidature into the school in which I was employed as an academic. The person who had the knowledge and expertise of the methodology I was employing and some understanding of my research area was a colleague with whom I taught and had had conversations about my work. She agreed to become my supervisor. However, as our relationship had already been established as colleagues teaching the same topics, it was not possible to clearly establish a supervisor-student relationship. Again, as was my experience in my Masters studies, the primary style of supervision was group meetings. This group had been established for some time, with established norms and relationships that were not accommodating of a new member. For some time I attended these meetings feeling like an outsider. Furthermore, when I met with my supervisor as a student, mostly on an ad-hoc basis, it was difficult to quarantine PhD work from work around teaching. Teaching-related matters often derailed the supervisor-student discussion. This student-supervisor relationship was further complicated when she became my workplace supervisor. Furthermore, changing PhD supervisors led to a change in the theoretical direction of my work and necessitated going back to the literature to grapple with new ideas. So, instead of a sense of progress, I felt I was stagnating or even going backwards. A second supervisor, also from within the school, had been appointed but it was essentially in name only; neither of us initiated contact.

My supervisor gained an appointment at another university interstate. I decided I had already lost time because of the changed theoretical aspects and it was prudent to transfer my candidature to that university. I perceive that this created a new set of issues, particularly as my supervisor sought to establish herself in her new position. My perception is that I was part of her ‘old’ life and the fact that we had not established a regular meeting structure or student-supervisor relationship, combined with the geographical distance, led to infrequent contact. I felt that again I was essentially steering my own course. One way to counter this was to travel to the other university every month to a pre-arranged meeting. However, these meetings were not fruitful; it was too easy to slip into a collegial relationship and get caught up in matters not associated with my research. The data I collected lent itself to another change in the methodology and it is my perception that my supervisor lost interest in what I was doing. Her priority was given to competing interests such as grant writing. This perception is informed by the lack of feedback on written work and, when feedback was forthcoming, there was a time delay which often meant I had moved on in my thinking or writing. This became a problem as the thesis submission deadline drew nearer, with instructions and suggestions that required considerable work being conveyed at the ‘ninth’ hour. This created considerable stress and angst, and I seriously considered not finishing. However, I had come too far to give up.

Commentary

Student 2’s chronological narrative of HDR through both Masters and PhD completions in her place of work is punctuated by starts and stops attributed mainly to the student being orphaned by a series of supervisors. It portrays the complexities of the supervisor-student relationship as a series of critical events which lead the student to debate the value of students choosing their supervisors as against supervisors being allocated by the institution. Reflecting on her Masters

experience, she recognizes her need for a strong supervisor to keep her on track. Like Supervisor 1 and Student 1, Student 2 demonstrates agency by researching supervisors' credentials and seeking peer support to target a supervisor in her field of PhD study. Having achieved this, she suffers the negative impact of workplace upheaval and family responsibilities, as well as her chosen supervisor leaving. Undeterred, she demonstrates determination and resilience to move her study to a new discipline and seek a new supervisor. Upon discovering that having a colleague as a supervisor has many pitfalls – confusion between work collegiality, friendship, the supervisor-student relationship, and the PhD supervisor also be coming her workplace supervisor – she begins to question whether it is all worthwhile. In the process, she has experienced several different supervision styles, none of which seem suitable, had to change her methodology, which has meant going backwards, and has begun to feel like an 'outsider'. Her narrative resonates with Wisker and Robinson's (2010) research with HDR students who have lost their supervisors. She experiences "stuckness", which "impacts negatively on self-esteem [and] confidence, and may lead to attrition or delay in completion (Kiley & Wisker, 2009, in Wisker & Robinson, 2012, p. 60). This is demonstrated by the student not contacting an interim supervisor when her supervisor takes up a position at another institution. Once again, the student gets back on track, making the decision to move her candidature to her supervisor's institution. However, again she experiences disruption through her supervisor having 'moved on'. Just as Student 1 felt, Student 2 now feels that her supervisor has no time for her. Again she feels she is going backwards because she must change her methodology. Eventually, despite lack of feedback, she pushes on and completes her PhD, because, like the student in Wisker and Robinson's (2010, p. 61) Case 1, she has "the drive to finish…the Ph.D. no matter what".

Lessons learned

Regardless of whether a student chooses a supervisor or the institution allocates a supervisor, critical life events beyond the student's or supervisor's control can impact on the supervisor-student relationship, the supervisory process, and the whole HDR experience.

At the end of the day, however, students are the masters and mistresses of their own HDR destiny.

Students who are 'orphaned' by their supervisors need additional institutional support.

'I like being treated as an equal'

Student 3 (young female student, Canada)

I get along really well with my supervisor, having worked with her during my MA and now for my PhD. I think the only potentially problematic issue for the relationship is defining friendship/supervisor boundaries. She is not much older than me, and given our shared research interests we have a lot of things in common. We are friends on Facebook, and as a cohort of students we have gone out dancing and to other social events. I've never felt that being friends outside of academia is an issue and I certainly respect her opinion and value her feedback. From a pedagogical perspective, I enjoy that having this friendship deconstructs traditional student-teacher power relations, making it a more equal relationship. However, on occasion, I do wonder if she feels that she is able to be completely honest and critical with me about my work because of the relationship. I also wonder about the role gender plays, especially within my supervisor's cohort of graduate students. Often it is only the female students who go out with

our supervisor, with the male students declining to come, or not invited. Has the closer relationship between us women created opportunities that the male students do not get?

In spite of these questions, I enjoy our relationship, even though it may be atypical for a student-supervisor relationship. Recently, she asked me to collaborate with her on an article, and we worked very well together. It was a truly collaborative experience and I felt she valued my opinion as an equal in a way that I have found other academics do not. I find that I am able to appreciate her opinion and perspective, while at the same time feeling like an equal.

Commentary

Student 3 appears to have the ideal, openly collegial relationship with her supervisor that students 1 and 2 were seeking. While not stated, it may be supposed that this provides Student 3 with the intellectual stimulation and confidence needed to fully participate in the HDR experience. Perhaps age played some part in this student-supervisor relationship, with both being young, highly social and technologically savvy females who connect by social media (Facebook), which enhanced their communication with each other both within and outside the student and supervisor roles, and the higher education institution. This narrative resonates with the collegial relationship shared between the students and the supervisor in Gayle et al. (2010), where they meet to share their lives, openly discussing families and relationships.

However, even Student 3 questions whether their friendship might impact the supervisor's honesty with feedback, and privilege her over other students, particularly the males, who do not enjoy the same social relationship with the supervisor.

Lessons learned

Is there such a thing as the ideal supervisor-student HDR relationship?

Students and supervisors are different, and supervisor-student relationships are different. A supervisor-student relationship that works for some people may not work for others.

Stepping back and reflecting on the supervisory relationship and process can enhance it further or address issues not previously considered, such as ethical boundaries.

'I need this back next week!'

Editor 1 (mature age male, Australia)

In working with higher degree students I sometimes wonder if anyone has read their thesis from beginning to end. Frequently I receive a request with only one week to do a thorough edit. This is not enough time to edit a thesis in accordance with standards for thesis editing (standards C, substance and structure; D, language and illustrations; and E, completeness and consistency) as stipulated in IPED's 'Guidelines for editing research theses' (IPED, 2010). By the time I have reached a middle chapter, I realize there is no way the thesis will be submitted by the requested date. This is extremely frustrating. They are stressed and so am I because I cannot deliver a high quality job in time. Any request for a final edit with a turnaround time of less than three weeks is unrealistic. It doesn't allow enough time for me to do a good job, for the student to do corrections and for the supervisor to have a final read before the thesis is submitted. Then there

is the issue of the terrible state of the writing in some theses. So many corrections need to be made that the document is almost unrecognizable after I've finished marking it up.

I see no merit in compromising quality for the sake of getting the thesis submitted 'on time'. I know there are end-dates that have to be met, but there must be ways of ensuring that date can be met without the final panic.

Commentary

Editor 1's narrative can be summarized as focusing on three major issues arising from a series of critical events involving students and supervisors expecting the impossible: time, ethical application of editing standards, and poorly written documents. The editor's dominant emotion—frustration—pervades the narrative, bordering on rage. Yet, if "research cannot be separated from writing" (Kamler & Thomson, 2006, p. 11), why do supervisors not use "writing-oriented supervision practices?" (p. 157).

Lessons learned

Supervisors and students need to be aware of the editing process and how long it is likely to take. Editing time should be incorporated in the overall supervision plan.

'The line in the sand keeps shifting'

Editor 2 (mature age female, Australia):

'Should I become friends with my clients?' Probably not, but it is difficult not to when working with students and their supervisors because we all end up sharing the PhD journey to achieve a high quality output.

Confidentiality? A supervisor might say something to me in confidence about a student, or vice versa. Students often talk about their fear of complaining, fear of questioning the supervisor's advice and fear of asking questions if they don't understand something. They also bemoan difficulties they encounter with their visas or admit to feeling disconnected from, disinterested in or not really understanding their HDR work because they are analyzing and writing about someone else's data. Some students doing a thesis by publication query whether they are being used to enhance their supervisor/s' research publications profile while beginning to build their own. Supervisors confide in me about communication barriers and thesis writing issues, or stresses in the supervisor-student relationship. My dilemma is that sometimes I have heard something from either the supervisor or student that could be beneficial to both if shared. But…no.

Where do I draw the professional and personal ethical lines in the sand when editing an HDR thesis? Working with highly stressed and sometimes distressed students, supervisors who consider they can do no more with the student, and documents with such poorly written language and structure that I have no idea where to begin or end pushes me to personal and professional ethical limits. (Poor writing is not confined to students for whom English is not the first language). How much input from me is too much? Sometimes the only way to work on such a document is to sit with the student and talk them through it.

I sat with one student each evening for a month, explaining the editing process as I did it. Initially, when I asked her what she was trying to say she would tell me very clearly, but when I asked her to write it down the meaning vanished. This is when I had a conflict between my professional editing ethics and my personal principles of helping people – in this case my desire to help teach her how to write in English so that her written text said what she wanted it to. So, for the first week, as we sat at her computer, I would ask her to tell me what her text was supposed to say and I would type her narration into her document and cross out the jumbled text that had been there. 'Track changes' is the best invention! No, this wasn't editing. 'Should I be typing for her?' The second week brought a revelation. At the Monday session the student typed the words herself as she spoke them to me. I was mind-blown at the speed with which she had picked up the writing conventions in English. For the rest of the month she rewrote and I edited until her thesis was completed to a very high written standard. I had moved from typist, translator and English writing teacher back to the editing role. I had also become a friend. I wonder, could there be oral thesis submission now we have such great technology? Conversations between students, supervisors and examiners?

My initial reservations about breaking ethical standards evaporated because the first week of typing had enabled the student to learn how to write what she meant instead of trying to translate individual words into English and put them together on the page. I was also in consultation with her Primary and Secondary Supervisors throughout the whole process; again a situation removed from just getting the document, editing it and sending it back. As an editor of HDR theses, I believe the comments editors add to students' texts enhance the overall HDR learning experience; students learn to write better. Hopefully they will pass on their writing skills to their students.

I think the job of editor for HDR theses is invaluable for ensuring quality published outputs and as an added neutral support for students and supervisors. Professional objectivity lets me work non-judgmentally whereas supervisors and students have so much invested in the HDR process that they may make subjective judgments that affect timely, high quality completion.

Commentary

Editor 2's narrative demonstrates her reflection on the editing process as an ethical minefield. She expands the ethical quandaries of working with HDR students and supervisors from purely editing ethics to the implications of forming collegial relationships, issues of client confidentiality, providing emotional as well as professional support, and viewing the editing process more as a learning experience for the students than a standard editing job. Although the narrative focuses predominantly on the editor working with an international student, her acknowledgment that many other HDR students have difficulties writing to expected academic standards suggests the need for the expansion of strategies such as writers' circles for second language research students (Behrend, 2010) to all HDR students.

Lessons learned

Collegial working relationships between supervisors, students, and outside support people such as editors can benefit the HDR process by becoming part of HDR practice.

Editors are more than wordsmiths.

Summary

The narratives confirm the influence of many of the factors Kiley (in Hopwood, Boud, Lee, Dahlgren, & Kiley, 2010, p. 87) identified as impacting "the doctoral curriculum", including 'candidate characteristics'; 'supervisor/s characteristics'; 'candidate and supervisor learning and research experiences'; 'government policies'; 'university policies'; 'research culture'; and 'institutional protocols'. While Kiley includes 'Examination', this is not an overt focus of the narratives. However, it is implied in students' fear of failure, and students' and supervisors' demonstrations of resilience in their determination to complete their goal of completing each HDR journey.

The complexities of the supervisor-student HDR relationship and the whole HDR process are repeated throughout the narratives, and also feature in the HDR literature. Hence, while they are not new, they reinforce the importance of continually striving to seek strategies to better address them. In dot point form, common HDR experiences and concerns in the narratives include:

- conflict (cultural, ideological, personal, professional);
- personal and professional integrity;
- working the HDR experience into the whole of life experience – it is not a separate entity;
- student and supervisor diversity – characteristics;
- language and HDR writing issues;
- agency and resilience in the face of adverse critical events;
- value of supportive relationships within and outside the institution;
- power differentials;
- the emotional element of HDR experiences;
- specific issues for international students;
- ethical issues in collegial relationships (including for, and with, editors);
- supervisor allocation and selection systems;
- supervisory styles;
- need for planning and clarification of HDR practices and processes.

Paramount is the importance of productive supervisor-student HDR relationships, which require supervisors and students to identify and address any issues they may have with power differentials, personal characteristics, professional principles, cultural, social and religious beliefs, time constraints and differing expectations from the supervisory process. It is interesting that these issues arise whether the system uses one main supervisor per student or a panel of supervisors. While institutional policies outline supervisors' duty to provide "intellectual support, procedural knowledge and at times emotional support" to their HDR students (Flinders University, 2012, for example), the students and other support services also have a duty to ensure the process works.

The narratives indicate the importance of a mutually-agreed and clearly explained supervision plan from day one, outlining the supervisor's HDR ideologies and 'orientation' to the supervision process; a schedule for regular supervision meetings; type of supervision (group or one-to-one); dates for students to submit work to supervisors; dates for supervisors to return feedback to students; and an end date for the completed thesis (not the last day of the candidature), allowing time for editing, student and supervisor final corrections, printing, binding and submission. This end date should be approximately eight weeks before submission date. Adopting a project supervision matrix for the "learning and teaching process; developing the student; and producing the research project/outcome as a social practice" (Maxwell &

Smyth, 2010, p. 409) has the potential to enhance the overall HDR experience for supervisors and students.

Manathunga (2006, in Leggatt & Martinez, 2010, p. 605) maintains that if HDR students are not "self-motivated and able to raise questions and problems with their supervisor early", this is a "warning sign for non-completion." Students have a duty to ask questions because supervisors may "assume knowledge the … student does not have" and forget that the "student [may be] struggling to learn the material for the first time" (Berrett, 2012). Supervisors need to be constantly aware that "it's hard to know what it is like for someone else not to know something that you know." Lack of this awareness is "the chief driver of bad writing … and bad teaching" (Pinker, in Berrett, 2012). Only the student in Supervisor 1's narrative appeared to lack motivation. While Student 1 was afraid to raise issues with her supervisor during the first eighteen months, after this she became courageous through desperation to achieve her PhD.

The most consistent qualities demonstrated throughout the narratives were the resilience, persistence (fitness), and agency of supervisors, students and editors to achieve timely HDR completions. Seeking solutions outside the student-supervisor relationship required collaboration with colleagues and relevant services, and serious questioning of compromise for the sake of completion: compromised professional and personal standards, ethics, beliefs and principles; compromised professional and personal relationships; and compromised quality to fit time constraints. This questioning led to a shift in the way work was done while minimising compromise.

The narratives from Students 1 and 2 raised serious questions about supervisor commitment to the HDR supervision role. Non-spoken assumptions could be made that perceived lack of commitment could be due to supervisors having too many HDR students. Spoken assumptions were that HDR supervision was a low priority.

The issues raised by students and supervisors point to the need for greater supervisor development in readiness for learning how to interact with students from culturally and ideologically diverse backgrounds; how to perform different supervision styles with different students; and how to plan their time to ensure they provide sufficient commitment to HDR students.

It would seem that students also need greater preparation for understanding their commitment to their HDR role, and understanding of the supervisor's role.

Time, an issue previously synonymous with international students because they must return home within the specified three years, is now an issue for domestic students in Australia. The Canadian comparison provides food for thought re time, expense, and panel supervision.

Conclusion

In light of the issues discussed in this paper, there is now a greater need to nurture student and supervisor motivation for undertaking HDR, and to develop their ability to devise and adhere to a well-planned and managed, mutually-agreed teamwork approach to the supervision process to ensure survival of more than just the fittest. At an institutional level, providing additional support for supervisors' development will be critical for helping them learn to deal with emotional work, to take each student and their topic as they come, and to confront personal challenges with a nonjudgmental mindset. Perhaps adopting the Canadian system of a panel of supervisors could provide support for individual supervisors, but may or may not be in the best interests of students. Expanding research networks across the world depends in some part on the experiences of HDR students who return home after completion. Ensuring they have a

positive experience so they are willing to maintain links can open the door for future collaborative research and therefore greater institutional research output.

Finally, the word and the act 'supervision' imply a punitive power differential. Could replacing it with the term 'supervisor' make for a more collaborative HDR working environment?

Limitations

The stories provide glimpses only of random experiences of HDR and there are no narratives from examiners. All narratives except one (an editor) are from women. Only one narrative (Student 3) is from a young woman, with all others from mature-aged people. None of the supervisors or students whose narratives appear in the paper were in supervisor-student relationships with each other. No generalizations can be made from the narratives' content. "All generalizations are dangerous, even this one" (Dumas, in Cohen & Cohen, 1988, p. 149).

References

Australian Government Department of Industry, Innovation, Science, Research and Tertiary Education (2012). Overview of Research Block Grants. Retrieved March 1, 2012 from http://www.innovation.gov.au/Pages/default.aspx.

Behrend, M. (2010). Writers' circles for second language research students: developing as research writers. In Proceedings of the 2010 Quality in Postgraduate Research Conference 'Educating Researchers for the 21st Century', Adelaide, Australia April 13-15 2010. Canberra: The Centre for Educational Development and Academic Methods, The Australian National University, 241-244.

Berrett, D. (2012). Harvard Conference Seeks to Jolt University Teaching. The Chronicle of Higher Education, February 5 2012. Retrieved February 14, 2012 from http://chronicle.com/article/Harvard-Seeks-to-Jolt/130683/.

Boud, D., Keogh, R., & Walker, D. (Eds). (1985). Reflection: Turning experience into learning. London: Kogan Page.

Brundage, D. H. (1980). Adult Learning Principles and their Application to Program Planning. Minister of Education Ontario, Queens Park Toronto.

Clandinin, D. J., & Connelly, F. M. (1989). Narrative and story in practice and research. Retrieved February 14, 2012 from http://eric.ed.gov/PDFS/ED309681.pdf .

Clandinin, D. J., & Connelly, F. M. (2000). Narrative Inquiry: Experience and story in qualitative research. San Francisco: Jossey-Bass.

Cohen, J. M., & Cohen, M. J. (1988). The Penguin Dictionary of Quotations. London: Penguin Books.

Connelly, F. M., & Clandinin, D. J. (1990). Stories of experience and narrative inquiry. Educational Researcher, 19(5), 2-14.

Gayle, K., Speedy, J., & Wyatt, J. (2010). Gatecrashing the Oasis? A joint doctoral dissertation play. Qualitative Inquiry, 16(1), 21-28.

Harbon, L., & England, M. (2006). The cultural practice of Research Higher Degree supervision over distance: a case in progress. University of Sydney Papers in TESOL, 1, 87-107.

Hopwood, N., Boud, D., Lee, A., Dahlgren, M. A. & Kiley, M. (2010). A different kind of doctoral education: a discussion panel for rethinking the doctoral curriculum. In Proceedings of the 2010 Quality in Postgraduate Research Conference 'Educating Researchers for the 21st Century', Adelaide, Australia April 13-15 2010. Canberra: The Centre for Educational Development and Academic Methods, The Australian National University.

IPED (2010). Guidelines for Editing Research Theses. Retrieved March 1, 2012 from http://www.editors-sa.org.au/sites/default/files/Guidelines%20for%20editing%20research%20theses.pdf

Kamler, B. & Thomson, P. (2006). Helping doctoral students write: Pedagogies for supervision. London & New York: Routledge.

Kolb, D, A. (1984). Experiential Learning: Experience as the source of learning and development. Englewood Cliffs, N. J.: Prentice Hall.

Lave, J., & Wenger, E. (1991). Situated Learning: Legitimate peripheral participation. New York: Cambridge University Press.

Leggatt, P., & Martinez, K. (2010). Exploring emerging issues in research higher degree supervision of professional doctorate students in the health sciences. Advances in Health Science Education, 15, 601-608.

Maxwell, T. W., & Smyth, R. (2010). Research supervision: the

Cumming, J. (2007). Representing the complexity, diversity and particularity of the doctoral enterprise in Australia. Centre for Educational Development and Academic Methods, PhD Thesis. Canberra: The Australian National University.

Cumming, J. (2008). Acknowledging conflict in communities of practice: a case study from doctoral education. In Proceedings of the 31st HERDSA Annual Conference, Rotorua, 1-4 July 2008, 'Engaging Communities'. Milperra, NSW: Higher Education Research and Development Society of Australasia Inc., 117-125.

Dewey, J. (1938). Experience and Education. New York: Simon & Schuster.

Edwards, D., Radloff, A., & Coates, H. (2009). Supply, Demand and Characteristics of the Higher Degree by Research Population in Australia. An ACER Research report for the Department of Innovation, Industry, Science and Research, June.

Flinders University (2012). Flinders policy and resources. Retrieved February 14, 2012 from http://www.flinders.edu.au/teaching/support/research-education/postgraduate-supervision/postgraduate-supervision-processes.cfm.

research management matrix. Higher Education, 59, 407-422.

Murphy, N., Bain, J. D., & Conrad, L. (2007). Orientation to research higher degree supervision. Higher Education, 53, 209-234.

Pearson, M. (1999). Rethinking the past and the future of the PhD in the Humanities and Social Sciences. Southern Review, 32(2), 186-190.

Schön, D. A. (1983). The Reflective Practitioner: How professionals think in action. New York: Basic Books.

Webster, L. & Mertova, P. (2007). Using Narrative Inquiry as a Research Method: An introduction to using critical event narrative analysis in research on learning and teaching. Oxford: Routledge.

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

Wenger, E. (2000). Communities of practice and social learning systems. Organization, 7(2), 225-246.

Wisker, G., & Robinson, G. (2010). Doctoral orphans: nurturing and supporting the success of postgraduates who have lost their supervisors. In Proceedings of the 2010 Quality in Postgraduate Research Conference 'Educating Researchers for the 21st Century', Adelaide, Australia April 13-15 2010. Canberra: The Centre for Educational Development and Academic Methods, The Australian National University, 59-63.

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Measuring Research Student Satisfaction in an Era of 'Students as Customers'®

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Abstract

Over the past thirty years the higher education sector in Australia has undergone radical change and transition, as a result of the adoption of New Public Management (NPM) techniques and thinking in higher education. The shifts which have occurred in the sector have led to an increased emphasis on the quantification of outputs and moves to view 'students as customers.' Significant questions remain regarding whether this shift has; improved the satisfaction level of students, whether students have benefited from the conceptualisation as a customer and whether student feedback is effectively used to improve the quality of education provided in universities. This article will review the impact of NPM and the conceptualisation of students as customers within the Australian context, with a specific emphasis on the conduct and analysis of student satisfaction surveys for higher degree research (HDR) students and attempts to close the feedback loop with research candidates. This article will sharpen the focus on the evaluation instruments, given that they are a critical and regular part of analysis and benchmarking undertaken at universities. The article will suggest alternatives to the traditional Likert scale based surveys generally used in Australia and suggest that alternatives may be complementary or indeed more effective in obtaining clearer information to improve student experience. The article will then conclude with suggested directions for future research and key conclusions related to the evaluation of research student experiences.

Keywords: New Public Management, Research Students and Student Satisfaction

Background

The international higher education sector continues to undergo rapid change and in Australia this has included a move into a new paradigm, where corporatisation, university branding and competition are now firmly established in the lexicon of the higher education sector. As a result, the current era in higher education can be considered as a post-reform phase, where universities are now firmly ensconced within a culture of performance based analysis and management by objectives (Hughes & Sohler, 1992). Within this framework however, the roles and responsibilities of students and academics remain in a period of transition, consistent with changing identities in the sector (Holligan, 2005). Critical to the changing roles in universities has been the adoption of New Public Management (NPM) performance analysis and goal setting. NPM can be described as public sector management technique based on the idea of setting transparent and agreed-upon objectives and adopting transparent and agreed-upon strategies for reaching them. It is based on techniques and strategies which have developed in the private sector, but have been applied in the public sector (Dunleavy & Hood, 1994, p. 9).

As a result, performance based metrics have now in general been established across the university sector in Australia. Whilst these reforms have not been universally accepted as being positive for the quality of teaching and research, they continue to play a prominent role in re-defining the roles of academics, students and administrators and placing competing demands on these roles (Chandler, Barry, & Clark, 2002).

This article shall seek to address the transition in the conceptualisation of higher degree research (HDR) candidates, from 'students to customers' (D'Eon & Harris, 2000; Playle, 1996) as a result of NPM and related policy and service delivery changes in higher education. Within this changing paradigm, the article will examine the role of student experience surveys as a critical mechanism which Universities utilise to engage and understand their 'customers' as a potent form of market research and whether survey forms and techniques have kept pace with the changes in the sector. The article will raise methodological concerns with the use of current satisfaction surveys, with regards to clearly identifying ways in which to close the feedback loop and to optimise student experience. The article will also suggest changes to current survey techniques that may assist in providing more tailored and more insightful understandings of the research student experience, with a view to generating action to address student concerns. The following section will begin by providing a broad overview of the changes that have occurred in higher education as a result of NPM and addresses how these changes have impacted on the conceptualisation of 'students as customers,' before integrating these concepts into the discussion of student satisfaction surveys.

New Public Management and Higher Education

Throughout the 1980's and 1990's significant changes occurred in public administration and management in both the policy formulation and service delivery realms in many countries such as the United Kingdom, New Zealand and Australia. Critical to these changes were the understanding that there has been a shift from hierarchical government to market and network based approaches (Rhodes, 1996). Under these approaches market and market principles of performance management and managerialism have begun to exert a more critical influence in the development and implementation of public sector policy (Bell & Hindmoor, 2009, p. 10; Jordan & Schout, 2006). The changes in policy making and public sector management have led to a move towards a new style of management based on corporate models and private sector management techniques (Chandler, et al., 2002). This system of reforms, NPM has been dominated by characteristics including: an increased emphasis and greater discipline in resource usage and accountability; the use of management by objectives and explicit performance measures; increased emphasis on competition and outputs and the disaggregation of public sector units (Hood, 1991, p. 4).

The changes occasioned as a result of NPM have had a significant impact on the higher education sector in Australia. In Australia, reform of the higher education sector has been heavily influenced by a number of critical reviews of higher education which have emphasised changes to the higher education system aimed at generating competition and improving outputs. Reviews such as the Dawkins Review (1988) and Bradley Review (2008) have demonstrated that there is an expectation that universities are to act within the frameworks of clear business models and achieve corporate style goals and objectives. These goals and objectives are intended to improve the performance of the sector on an international level and make Australia competitive in the international education market (Commonwealth of Australia, 2008). In particular university research performance has come under increased scrutiny, with each university needing to quantify and justify research results for continued government funding, whether these be; research grants, publications, student enrolments and thesis

completions. One of the most important techniques has been the use of performance targets and goals by universities to manage their performance and benchmark themselves against competitors. The Excellence Research Australia (ERA) initiative is one such example of the quantification of performance for comparative purposes, with the stated objective to 'assess research quality within Australia's higher education institutions' (Australian Research Council, 2011).

With regards to research students and quantifying performance in Australia, there are a number of measures which directly tie performance outcomes to funding, including research block grant funding for the Research Training Scheme (RTS) which provides funding for domestic candidatures and the Australian Postgraduate Award Scholarships (APA), which provides a living stipend. Funding given to each university for these schemes is based on formulas which assess previous performance on key areas such as student load and research degree completions as a basis for the determination of future funding. As a result of these funding models, which are heavily based on performance and relative benchmarking, all Australian universities face demands to ensure timely completions of research students as well as providing research training for the future academic workforce (Commonwealth of Australia, 2008). As a result the systemic considerations involved with research student funding can then be seen to create a strong motivation for universities to perform well in respect to the key metrics that drive funding as well as more traditional academic goals. Given this, ensuring quality research training education is provided to students whilst meeting completion goals remains a significant challenge and perhaps an inherent tension in managing HDR candidatures under the current frameworks (Pearson & Brew, 2002; Wisker, Robinson, & Shacham, 2007).

'Students as Customers'

Given the changes that have occurred in the higher education sector as a result of shifts towards NPM, the understanding of what constitutes a student and their role within the education system has also undergone a transition or change. At all levels of the tertiary education system, undergraduate, postgraduate coursework and postgraduate research students are now increasingly faced with balancing financial, time and family demands with academic workloads (Moreau & Leathwood, 2006). Perhaps as a result of this, there has been a decreasing culture of students engaging on campus, and attending university only at class time or in some cases not all, due to the rise of online learning methods. Financial circumstances, changes in traditional student unions, and social networking also provide decreased emphasis on face to face on campus engagement. A number of authors such as Albanese (1999) and De'on and Harris (2000) have reflected on this changing role of students and suggested that there has been a shift from a 'student to customer' in the realm of higher education. This conceptualisation however has not gone unchallenged given that issues surrounding the role and identities of students and academics strike at the core of university life and values which have traditionally prioritised knowledge acquisition and dissemination (Archer, 2008). To this end there has been mixed evidence regarding the conceptualisation of students as customers with arguments both in support and against this viewpoint. One of the most common themes however is that viewing students in this way is counter-productive and does not lead to a better standard of education or better quality graduates (Albanese, 1999). For the purpose of this article, it will be accepted that the conceptualisation of students as customers remains a controversial concept, however that many universities have adopted this viewpoint as a result of the performance objectives and pressures established through NPM concepts.

With respect to research students, this article intends to use the 'students as customers' framework as a basis to understand and review the way in which student feedback is generated

and the response it receives. The conceptualisation of a research student as a customer can be seen to commence at the point of enquiry where, students are encouraged to engage with potential supervisors through a range of means, a number of universities maintain supervisor profile databases, where students can choose to contact a supervisor with similar research interests, hence encouraging a student to choose their 'educational product,' from a suite of providers, consistent with a student choice model (Bratti, 2002). This choice of university and degree is also set against a backdrop where students choosing to undertake a research degree make a significant financial sacrifice to forgo graduate employment, which in general provides better final reimbursement than a scholarship or stipend (Graduate Careers Australia, 2011). This economic investment can be seen even more acutely with respect to international students, who as opposed to their domestic counterparts pay significantly more to undertake research degrees at Australian universities. As such for international students, it can also be seen that a research degree is not only a substantial academic, social and physical journey but also represents a significant economic burden over the length of their degree.

As a result of the financial pressures and implications of undertaking a research degree, there is a growing sense that candidates maintain not only rights as students, but also as customers in receipt of a commodity and with the expectation that they should be able to maintain similar rights to consumers of other products. Given this scenario and the transitions which have taken place in the higher education sector, it is feasible to accept the proposition that students or candidates of the past have now been transformed into customers of today, irrespective of the debates surrounding the merits of this conceptualisation and that their feedback should be dealt with in a more progressive nature by universities in order to improve the quality of the educational product or student experience.

Student surveys and the Link to NPM

Given the demands of ensuring competitive performance, understanding and quantifying student experience through evaluations and surveys has become critical to understand what barriers may be likely to act as an impediment to strong performance in key metrics related to research students such as student completions. Further, given the conceptualisation of students as customers noted in the preceding section, student experience evaluations have become critical not only for process improvement purposes but also as a key form of market research in an era of changing identities. These surveys seek to engage students' views and are the primary data collection mechanism for research student experience in Australia. It has also been noted that the collection of this data by universities is a critical step in allowing individual departments to understand the needs of students, consistent with a constructive and effective evaluation mechanism to improve supervision practice and student experience (Mainhard, van der Rijst, van Tartwijk, & Wubbels, 2009, p. 359). These surveys tend to be comprehensive and measure students' attitudes on research candidature on a yearly basis, with a particular emphasis on research supervision, infrastructure, generic attributes and research climate. It has been noted however that student surveys may pose difficulties when applied for the purpose of institutional benchmarking and difficulties remain in closing the feedback loop on student comments (Ginns, Marsh, Behnia, Cheng, & Scalas, 2009) as well as implementing substantive improvements to research student experience.

As a result one of the inherent tensions created in the survey process is that universities collate large amounts of data regarding their students' experiences, however on many occasions are not able to implement this feedback with specific and measureable outcomes. Further there is often very little direct engagement with the student body on the results of these experience surveys and little negotiated goal setting and measurement which arise as a result. An example

of this may be seen with respect to data related to supervision quality and the student experience of the supervisory relationship. Surveys generally indicate that there is often a critical disjuncture in the expectations that supervisors and students maintain regarding the supervisory relationship, consistent with the gap or juncture between student and supervisor which has been previously been established in the literature such as Murphy, Bain and Conrad (2007). This process of expectation setting and mutual understanding can be seen to form part of 'complex bi-lateral interaction processes' (Kam, 1997, p. 81) which typify the candidate-supervisor relationship. Given that at most universities, supervision limits cap supervision of students at around five students, and many academics may supervise significantly less students, the issue of anonymity in the survey process becomes critical. If a student is to provide frank commentary on the quality of the supervision they receive, this may be identifiable and may place the student-supervisor relationship under greater strain or pressure, however if the comments of students are not addressed specifically with each supervisor or the survey instruments are not intentionally designed to obtain this feedback, can a university hope to improve the outcomes for both students and staff?

The comments above illustrate that the student experience evaluation process faces difficulties in closing the loop with students and that survey design may contribute to these difficulties. As a result re-defining some of the survey instruments and including students in generating performance measurement targets that are directly related to student experience may serve to provide a better approach. These arguments are also consistent with the move that has occurred to embrace NPM in the higher education sector. If NPM approaches underpin the view of 'students as customers' then for the sake of consistency it is reasonable to suggest that there could be an expectation that the results from student experience surveys lead to negotiated goal setting and performance measures regarding aspects of student experience. The following section will argue that the design of student experience surveys for research students is critical in obtaining clearer and more relevant information that can be used to initiate a more collaborative form of goal setting and performance analysis.

Student Survey Methodologies and Alternatives

Given the discussions above regarding the changing role of students, an important starting point, in trying to better integrate student feedback and close the feedback loop is to understand what changes could be made to current survey designs in order to improve these and better align information for potential action once data has been collated. The following section will outline the most common methodological approach taken for the conduct of research student experience surveys and then outline alternatives which may serve to improve upon this process.

Critical to understanding the efficacy of research student evaluations and the ease to which the results can be translated into goals and objectives to improve student experience are considerations regarding the methodology used to collect information from students. In terms of the methodology used to obtain student responses, the most typically used structure is a survey based on responses to multiple Likert scale questions which cover areas such as generic attributes, research climate, supervision and infrastructure. The Postgraduate Research Experience Questionnaire (PREQ), which is part of the national Australian Graduate Survey is the primary data collection mechanism on research student experience in Australia and reflects the methodology described above. The survey is administered nationally and consists of asking respondents for demographic information as well as their opinions on a variety of areas related to their student experience. The following question in Table One mirrors the approach used in the PREQ, although it applies an original question to this format:

Table One: Sample Student Experience Question

Q1. My supervisor actively listens and engages with my research topic development					
Strongly Disagree ❑	Disagree ❑	Neither Agree nor Disagree ❑	Agree ❑	Strongly Agree ❑	Does not apply ❑

Whilst Likert scale based surveys have been traditionally used to measure student experience across both coursework and research cohorts, it can be increasingly seen that further and perhaps more differentiated work needs to be done with respect to survey methodology and structure, particularly with respect to higher degree research candidates. The first critique regards the way in which the Likert style survey asks for a student's rating of their satisfaction, but does not ask to students to rate the relative importance of the item. In this sense each item is then ascribed a nominally equal weighting of importance that may not represent a student's weighting for the level of importance. As a result there is a limit to which the data can be analysed in terms of understanding a broader picture regarding which issues students themselves identify as critical relative to other items. The second critique relates to the design of these surveys and the type of bias which is inherent in the Likert scale survey style. In general terms, the design of surveys and the type of bias which is elicited as a result of the designs have been recognised as an important consideration in designing and assessing survey efficacy (Dolnicar & Gruen, 2007). Critical to this has been the establishment and understanding that response style bias may negatively influence the integrity of data obtained through surveys (Baumgartner & Steenkamp, 2001) and as such the usefulness of the data collected for implementation purposes. Broadly speaking response style bias refers to bias that may exist based on the design of a data collection mechanism. This type of bias may lead to the perpetuation of a particular type of response pattern that can alter the overall results obtained. Likert scales may be particularly prone to this type of bias, given that they involve a high degree of repetition in their response process and have a standardised format. As such the bias inherent in the design of such surveys may as a result mean that these surveys are not yielding meaningful results on student experience with respect to research supervision, infrastructure, generic attributes and research climate or providing the sufficient level of detail so that these issues can be addressed. This can then be seen to have a deleterious effect on the capacity of universities to address and respond to the needs of research students.

Given the critiques of the traditional Likert scale student satisfaction survey and the need to address student feedback in a meaningful way, this article will now seek to outline alternative student evaluation mechanisms which could potentially be trialled as an alternative to current surveys. Three approaches will be suggested; survey differentiation, the use of relative importance indicators in surveys and qualitative focus groups. It is envisaged that these methodological approaches will lead to a better triangulation of data regarding research student experience, and could be used in unison to obtain a more representative sample of student views and insights as well as being used to directly and specifically address areas of concern.

Survey Differentiation

The most frequently used Postgraduate Research Experience Questionnaires can be critiqued on the basis that they are generally generic survey instruments which do not differentiate between different research cohorts. There is a view however that conducting such surveys does not address the breadth and depth of research student experience across a range of disciplines and institutions. Research student feedback questionnaires have predominantly been based on an assumption that HDR students can be seen as a general cohort of students. The point can be made however that the experience of research students will vary across discipline groups, in this way a PhD in Drama can be seen to be significantly different to a PhD in Engineering. Given this, there is a sense that although the current survey structures provide a solid basis in which to understand student experience, more targeted and more varied means of obtaining student feedback may be appropriate as a way to better understand and address the needs of research candidates. To this end it is suggested that surveys could be designed according to cohort groups e.g. natural sciences, creative arts, education and humanities, medicine, health sciences and engineering. In this way surveys could ask questions specifically related to each discipline that may not be relevant to another field. An example of this may be machine or technical issues which are often a key feature of research in engineering disciplines; specifically probing at the discipline level is likely to produce insights which may not be obtained at the generic university wide level. As a result of surveys which seek to identify more relevant data collection, it is envisaged that a more productive dialogue may occur between students and universities to adequately address areas of student concern and plan for process improvements in a more efficient way.

The Use of Relative Importance Scales in Surveys

The second element which is identified and suggested as an improvement to the current survey collection process most typically used, is the use of surveys which use relative importance scales not only to understand the opinions and views of candidates but also to understand how relatively important these are. This methodology is characterised by asking respondents to indicate and identify differences between their preferred and least preferred options. As a result not only are candidates indicating a broad agreement scale such as in Likert scale based surveys, but they are also indicating and ascribing relative importance to their concerns. This can be seen to be critical in the area of research student experience surveys, where by breaking down areas such as supervision may provide a more potent means of closing the feedback loop. As a comparison to the Likert scale based question included in Table One, Table Two includes a sample of a relative importance scaling question which could be used to understand the relative importance of the availability of supervision relative to other issues of concern such as adequacy of supervision, the role of supervision in developing research and the degree of intellectual autonomy allowed in the supervisory arrangement. Each candidate would be asked to only select one item from the most positive and most negative column, as such providing an indication of the relative importance. An open ended response section could also be provided after each group of questions to further elaborate and understand the specific reasons for the choice of the most positive and most negative aspects of candidature. Table Three on the other hand provides a more simplified model where a candidate is asked to indicate their views using a Likert scale, however there is the addition of an importance scale, which will assist to identify relative importance.

Table Two: Positive and Negative Importance Question

Most positive	Characteristic	Most negative
	Supervision was available when I needed it	
	Supervision was adequate and meet my needs	
	Supervision allowed me to develop my research	

Table Three: Likert Scale Question with Importance Scale

Importance	Characteristic	Rating
❒ Important ❒ Neutral ❒ Unimportant	Supervision was available when I needed it	❒ Agree ❒ Neutral ❒ Disagree

These approaches are suggested an alternative to Likert scale surveys, given that they are likely to yield not only information on the views of student experience, but also provide for the relative importance of these tools. An interesting trial has been undertaken of this approach in a coursework environment by Hyuber's (2009) who has described the use of relative importance method through best-worst scaling. It is suggested that such approaches provide more meaningful and deeper feedback given that they also include an element which asks the student to prioritise the importance of their selections. To this end, Huyber's (2009) has suggested that these approaches: 'enhance discrimination between various items on a list of items of concern' (Huybers, 2009, p. 220) as opposed to asking respondents to classify items on a standard agreement scale.

Qualitative focus groups

Finally, a third suggested addition to the student experience evaluation process is the use of qualitative focus groups, which again could be used in unison with a more targeted survey cohort approach and the use of relative importance scales in surveys. The use of qualitative focus groups has been common place in the corporate world, with businesses investing significant funds to engage in the use of these groups to better understand their clientele and to connect to the needs of their customers. Another benefit of a focus group is that there is a direct dialogue established with candidates. As such it is suggested as a useful complement to other survey approaches (Calder, 1977). Qualitative focus groups allow participants to express and build upon comments which may have been indicated in a survey, they also allow for an exchange of ideas between participants and the moderators of such a session as well as allowing for a more in depth discussion of key issues than is the case with surveys alone. As a result qualitative focus groups offer the opportunity for research administrators to gain a better understanding of student needs, keeping in mind and ensuring that such groups allow for a

representative sample of research students. As such the establishment of focus groups can be linked to the more targeted methodology mentioned in the previous section.

As a result of the approaches suggested as alternatives to traditional Likert scale surveys, it can be seen that the emphasis is on obtaining clearer and more strongly linked student information which can be triangulated to better understand student experience and actively address the comments of students with respect to their research candidature experience. This is consistent with a target and objective setting approach key to NPM principles. These methods aim to provide an alternative to standard student response and evaluation mechanisms. It is envisaged that using approaches such as those presented in this article will may assist in the implementation of student feedback.

This article has suggested that there has been a strong change or transition in the higher education sector which has seen a shift from a public sector approach to a market based outlook including a shift to viewing students as customers. Given this it has been suggested that forms of understanding student experience also need to be consistent with the changes that have occurred in the sector. It has been argued that if private sector management techniques are to be applied in the higher education sector with regards to performance and performance management then it would be reasonable to apply survey techniques and evaluation methods commonly used in the private sector. In this way it is suggested that if students are conceptualised as customers that they are also given the corresponding rights and that their feedback is adequately addressed to improve the quality of the research experience.

Future Directions

Given the alternatives to traditional evaluation mechanisms which exist to gauge students' perceptions of their research experiences established in this article, there are a number of future research directions which can be investigated further to empirically test the material in this article including; a longitudinal analysis of Likert scale and relative importance scaling surveys, the use of relative importance surveys and qualitative focus groups as a pilot project and finally considering semi-structured in-depth interviews with research candidates.

With respect to the first suggested research direction, a longitudinal comparison could be undertaken of a research student cohort group. A large n research study could separate respondents into a control and variable group where the independent variable of survey design is tested against a dependent variable of the nature and scope of student feedback which can be implemented to improve student experience. One part of the student cohort could be administered a traditional Likert scale survey, whilst the other half of the cohort could be provided a relative importance scale survey and followed up with a qualitative focus group. The results of the two survey methodologies could then be compared to assess whether the relative importance survey and qualitative focus group process provided more in-depth feedback which could be used to inform process improvement for the research student experience, than a standard Likert survey.

Secondly, a further research approach could be the use of the relative importance scale survey and qualitative focus groups across an entire research cohort. This research could attempt to understand whether research candidates themselves view this type of evaluation approach as a more successful approach to obtaining their feedback. The survey and focus groups could directly address questions which focus on the student's preference with regards to providing feedback.

Finally, a final research direction could build upon the use of alternative survey methods by using yet a different approach, such as semi- structured interviews to provide further and more detailed qualitative accounts of the research student experience and establishing whether these are a more effective evaluation mechanism.

Conclusion

This article has provided a discussion of the impact of new public management on conceptualisations of students as customers. It has outlined that although the higher education sector in Australia has moved and transformed rapidly in a public sector increasingly dominated by corporate models, evaluation mechanisms for student experience have remained strongly embedded within frameworks that reflect general trends of experience and may not systematically address specific elements of the student experience. This is particularly important in an era where students have become more discerning with respect to their student experience. It is argued that universities must also acknowledge that a move to a more customer oriented approach with rising fees and emphasis on performance metrics also entails a responsibility of ensuring the best possible experience for its students. As a result it has been suggested that given the transition and changing panorama of the higher education sector that it is critical that survey and student feedback mechanisms also evolve to further develop work in addressing key areas such as research supervision, generic attributes, infrastructure and research climate and the individual elements which form these larger themes. This article has also sought to outline that student satisfaction surveys premised on Likert scales, although providing a useful overview of student experience may suffer from the bias inherent in the Likert scale methodology. As a result, it has been suggested that an alternative approach to student research experience surveys which potentially utilise a more a targeted cohort approach, relative importance scales and qualitative focus groups may provide a more meaningful account of research student experience that can be used to inform process improvement in universities.

Acknowledgements

The author of this article would like to acknowledge the support and contribution of all colleagues who have provided meaningful discussions on the nature of research student experience and research training in higher education at the University of Sydney and the Australian Catholic University.

References

Albanese, M. (1999). Students are not customers: A better model for medical education. Academic Medicine, 74(11), 1172-1186.

Archer, L. (2008). Younger academics' constructions of 'authenticity', 'success' and professional identity. Studies in Higher Education, 33(4), 385-403.

Australian Research Council (2011). The Excellence in Research for Australia Initiative Retrieved 18 August 2011, 2011, from http://www.arc.gov.au/era/

Baumgartner, H., & Steenkamp, J. (2001). Response styles in marketing research: A cross-national investigation. Journal of Marketing Research, 38(2), 143-156.

Bell, S., & Hindmoor, A. (2009). Rethinking Governance: The centrality of the state in modern society. Cambridge: Cambridge University Press.

Bratti, M. (2002). Does the choice of university matter? A study of the differences across UK universities in life sciences students' degree performance. Economics of Education Review, 21(5), 431-443.

Calder, B. J. (1977). Focus Groups and the nature of qualitative marketing research. Journal of Marketing Research, 14(3), 353-364.

Chandler, J., Barry, J., & Clark, H. (2002). Stressing academe: The wear and tear of the new public management. Human Relations, 55(9), 1051-1069.

Commonwealth of Australia (2008). Review of Australian Higher Education. Canberra: Department of Education, Employment and Workplace Relations.

D'Eon, M. F., & Harris, C. (2000). If students are not customers, what are they? Academic Medicine, 75(12), 1173-1177.

Dolnicar, S., & Gruen, B. (2007). Cross-cultural differences in survey response patterns. International Marketing Review, 24(2), 127-143.

Dunleavy, P., & Hood, C. (1994). From Old Public Administration to New Public Management. Public Money & Management, 14(3), 9-16.

Ginns, P., Marsh, H. W., Behnia, M., Cheng, J. H. S., & Scalas, L. F. (2009). Using postgraduate students' evaluations of research experience to benchmark departments and faculties: Issues and challenges. British Journal of Educational Psychology, 79, 577-598.

Graduate Careers Australia (2011). Graduate Jobs and Dollars Retrieved July 2011, from http://www.graduatecareers.com.au/Research/GradJobsDollars/AllLevels/Accounting/index.htm

Holligan, C. (2005). Fact and fiction: A case history of doctoral supervision. Educational Research, 47(3), 267-278.

Hood, C. (1991). A public management for all seasons? Public Administration, 69(1), 3-19.

Hughes, C., & Sohler, C. (1992). Can Performance management work in Australian Universities. Higher Education, 24(1), 41-56.

Huybers, T. (2009). Best-Worst Scaling: a magnifying glass method for university teaching evaluation in the student experience. Paper presented at the Proceedings of the 32nd HERDSA Annual Conference, Darwin.

Jordan, A., & Schout, A. (2006). The coordination of the European Union, exploring the capacities of networked governance. Cambridge: Cambridge University Press.

Kam, B. H. (1997). Style and quality in research supervision: the supervisor dependency factor. Higher Education, 34(1), 81-103.

Mainhard, T., van der Rijst, R., van Tartwijk, J., & Wubbels, T. (2009). A model for the supervisor-doctoral student relationship. Higher Education, 58(3), 359-373.

Moreau, M. P., & Leathwood, C. (2006). Balancing paid work and studies: working (-class) students in higher education. Studies in Higher Education, 31(1), 23-42.

Murphy, N., Bain, J. D., & Conrad, L. (2007). Orientations to research higher degree supervision. Higher Education, 53(2), 209-234.

Pearson, M., & Brew, A. (2002). Research training and supervision development. Studies in Higher Education, 27(2), 135-150.

Playle, J. F. (1996). Quality in nurse education: An exploration of the concept of students as customers. Nurse Education Today, 16(3), 215-220.

Rhodes, R. (1996). The new governance: governing without government. Political Studies, XLIV, 652-667.

Wisker, G., Robinson, G., & Shacham, M. (2007). Postgraduate research success: communities of practice involving cohorts, guardian supervisors and online communities. Innovations in Education and Teaching International, 44(3), 301-320.

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Our unique journey in pursuit of a PhD ®

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Abstract

The Aceh government is committed to rebuilding Aceh (Indonesia) post the tsunami, and sending students to study overseas is one of many initiatives to enhance the quality of human resources in the province following the tragedy. This paper illustrates the journey of two students from Aceh who are undertaking their PhD at Flinders University where their decision to study differed from the reasons students might typically have to pursue the PhD degree. As do others who are chosen by the government, the students have responsibility to accomplish that specific mandate. The government and the people in Aceh anticipate the new ideas, novel concepts and ways of empowering the province that the students will bring back to their province upon the completion of their study. Pursuing a higher degree, particularly overseas, is seen as blessing for many people including the students. Meeting new people and experiencing a new study and research environment always brings added value for them. As well as cultural considerations, undertaking a PhD also involves professional and personal issues. Shifting roles from professional teachers to become postgraduate students is part of the process of undertaking the degree, and this brings with it a number of challenges. As international students, these challenges encompass cultural, along with language adjustments and academic barriers, in addition to family issues. This paper employs a self-narrative study approach to report the PhD journey of the two students. This journey is examined from three dimensions: cultural, professional and personal.

> *"We create our own stories, which help us see ourselves and our world and to make sense of self and experiences over time." (Ari, Jacobs & Sorensen, 2010, p. 469)*

Introduction

The long domestic armed conflict between the Aceh Movement for Freedom (GAM) and the Indonesian government for over 30 years tore Aceh apart. Difficulties the province faced increased when the tsunami hit on December 26, 2004. The destruction caused by the natural disaster is well documented in the literature. Part of the devastation was the loss of skilled and educated people in the province including educators, government and non-government officers, and business people.

The Aceh government has a strong desire to rebuild the province. With the implementation of the Law of Governing Aceh (UUPA) in 2006, Aceh has more opportunity and power to regulate, govern and met the needs of the Acehnese. One government program is to rebuild education in Aceh after the conflict and the tsunami. This is evident in the allocation to education of 40% at provincial level and 60% at the district level of total revenue from the production of gas and oil in the province. Also a further 20% of the Aceh Regional Budget (APBA) and the District/City Budget (APBK) is allocated for education (International Development Law Organization, 2008). Some of the budget is allocated for scholarships for students to study overseas including for undergraduate degrees and postgraduate degrees (Masters and doctorates). This is an initiative to replace those skilled and educated people killed in the events in order to hasten rebuilding

the province through empowering human resources in the province, particularly the education sector, which is behind that of other provinces in Indonesia (I. Ibrahim[1], personal communication, November 13, 2011). Since 2005 the Aceh government has provided full scholarships for 1887 students to study at 33 leading universities in Indonesia, and overseas at universities in 18 countries including Australia, Germany, Egypt and the USA (Izhar[2], personal communication, November 14, 2011).

Fadliadi and Habiburrahim, the two students who are the focus of this paper, were awarded Aceh scholarships to study in Australia for PhDs. As for many others, undertaking doctoral studies is a privilege. They are perceived in Indonesia as role models and people others can count on for advice and motivation on how to guide their children to be successful like them. Even in the institutions where they work colleagues and students approach them for advice on how to succeed in academic life, including how to get a scholarship to study overseas.

The reason for pursuing studies for a PhD varies among students (Moltschaniwskyj & Moltschaniwskyj, 2007). For some, successful completion of a PhD will contribute to future career development. Indonesian tertiary education institutions are changing their focus from teaching to becoming research universities. Teaching staff need to master research skills to retain their status as lecturers. However, a PhD for these students is also to equip them to contribute to rebuilding Aceh. This paper includes personal narratives by Habiburrahim and Fadliadi and analysis of some of their experiences and obstacles faced to this point in their doctoral studies at Flinders University in South Australia.

The PhD Learning Journey Model

The PhD journey is a lengthy and challenging experience for those who undertake it. Commencing candidates bring a diverse range of experiences, skills and abilities to their candidature and these shape the journey to successful completion of their PhD studies (Moltschaniwskyj & Moltschaniwskyj, 2007). Prior experiences may include work on smaller research projects, knowledge that will facilitate good management of a large research project, familiarity with forms of communication utilised in research work (Rizvi, 2010), depth knowledge of educational theory and relevant literature, professional roles held, cultural values, and personal circumstances that will shape life from the commencement of the candidature. Successful completion involves more than the production of a thesis. Callaghan (2009) had highlighted the fact that the successful PhD graduate should achieve more than the completion of a thesis, but should also emerge from the learning journey of doctoral studies as a creator of knowledge, who shares their work with others, and is equipped to be an effective researcher (Grant & Pearson, 2007).

Callaghan's points about the qualities of the PhD graduate and the role of the supervisor have been developed into 'The PhD Learning Journey Model' (see Fig. 1) to provide a tool for analysis and discussion about the journey Habiburrahim and Fadliadi are experiencing. The model identified three stages in the life and development of the successful PhD graduate. The focus of the beginning stage, where the candidate is entering doctoral studies, is what the students bring into this new role and this new large research project, in particular the funds of knowledge (Moll, Amanti, Neff, & Gonzalez, 1992) they bring to their studies. The learning journey covers the stages of the research development and completion of the research project and the

[1] *Idris Ibrahim is the advisor for the Aceh Human Resource Development Committee*

[2] *Izhar is the chief of the Aceh Human Resource Development Committee for the program implementation*

relationship between student and supervisor, and the transition to a successful PhD graduate detailed in the final stage of the model.

Recognition of the diversity amongst commencing students, and the qualities expected of graduating students, is a reminder of the complexity and diversity of the learning and work of doctoral students, and the complexity of supervision (Vilkinas, 2002, 2008). Callaghan (2009) proposes that the relationship between doctoral student and supervisor resembles an apprenticeship where the supervisor(s) works alongside the student in a mentor-apprentice relationship (demonstrating, explaining, modelling) and the candidate asking probing (fearless) questions. A successful apprenticeship enables the candidate to take increasing control of their work, transitioning to being a new master of the craft of research (Renshaw, 2003) and finally being more knowledgeable than their supervisor(s) on the topic of their research. The PhD Learning Journey Model, drawing on Callaghan's outline of the characteristics of the successful PhD candidate, and of the nature of the supervisory relationship between students and supervisors offers some productive ways of thinking about the experiences of Fadliadi and Habiburrahim part way through their studies and as they look to their goal of successful completion of PhD studies.

Methodology

This paper employs self-narrative as the methodology. According to Ary, Jacobs, and Sorensen (2010) to use narrative is to focus on stories told by individuals with the aim of understanding these lived experiences. In this paper the term self-narrative is used to indicate there is a storying of personal experiences. Here the self-narratives of Habiburrahim and Fadliadi, as PhD students at the School of Education, Flinders University, are told to present several insider perspectives of international doctoral students on their doctoral studies. These journeys are presented in two separate narratives to allow space for 'individual perspective' and 'style' (Batchelor & Napoli, 2006). As with any memory work or recollection these stories may not be capture all significant events (Ary, et al., 2010). It has been a long process recalling and documenting experiences perceived as important. Talk about cultural, professional and personal factors that have impacted on candidature, drafting narratives, discussion about how these fitted with the model, then redrafting, followed in an iterative process. The final narrative texts can be viewed as what Denzin (2000) has termed performances, or restorying of experience in the process of selecting and presenting parts of these lived experiences (Connelly & Clandinin, 1990). Developing these narratives, or performances, has been a complex process, with the editing and transforming of the original texts steered with the intention of retaining some of the language and rhetorical features of these international students. This priority was accepted as a response to the issue of representation and the desire to retain an element of Habiburrahim and Fadliadi's voices (Savin-Baden & Van Niekerk, 2007). The different language and rhetorical features of their narratives are also illustrative of the language and cultural learning required of them during their candidature (Brown & Holloway, 2008).

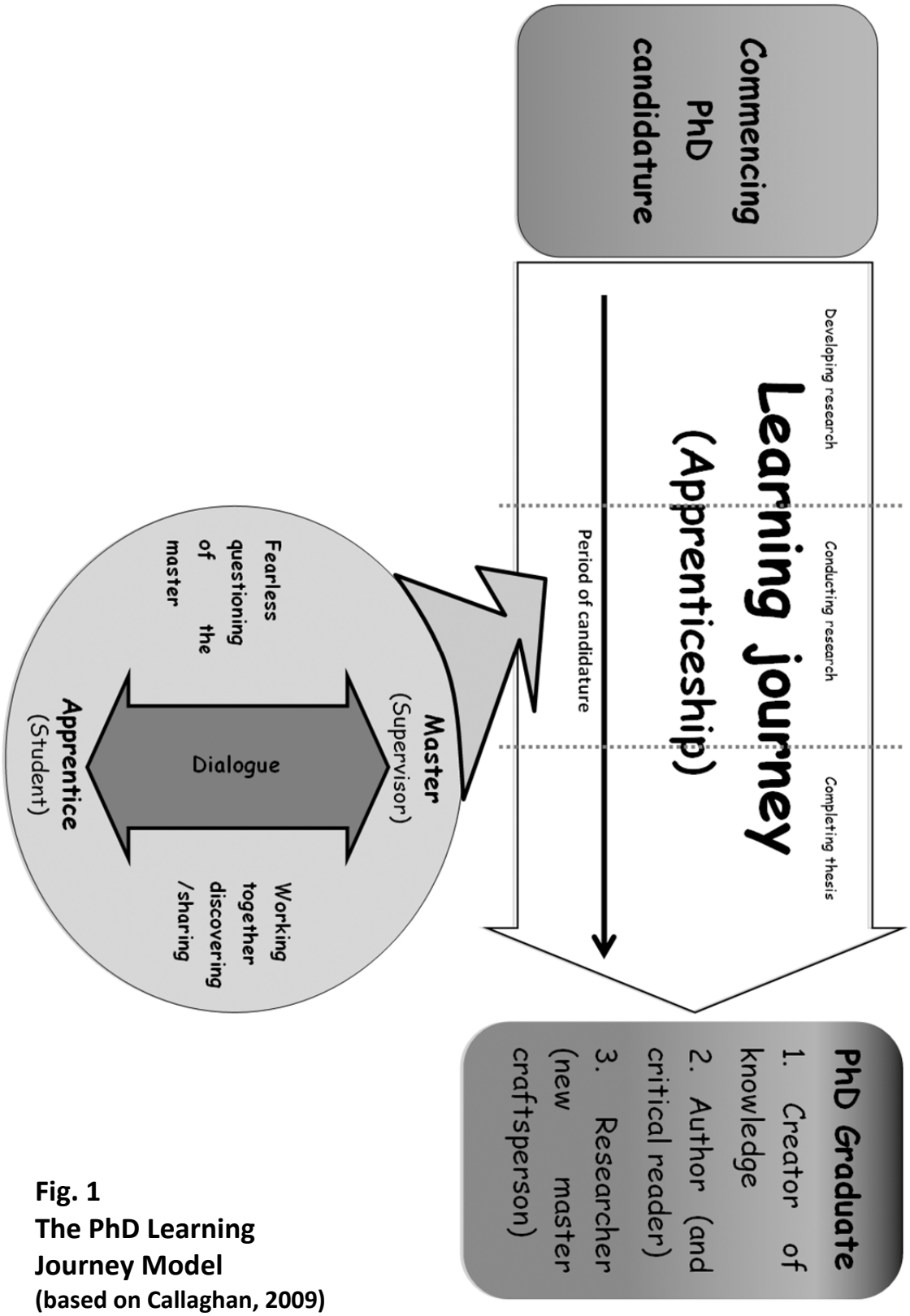

Fig. 1
The PhD Learning Journey Model
(based on Callaghan, 2009)

Analysis has concentrated on themes identified in the narratives, with a focus on those which fit or contrast with the model and the different stages of the candidature, using the cultural, professional and personal dimensions. Cultural influences include what students bring to their studies such as understandings about the world and community values, and including language and ways of working with oral and written texts (Cortazzi & Jin, 1997; Gee, 2012). The professional dimension includes knowledge and experience students bring to their candidature, in particular their professional identity (Rizvi, 2010; Thomson & Walker, 2010) and academic background and experiences (Kiley, 2007). The personal dimension relates to the individual, their personal characteristics and family situation (Rizvi, 2010).

Narrative one: Habiburrahim

I was inspired to pursue PhD studies when I studied for a Masters degree at Texas A&M University in USA from 2006 to 2007. When I studied in the USA, I met several great people including Professor Yvonna Lincoln and Dr Robert Gates. I was impressed by the way Lincoln approached the teaching and learning processes. Even though she was very busy she allocated sufficient time to meet students and discuss various educational issues. Gates also inspired me to pursue PhD studies. His leadership skills and management of Texas A&M University made him well-respected. Due to his leadership and management competency, the USA Presidents George W. Bush and Barack Obama appointed him Secretary of Defence. At the local level in Aceh, I was inspired by the late Professor Safwan Idris[3], the former Ar-Raniry Institute Rector, to pursue a higher education degree. He used to encourage all lecturers to keep on studying to empower ourselves, our community, our educational institution, and our nation.

Now, I have been in Australia for two years. As a sojourner, various experiences, problems, and crises have been met and resolved. In the first few months of my new life in Australia, social and academic problems were among the most prevalent hurdles I had to confront. Social problems in the process of cultural transition such as less family and friends' support, deficient social communication competency, deficient knowledge of the host culture, norms, values, and non-verbal norms are part of the tangible impediments I faced. However, academic problems including academic language and educational methodologies have become my biggest concerns. I realized that the unfamiliar educational methodology applied in my host country may impede my successful study. To cope with this I read various books and articles about successful study in Australia.

Having read literature on educational approaches, I understand that being an active classroom participant is always encouraged in Australian universities. To some extent this approach contradicts with my former teaching and learning experiences in which I was taught to be "a quiet learner". It is commonly known that the education approach in Asian countries is result-focused, where students learn by listening and memorising, while in Australia it is student-centred with students encouraged to engage in independent learning, to question, criticise, and develop critical thinking. Also, Asian students view teachers/lecturers as experts or models, but Australian students regard them as a facilitator or friendly critic who promotes autonomous learning (Cortazzi & Jin, 1997). I was in this fearful stage the first day of study in Australia. However, my motivation to successfully accomplish my degree remained high. I believe that

[3] *Safwan Idris was both a very highly respected academic and Islamic scholar in Aceh. He obtained his Masters and PhD degrees from The University of Wisconsin – Madison, USA. He supervised Fadliadi's undergraduate thesis and was an examiner for Habiburrahim's undergraduate thesis at the Ar-Raniry Institute – Aceh. He was murdered on Saturday 16 September 2000 during the intense armed conflict in Aceh.*

motivation to succeed is needed to press towards better integration and thus conquer the problems I am facing.

To release the unbearable tensions, my academic supervisors recommended me be an audit student. I participated in two topics: Approaches to research and Qualitative research methodologies. Taking these courses gave me a better overview of the teaching and learning process used here. This also gave me a chance to adapt to a new study environment, to meet other people, and make friends, and slightly reduced my anxiety.

In the classroom I noticed that the lecturers provided a friendly teaching and learning environment. Students could argue with their lecturers whenever they disagree. This reminds me of the first time I met my supervisors. They asked me to brief them about my research interests, what I was planning to do, and how I was going to do it. They listened to me carefully without interrupting. They let me finish my story until I say, "This is the planning I have".

At the end of the meeting they asked me to re-send the research proposal I had drafted when I was still in my home country. After waiting for a week, the initial drafted proposal was returned. They asked me to stop working on that proposal, and to reread and contemplate what I was going to research. Along with the proposal return, my supervisors also sent me a thirty item reading list. I had to find books and journals to read, understand, and summarise. At first I was dismayed to read thirty books or journal articles in a very short time. But, they did not let me down; they called me for another meeting. They told me to read the books and articles that fit my interests. After reading the books and articles, I realized that the list they had supplied really helped me formulate the direction of my research.

Time passes quickly, and now I am in the second year of my studies. New academic life, a friendly study environment, and a stressful study workload have been faced and a high level of focus is required. My supervisors are challenging me to work more independently. Now it is time to build up my competency, to be an independent researcher and a prospective knowledge creator. They also strongly urge me to think critically about the educational theories that I am using. I have to be confident to criticise theories that seem slightly misleading or inconsistent.

This is a difficult moment. Shifting my approach from being guided in study processes to working independently may be an issue for me. I work best if I am told step by step how to finish my work. My supervisors are also encouraging me to have confidence to disagree with their ideas. In this regard, they want to say that the supervisors are the people who just guide students, but the final decisions remain in the students' hands. I believe that this transition will bring a great development towards my research competence as a prospective researcher and knowledge creator.

Narrative two: Fadliadi

When I was about to complete my Masters degree at Flinders University in South Australia in late 2008, I thought I was going to have a break from formal education or studying for another degree for a while. I wanted to have a rest and enjoy my life a little after the hard work doing my Masters degree. My family: my wife and son were also very excited when I was about to finish my Masters and return to Aceh. They could not wait to have their 'normal life' back in our home in Bireuen-Aceh. For example, my son missed playing outside with other kids in the neighbourhood; rising kites, playing soccer, collecting tadpoles from the drain and catching the dragonflies and grasshoppers near our home, or having a shower under the heavy rain. My wife, the eldest in her family, wanted to be back with her mother supporting her emotionally and financially, helping raise her five siblings, an obligation as the oldest after her father passed

away when she was at senior high school. And I myself, who was brought up in a large caring family of nine brothers and sisters, missed my extended family so much.

However, what I was planning changed. I was offered a scholarship by the Aceh government to do a PhD. The scholarship offered was part of the government initiative to hasten the process of rebuilding Aceh. My extended family were excited that I had the opportunity to do another higher degree and motivated me to accept the offer. Moreover, I was not very sure about doing a PhD at that time asking: "Am I clever enough for a PhD degree?"

After only four months in Aceh I returned to Adelaide on May 15, 2009 for my PhD studies. Returning to Adelaide did not mean there were no challenges for me and my family. Finding accommodation and a school for my son were difficult. To be able to convince the landlord that we were 'good people' and financially secure was not easy. One of the many things that my family and I are grateful for is that we have another opportunity to improve our English.

On May 18, 2009 I officially enrolled as a PhD student in the School of Education, Flinders University. At the beginning of my study I found it quite challenging. From the two page research proposal I was assigned to produce in our first meeting, my supervisors understood I did not have a strong research background. From that point, I had a feeling that my supervisors closely monitored my progress. They gave me extensive feedback on all work I produced. They suggested I audit the research topic 'Approaches to qualitative research'. They also continuously handed me, or instructed me to find, articles and books to read, or suggested I attend particular seminars and workshops to enhance my research and writing skills. While I have gained from attending those workshops and seminars, I also have to acknowledge that I did not get much from some simply because I was struggling with the ways the presenters delivered the materials. For example, they spoke too fast and moved very quickly from slide to slide without paying attention to the fact that some attendees, particularly international students like me, are struggling because of a language barrier.

Being closely monitored, I was grateful. But I also felt that I lost part of the autonomy I used to have when I was a professional teacher in Aceh; then I did what I wanted to do and had full control of my life. Here, I felt that my life is in my supervisors' hands. Although they said I was free to say 'no' to them, I would never be able to say 'no'. I was brought up in a culture where teachers are highly respected and students obey their teachers. To say 'no' to our teachers is considered rude. In addition, I perceived myself as having very little knowledge while my supervisors are the experts and superiors. So, I did not say 'no' and just did what they asked me to do.

In February 2010, I successfully presented my research proposal to the school committee and was granted approval to commence my fieldwork. I then spent about six months in Aceh for my data collection starting in April 2010. However, upon the completion of my fieldwork, I faced lots of challenges in my study such as I had to deal with health issues that have very much slowed me down. I was so stressed that I could not perform well for my study; on one side I want to complete this PhD as soon as possible within the three-year timeframe of the scholarship allocated by the Aceh scholarship committee, but on the other side I realised that it seems to be impossible. Whatever I do and wherever I go, this PhD thesis is always in my head. At the moment there seems nothing more important than this PhD and writing the thesis. Very often I feel guilty that I have abandoned many other things like commitment to family and religion, all because I am busy with my thesis writing. At this stage, the fear for failure has been so intense I have lacked confidence and lost direction. Even I was scared of my own supervisors' critical comments was so high, especially if I had to see my supervisors the next day. Interestingly, those sorts of feeling are also experienced by other international students. One said she was so scared anytime she was due to see her supervisors she could not eat anything until she had finished her

meeting with her supervisors. Another student said she had an indescribably unpleasant feeling when she needed to meet with her supervisors.

Apart from those things, I feel so lucky that my supervisors are caring and supportive, not only about academic issues but also non-academic things such as providing moral support especially in the absence of support from significant others such as my parents who I have never told about my problems in Australia including my health issues. My supervisors always lift up my confidence when I am lost, assuring me that I am okay and they are there to support me. Of course my supervisors still require me to complete tasks they assign me and comment on my work. Sometimes, they are 'tough', too. And sometimes I can feel they are stressed when they see I did not perform as well as they expect. And I feel guilty for that as I believe that they have allocated much effort and time to make sure my study is going well. This includes their struggles to understand my writing and oral language in our meetings. And I myself am sometimes frustrated at being unable to put the ideas I have in my head into written English or to speak my ideas clearly when my supervisors are seeking clarification of what I have written.

In the end I understand that this PhD is not just for me for a better career, to become more knowledgeable, or be expert in a particular field, but it is also for my family, my wife and son who have sacrificed to be with me during my PhD, for my extended family in Aceh who have high expectations of me, for the Aceh government to help them rebuild a shattered Aceh, and for my supervisors whom I believe are making great efforts to help me achieve my PhD.

Discussion

Commencing PhD candidates: From Habiburrahim and Fadliadi's narratives it is clear they have faced a range of challenges that have made progress in their study journeys different to that of mainstream Australians students. Looking at the professional/academic dimension, these students see themselves as having entered their studies lacking some of the academic skills held by Australian students, and with less knowledge and experience of computer technologies. Their focus is on what they considered they lacked, and the extra workshops, seminars and auditing of topics they needed to do, without recognising valuable skills, abilities and insights they brought to the research they were planning to do (Moll, et al., 1992). Another significant change was the movement from roles as teachers at university or school, to becoming students again; from positions of leadership and personal autonomy to being guided by and striving to meet the expectations of others (Rizvi, 2010). While the duration of scholarships varies, these students were each granted scholarships for three years of doctoral study.

These commencing students were shaped by the cultural dimension in a range of ways. In particular they have been concerned with the language difficulties they commenced with, and their limited understanding of Australian culture and values (Cortazzi & Jin, 1997). Although these students had both completed Masters degrees in Western countries (the USA and Australia), they came expecting to participate in an educational pedagogy that had the teacher in the position of expert and leader (Cortazzi & Jin, 1997) and they would emerge from the candidature with a larger piece of writing on a topic they had already developed. Feelings of commitment to the development of their home country is different to the approach of Australian students where our educational system is increasingly focused on personal gain from educational success (Owler, 2010). The cultural adjustment and the challenge of reconciling some of the educational differences represent a significant challenge for these students despite their previous exposure to Western culture and educational institutions (Brown & Holloway, 2008).

The personal challenges for these international students as they commenced their studies were also significant. The personal narratives of Habiburrahim and Fadliadi illustrate a diversity of personal issues, with the challenges for Fadliadi being more strongly foregrounded. Some students keep the personal challenges of their lives private while others struggle more openly. The families of some international students remain behind in their home country, while other students bring their families and seek to establish a life in the host country for the duration of the period of study (Rizvi, 2010). Both choices involve significant challenges and require considerable decision making and organisation at the commencement of candidature.

All supervisors acknowledge that each student is as unique as the doctoral research they wish to pursue and approach their role as supervisor with the intention of quickly assessing those areas where their new candidate is likely to need develop additional expertise. In the PhD Learning Journey Model the beginning candidate can be interpreted as a generic position or role. Despite the care that is taken to admit candidates who are appropriately prepared for doctoral studies, and who have identified an appropriate research topic and methodology, the diversity amongst students is more than many supervisors realise.

Learning journey

The learning journey is the central part of the PhD Learning Journey Model, and covers the period of candidature. The narratives of Habiburrahim and Fadliadi to this point in their learning journeys tell of progress in the professional/academic dimension. Both students have worked hard and completed a research proposal and the field work for their research. In the process they have mastered some new research skills and gained more confidence in their ability to meet Australian expectations for study and research. Their research skills have developed as they have audited topics, and participated in workshops, seminars and training sessions, although not all have been helpful. They have listed learning from lecturers and supervisors, and meeting and studying with other students, as positive professional/academic learning experiences. The significant difficulty is the pressure of the three year scholarship and the expectation to complete their research within this time frame.

Social and cultural understanding remains a significant difficulty for these students. They still feel unable to say ‘no’ to their supervisors (Cortazzi & Jin, 1997) and so are not having discussions about why a particular task is being recommended (Goode, 2010), or that explore the students’ preferences for aspects of their research. Despite the recognition that the relationship between students and teachers is different in Australia, and encouragement to develop a relationship with their supervisors that resembles more that of person who has already mastered the craft of research and who is mentor and guide to the new apprentice, the change is proving difficult to make. Language continues to be an impediment. This includes vocabulary, plurals and tenses, and being able to clearly express ideas verbally in meetings and in written text (Brown & Holloway, 2008). Cultural and language issues mean that for these international students, and for many students from Southern and Eastern Asia (Cortazzi & Jin, 1997), the type of relationship between students and supervisor identified as productive by Callaghan (2009) does not fully develop. The dialogue, ‘fearless questioning’, and discovering and learning together, does not come to completely replace traditional teacher-student relationship (Cortazzi & Jin, 1997; Robinson-Pant, 2010). Instead they continue to feel concerned about meeting their supervisor’s expectations.

With the emergence of health issues the personal dimension of the life of a PhD candidate can be the source of significant difficulty and anxiety. In these circumstances anxiety and fear of failure, and the ups and downs of confidence that are a usual part of the learning journey of

doctoral students (Crawford, 2003; Kearns, Gardiner, & Banytis, 2009; Owler, 2010) are increased. Yet, these students are working without the support and encouragement of their extended family. Other elements of the personal dimension that are important for these students are family and religious responsibilities and the obligation they feel to those supporting them; their families, supervisors and those who will benefit from their research.

Conclusions

These students still have much to do before they arrive at a successful completion of their studies. The PhD Learning Journey Model has aided a more structured examination of the experiences and concerns expressed in the personal narratives and reminded us that the completion of a PhD should be more than finishing a lengthy thesis. Callaghan's (2009) text led to more discussion about the importance of language and culture, particularly the relationship between student and supervisor. We have been reminded that what these students brought into their candidature has had a significant impact on their learning journey. Personal factors and cultural factors, including language, will continue to impact on the way their progress to the completion of their doctoral studies unfolds.

References

Anfara, V. A., Brown, K. M., & Mangione, T. L. (2002). Qualitative analysis on stage: Making the research process more public. [Research News and Comment]. Educational Researcher, 31(7), 28-38.

Ary, D., Jacobs, L. C., & Sorensen, C. (2010). Introduction to research in education (8th ed.). Belmont, CA: Wadsworth.

Batchelor, D., & Napoli, R. D. (2006). The doctoral journey: Perspectives. Educate, 6(1), 13-24.

Brown, L., & Holloway, I. (2008). The adjustment journey of international postgratudate students at an English univesrity: An ethnographic study. Journal of Research in International Education, 7(2), 232-249.

Callaghan, P. T. (2009). Foreword. In C. Denholm & T. Evans (Eds.), Beyond doctorates downunder: Maximizing the impact of your doctorate from Australia and New Zealand (pp. iii-iv). Camberwell, Vic. : ACER Press.

Comber, B., Nixon, H., & Reid, J.-A. (2007). Environmental Communications: Pedagogies of Responsibility and Place. In B. Comber, H. Nixon & J.-A. Reid (Eds.), Literacies in place: Teaching Environmental Communications (pp. 11-23). Newtown, NSW: Primary English Teaching Association.

Connelly, F. M., & Clandinin, D. J. (1990). Stories of experience and narrative inquiry. Educational Researcher, 19(5), 2-14.

Cortazzi, M., & Jin, L. (1997). Communication for learning across cultures. In D. McNamara & R. J. harris (Eds.), Overseas students in higher education: Issues in teaching and learning (pp. 76-90). New York: Routledge.

Crawford, L. (2003). PhD journey: Some shared experiences. Retrieved from: https://ala.asn.au/conf/2003/crawford2.pdf

Kearns, H., Gardiner, M., & Banytis, F. (2009). The PhD experience: What they didn't tell you at induction (2nd ed.). Adelaide, SA.: ThinkWell Publications.

Kiley, M. (2007). Thinking like a researcher. In C. Denholm & T. Evans (Eds.), Supervising doctorates downunder: Keys to effective supervision in Australia and New Zealand (pp. 121-127). Camberwell, Vic. : ACER Press.

Moll, L., Amanti, C., Neff, D., & Gonzalez, N. (1992). Funds of knowledge for teaching: Using an qualitative approach to connect homes and classrooms. Theory into Practice, XXXI(2), 132-141.

Moltschaniwskyj, N., & Moltschaniwskyj, G. (2007). Setting the scene: Initiating the supervision relationship. In C. Denholm & T. Evans (Eds.), Supervising doctorates downunder: Keys to effective supervision in Australia and New Zealand (pp. 28-35). Camberwell, Vic. : ACER Press.

Owler, K. (2010). A 'problem' to be managed?: Completing a PhD in the Arts and Humanities. Arts and Humanities in Higher Education, 9(3), 289-304.

Renshaw, P. D. (2003). Community and learning: contradictions, dilemmas and prospects. Discourse: Studies in the Cultural Politics of Education, 24(3), 356-370.

Rizvi, F. (2010). International students and doctoral studies in transnational spaces. In M. Walker & P. Thomson (Eds.), The Routledge doctoral supervisor's companion: Supporting effective research in education and the social sciences (pp. 158-170). Abingdon, UK: Routledge.

Robinson-Pant, A. (2010). Internationalisation of higher education: Challenges for the doctoral supervisor. In M. Walker & P. Thomson (Eds.), The Routledge doctoral supervisor's companion: Supporting effective research in

Denzin, N. K. (2000). The practices and politics of interpretation. In N. K. Denzin & Y. S. Lincoln (Eds.), Handbook of Qualitative Research (2nd ed., pp. 897-922). Thousand Oaks, CA: Sage Publications.

Gee, J. P. (2012). Social linguistics and literacies: Ideology in discourses (4th ed.). Abingdon, UK: Routledge.

Goode, J. (2010). 'Perhaps I should be more practive in changing my own supervision? Student agency in 'doing supervision'. In M. Walker & P. Thomson (Eds.), The Routledge doctoral supervisor's companion: Supporting effective research in education and the social sciences (pp. 38-50). Abingdon, UK: Routledge.

Grant, B., & Pearson, M. (2007). Approaches to doctoral supervision in Australia and Aotearoa New Zealand. In C. Denholm & T. Evans (Eds.), Supervising doctorates downunder: Keys to effective supervision in Australia and New Zealand (pp. 11-18). Camberwell, Vic. : ACER Press.

International Development Law Organization. (2008). A brief account on the qanun on education in Aceh. Retrieved from http://www.aceh-eye.org/data_files/english_format/ngo/ngo_idlo/ngo_idlo_2008_11_00.pdf

education and the social sciences (pp. 147-157). Abingdon, UK: Routledge.

Savin-Baden, M., & Van Niekerk, L. (2007). Narrative Inquiry: Theory and practice. Journal of Geography in Higher Education, 31(3), 459-472.

Thomson, P., & Walker, M. (2010). Doctoral education in context: The changing nature of the doctorate and doctoral students. In M. Walker & P. Thomson (Eds.), The Routledge doctoral supervisor's companion: Supporting effective research in education and the social sciences (pp. 9-26). Abingdon, UK: Routledge.

Vilkinas, T. (2002). The PhD process: The supervisor as manager. Education and Training, 44(3), 129-137.

Vilkinas, T. (2008). An exploratory study of the supervision of Ph.D./research students' theses. Innovative Higher Education, 32, 297-311.

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Informal peer mentoring during the doctoral journey: Perspectives of two postgraduate students ®

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Abstract

Doctoral studies can be isolating for postgraduate students who do not have strong connections with peers within the department through which they are enrolled. Collaboration of doctoral students across disciplines represents an exciting opportunity to decrease isolation, build networks and maximise research output and development of research skills.

This paper reports on an informal peer mentoring relationship between two doctoral students at Flinders University in South Australia. The relationship developed through a university writing group in 2008. This progressed to a mentoring relationship built on similar research interests. The students met regularly to assist each other, reflect on the doctoral experience and share learnings. They also supported each other informally through emails. In this paper, we report on how our mentoring relationship relates to postgraduate socialisation and the stages of mentoring reported in the literature.

This relationship created a safe "space" outside of the students' disciplines to talk about issues related to their doctorates. This assisted with coping with the challenges of a doctorate. Through assisting each other, the students learnt that there is much that can be transferred across disciplines. Removing this discipline specific nature of research assisted in developing general research skills. Research output was increased through this process. From 2009 until 2011, the students presented at two conferences, had two papers accepted as conference posters and submitted one manuscript to a peer-reviewed journal, all related to their collaboration. A willingness and commitment from both parties, including a desire to learn about the other discipline, increased the effectiveness of collaborative efforts and enabled the relationship to continue.

This experience demonstrates the benefits of collaborating across disciplines. Collaborations between doctoral students from different disciplines could be encouraged by universities as a strategy for supporting postgraduate students and maximising their research output.

Introduction

Postgraduate education, specifically doctoral studies, represents an important part of career development for researchers, academics and others. A significant investment of time is usually contributed to doctoral studies, highlighting the potential for multiple experiences and learnings during this process. Therefore, it is important to consider how the doctoral experience might be maximised. Our experience suggests that one way in which this can occur is through informal peer mentoring.

For us, informal mentoring represented a vital part of the PhD learning process. Therefore, in preparing this paper, we sought to identify whether similar experiences had been reported in the literature. In a review of the relevant research we found that the doctoral journey, in particular in relation to the stages of postgraduate socialisation, had been described before. In

addition, literature on mentoring relationships and the stages of mentoring was discovered but much of this focussed on formal mentoring arrangements. Yet , together, these doctoral and mentoring studies provided useful theoretical insights into our own experiences. Specific studies of informal peer mentoring such as ours were sparse. The relevant studies which informed our self-investigation are detailed below.

Socialisation plays an important role in postgraduate students' journey from novice to professional. According to Weidman et al. (2001) graduate student socialisation is ''the processes through which individuals gain the knowledge, skills, and values necessary for successful entry into a professional career requiring an advanced level of specialized knowledge and skills''. Faculty context and culture contributes to doctoral students' socialisation (Gardner, 2010a). However, although each graduate student's experiences are unique, according to Weidman et al (2001), professional socialisation occurs in four overlapping developmental stages: anticipatory, formal, informal, and personal. In the initial anticipatory stage, newcomers prepare for and enter their program uncertain about what is expected; in other words, about procedures and agendas. During this period students tend to seek out information and listen carefully to directions. In the formal stage of socialisation, "veteran newcomers" (Weidman, et al., 2001, p. 13) learn more about role expectations, standards and policies through formal instruction, concrete information and observations of others. At this time, tasks issues are the main concern. The informal stage is characterised by the learning of informal expectations and degrees of flexibility from interactions with academics and peers. No longer a novice, the student starts to feel more professional. Peers can be important at this stage as students seek support and reassurance. Finally, in the personal stage, students internalise their new professional identity. As scholarly concerns advance, involvement in professional activities, such as presenting at conferences, increases. As programs end students prepare for future employment and further professional development (Weidman, et al., 2001). Doctoral student socialisation may be facilitated or impeded by ambiguities, study/life balance, ability to work independently, personal and professional development, and support received (Gardner, 2007). Socialisation can be particularly difficult for female, ethnic, older, parenting and/or part-time postgraduate students (Gardner, 2008).

Mentoring is also important to graduate students' development (Stacy, 2006). Mentoring can foster socialisation by nurturing professional and social development (Weidman, et al., 2001). Other outcomes from mentoring include behavioural and attitudinal change, improved health, enhanced relationships, increased motivation, job satisfaction and career outcomes (Eby, Allen, Evans, Ng, & DuBois, 2008) . In addition, mentoring positively influences students' perceptions of their graduate experience (Luna & Cullen, 1998). 'Mentoring' is an ambiguous term to define (Crisp & Cruz, 2009; Eby, Rhodes, & Allen, 2008). However, "in all cases a mentor makes an individualized, personalized effort to assist someone in achieving their goals, reaching their objectives, and/or becoming successful" (Landefeld, 2010, p. 11). Key features of mentoring are a unique relationship, a learning partnership, a process of providing support and reciprocity (Eby, Rhodes, et al., 2008).

University staff, other students, peers, friends, religious leaders and/or family may mentor students (Zalaquett & Lopez, 2006). Mentoring relationships can develop spontaneously or originate in formal mentoring programs (Eby, Rhodes, et al., 2008). Whereas formalised mentoring may be initiated through third party matching processes, informal mentoring develops through personal relationships. "Informal mentorships are not managed, structured, nor formally recognized by the organization. Traditionally, they are spontaneous relationships that occur without external involvement from the organization" (Chao, Walz, & Gardner, 1992, p. 620). Informal mentoring relationships at the doctoral level are often between individuals of similar sex, race and age (Turban, Dougherty, & Love-Stuart, 1997). Personally committed to

working collaboratively, informal mentors share similar goals and interests (Chao, et al., 1992). Studies (e.g., Chao, et al., 1992; Ragins & Cotton, 1999) suggest that informal mentoring outperforms formal mentoring programs in terms of effectiveness and career development. Perhaps this is because unlike formal mentoring programs, informal mentoring is not constrained by time, who is recruited and matching practices (Weinberg & Lankau, 2011).

All mentoring relationships, regardless of type, progress through four stages: initiation, cultivation, separation and redefinition (Kram, 1983). During the initiation stage mentoring is initiated and expectations clarified. In the cultivation stage, the mentoring relationship is maximised and the value of the relationship realised. A characteristic of the separation stage is a contextual or psychological change to the mentoring relationship. Anxiety and feelings of loss are common during this period, as those involved adjust to a changed relationship. Finally, the relationship evolves into a new form in the redefinition stage. Contact may continue for many years but is more on a friendship than professional level (Kram, 1983).

> *Doctoral work is an arduous process that poses immense challenges to students and their mentors who often have to tread this perilous passage alone, only marginally aided by established institutional procedures. Student-led doctoral groups that combine strong peer and mentor/mentee relations can be an invaluable configuration for improving the doctoral student experience and for nurturing and socializing fledgling academicians. (Hadjioannou, Shelton, Fu, & Dhanarattigannon, 2007, p. 175)*

Faculty members mentoring graduates students become “agents of socialization” (Lechuga, 2011, p. 768). However, doctoral students’ participating in formal mentoring programs report limited learning from academic role models (Linden, Ohlin, & Brodin, 2010). In a longitudinal study, Paglis et al. (2006) report that mentoring in doctoral programs may increase students’ research productivity and self-efficacy. However, over time, commitment to a research degree was not influenced by doctoral mentoring. Perhaps this was because after observing the realities of academic life many students choose to pursue alternative careers.

In general, a social, respectful and helpful role model with good communication skills, who is able to provide feedback and whom they may like to emulate is preferred by many doctoral students (Rose, 2003). Based on these attributes, Rose (2003) developed the *Ideal Mentor Scale* to help determine what qualities individual students prefer in their mentor. The *Ideal Mentor Scale* (Rose, 2003) measures three factors: integrity, guidance and relationship. The integrity subscale reflects virtues desired. The guidance subscale describes the type of practical assistance sought and the relationship subscale is concerned with personal relationships. Conceptualisations about the ideal mentor are consistent across academic disciplines and stage of candidature, but do vary according to age, gender and citizenship (Rose, 2005). Bell-Ellison and Dedrick (2008) found that women tend to rate acceptance and confirmation by their ideal mentor more highly than male students. Although personal liking is important to informal mentoring, personal liking appears to be less important within formal mentoring programs (Lankau, Riordan, & Thomas, 2005).

In this paper we present our experience as informal peer mentors who sought to guide and support each other during our candidature. Although past studies indicate that both socialisation and mentoring are important to doctoral candidates, currently there is limited research linking stages of PhD socialisation with mentoring phases. Such an understanding could be beneficial to further understanding how mentoring positively assists PhD students to successfully progress through their candidature. There are also few reports of interdisciplinary informal peer mentoring at the doctoral level. Insights into why and how peers choose to support each other outside of a formalised program could also help to address the gap in

academics awareness of informal socialisation of doctoral students reported by Gardner (2010b).

Introducing the mentors and the mentor experience

In this section we provide some brief information about the mentors and mentees, Annabelle and Carolyn. We also outline how this mentoring relationship was established and maintained.

Annabelle. Annabelle is a full-time student completing a PhD in the Department of Nutrition and Dietetics in the School of Medicine. After completing a Bachelor of Nutrition and Dietetics with Honours, she worked for a year in rural and remote South Australia where she developed a passion for Aboriginal health. Annabelle returned to complete a PhD looking at how White health professionals work in Aboriginal health and how they might do it better. She continues to work part-time as a dietician in Aboriginal communities while completing her PhD. She also has an interest in working with schools which was developed through participation in two large data collection processes in South Australian schools.

Carolyn. Carolyn is a part-time mature age student completing a PhD in the School of Education. To fulfil a life-long dream, she began undergraduate teacher training shortly after the birth of her first child. An early school leaver, Carolyn had a successful administrative career before this. After completing a Bachelor of Education with honours she then commenced doctoral studies. The focus of her doctorate is on school-community partnerships in metropolitan secondary schools. Carolyn juggles study with part-time work and family commitments.

Setting. Annabelle and Carolyn are enrolled at an Australian university. The university has structures in place to support postgraduate students. For example, an extensive professional development program associated with research skills is available to all masters and PhD students. An academic internship program for doctoral students aspiring to pursue an academic career, is available to a small number of near completion doctoral students each year. This is important, as Austin (2002) identified that doctoral students are often not exposed to academic life during doctoral studies. These programs provide some opportunities for students to establish informal mentoring networks. Both Annabelle and Carolyn separately completed the internship and other professional development programs.

Developing an informal mentoring relationship. Annabelle and Carolyn attended a writing group in early 2008 that was part of the professional development program for doctoral students provided by the university. This writing group encouraged collaboration and discussion about writing and research. Through these discussions, Annabelle and Carolyn identified they had similar interests in working with schools, and similar approaches to research, including a desire to look beyond their own discipline, and a desire to publish. They began to discuss how they could utilise these common interests and produce some research output. When the writing group disbanded in late 2008 they kept in contact.

Maintaining an informal mentoring relationship. Annabelle and Carolyn maintained their informal mentoring relationship through face to face meetings approximately every 2 months, and email contact when needed. While initial catch-ups were generally associated with ideas for research output, over time Annabelle and Carolyn continued to do this in addition to providing each other with practical and emotional support, which has previously been reported as a benefit of informal mentoring between doctoral students (Hadjiouannou, et al., 2007). Annabelle and Carolyn kept documentation of their mentoring relationship through informal emails, informal reflective journals, and voice recording of some meetings. In writing this paper, this documentation was reviewed.

The mentoring experience

In this section we describe our mentoring experience using the stages of mentoring proposed by Kram (1983).

No mentoring

At the beginning of our PhD candidatures, we felt alone and unsupported. We both had minimal relationships with other doctoral students and experienced a feeling of a lack of guidance, which led to feeling somewhat lost. This was a stimulus for us both to independently seek external support, which we did when we both joined a writing group, run by the university, for PhD students. Joining the writing group was a deliberate strategy to move past this loneliness and feelings of lack of support.

Initiation

In the initiation stage of our informal mentoring relationship, we identified that we had a common interest about doing research in schools. We shared ideas for research output and demonstrated that we were willing to listen to one another. Sharing ideas increased our enthusiasm for research, which assisted us to continue with our PhDs.

> *During this stage of our relationship, we were both becoming aware of the professional skills associated with doing research. We were able to learn some of these skills from each other, based on our different experiences and perspectives. For example, on first meeting Carolyn, Annabelle reflected that: "I saw Carolyn as someone who had already been through some of the PhD process—and would therefore be very valuable to learn from – especially with regards to data collection and analysis". (Annabelle, personal reflections 24/10/11)*

This demonstrates that Annabelle valued the *guidance* that Carolyn was able to provide.

Cultivation

In the cultivation phase of our mentoring relationship, we began to jointly produce research output. This included acceptance of two conference posters (one of which we later withdrew due to other commitments), two manuscripts (one of which we are currently looking for alternative places to publish due to an initial rejection) and oral presentations at two university conferences. In these cases, our initial enthusiasm was tested against reality, a characteristic of the cultivation stage (Kram 1983). Importantly, we achieved more together than we would have achieved apart. We each demonstrated integrity by seeking to achieve the outcomes we had agreed on:

> *Talking to Carolyn helps to re-motivate my interest in our research areas, because she reminds me why we are doing it. This is one of the benefits of our collaboration – we get more done together than we would apart – mainly I think because of pushing each other. I do not want to let her down, so I do the work. (Annabelle, personal reflections 27/10/10)*

In addition to the research output we created during this stage, we also began to discuss our professional goals with one another. We found that working together taught us a lot about collaboration and how to work in partnership, an important skill in both of our professional fields.

> *I am learning so much about working in partnership by working with Annabelle – this experience is forcing me to 'walk the talk'. I have to collaborate with a professional from another discipline, as a teacher would. We both have different styles, similar but not the same approach and vastly different training/backgrounds – though we can make linkages. (Carolyn, personal reflections 21/10/09)*

We also shared our experiences with research; for example we had discussions about our understandings of different theories, and when the time came we shared tips on how to write a thesis discussion chapter. We both found that we obtained clearer ideas about expectations by discussing things together. This was a form of guidance and we both valued it. We also provided each other with relevant information, for example:

> *Hi Carolyn,*
>
> *Sorry to bother you again, but wondering if you can help...sometime last year we were talking about bringing about a cultural change (in an organisation/ practice of workers) and you mentioned some literature that you were using? Referring to bringing about cultural change in a school I think? If you remember our conversation, can you point me in the direction of these references...I am wanting to talk about the possibility of cultural change in dietetics as a discipline and the practice of individual dietitians who work with Aboriginal people. Any suggestions would be appreciated!*
>
> *Thanks,*
>
> *Annabelle (email correspondence 3/2/11)*

Guidance was further appreciated by both of us as we experienced challenges along our PhD journeys. When we received feedback from supervisors that our writing was not of a high enough standard, or rejections from conferences, we reassured each other that we were still on the right track. This encouraged us both to be persistent, and it was an important way that we both maintained confidence during our doctoral studies. We also prompted and encouraged each other to take action on issues rather than to do nothing, further increasing our confidence in doing so. The challenges that the PhD journey presented, and the importance of our relationship, is demonstrated in the following comments:

> *The PhD journey is so lonely. I treasure my friendship with Annabelle. She is the one person I can be honest with, who really understands what this is like. Had coffee and a chat with her last week. She is so non judgemental, caring and understanding. How lucky am I. (Carolyn, personal reflections 7/3/11)*

Separation

As it came closer to the submission of our theses, we both recognised that the other would require time and space to write-up their thesis. Therefore, during these times we did not meet as often. We used email communication as a way to stay in touch when we could not meet in person. In this case, we both valued the integrity the other demonstrated, such as being honest about what we could and could not commit to during this time. However, despite our structural separation (Kram 1983), we were aware that we still had each other's support.

Redefinition

As submission of our theses gets closer and closer, we are beginning to looking for new and novel ways to work together as our roles change and our careers develop. We are both confident that our informal mentoring relationship was mutually beneficial throughout our doctoral degrees. Therefore, we are committed to maintaining it. Regardless of the directions our careers take, our informal mentoring relationship is now characterised by a friendship, and we will continue to maintain informal contact.

Discussion

In examining our mentoring experiences, we reveal links between mentoring stages (Kram, 1983), postgraduate socialisation (Weidman, et al., 2001) and mentor attributes (Rose, 2003). Table 1 highlights this.

Table 1 Stages of mentoring related to stages of PhD socialisation and ideal mentor attributes

Stages of mentoring (Kram, 1983)	Stages of post-graduate socialisation (Weidman, et al., 2001)	Attributes of an ideal mentor (Rose, 2003)
No mentoring	Anticipatory	
Initiation	Formal	Relationship
Cultivation	Informal Personal	Relationship, integrity Relationship, integrity, guidance
Separation	Personal	Relationship
Redefinition	Graduation	

Table 1 highlights how our mentoring relationship changed during the course of our PhD candidatures. In addition, the attributes that we sought from each other also varied across the PhD and mentoring journeys. While Rose (2003) suggests that those seeking a mentor value particular characteristics more than others, our experience suggests that the relevance of mentor characteristics changes according to the stage of mentoring (Kram, 1983).

During the anticipatory stage (Weidman, et al., 2001), as PhD newcomers, we each relied heavily on own discipline/faculty for information and support. We then independently turned to the

professional development program offered by the university to develop relevant skills. It was at one of these sessions, a writing group, that we first met. Receiving formal instruction is characteristic of the formal stage of socialisation (Weidman, et al., 2001). Kram (1983) suggests that new mentees can "fantasise" about the mentoring relationship. However, then we did not have unrealistic, if any, expectations about the role the other would play in our PhD journey.

As our personal relationship developed, we agreed to cooperate on our first project. The cultivation (Kram, 1983) of our mentoring relationship coincided firstly with the informal and later with the personal stage of socialisation (Weidman, et al., 2001). As our relationship grew, and we worked hard to achieve shared goals, integrity became increasingly important. We relied on each other to do tasks allocated within set time frames. As we report, during the informal phase (Weidman, et al., 2001) peers are important. Our investment in this mentoring relationship played some role in reaching the personal stage of socialisation (Weidman, et al., 2001). The experience of working together and across disciplines matured our outlook about academia. The height of our relationship involved numerous collaborative projects. It was not until we really trusted each other that we truly opened up and sought each other's guidance and support on issues.

The separation phase (Kram, 1983) subtly began as the end of our candidatures approached. Completing our thesis was a high priority and left little time for collaborating. Yet still we managed to complete this paper just weeks before thesis submission. Nevertheless, although much of our work was autonomous, our personal relationship endures. As we approach graduation, how our mentoring relationship will be redefined is unclear. There is still much we could do to informally mentor each other during our early career development.

Conclusion

This paper links the mentoring and socialisation experiences of two informal interdisciplinary peer mentors. It is difficult to traverse the doctoral journey alone. Informal peer mentoring can provide valuable career and psychosocial support throughout the socialisation process. Our experience suggests that academic subject knowledge is not always necessary to successful informal peer mentors. We more often sought general research knowledge and support in undertaking a PhD from each other.

Mentoring phases and outcomes may change according to the stage of socialisation. Interdisciplinary mentoring activities, whether formal (e.g., Santucci et al., 2008) or informal (as in the case of this study), appear to be positively associated with increased research output by doctoral students. With increasing amounts of university funding tied to research output this is important. Our experience suggests that universities should provide opportunities for cross faculty interactions between doctoral students. These opportunities may valuably supplement formal peer mentoring opportunities and enhance preparedness for future employment. For example, it has been reported that greater collaboration between health and educational professionals, beginning at the undergraduate level, is required (Hillier, Civetta, & Pridham, 2010). Further, students participating in traditional discipline-based graduate programs are not well prepared for future interdisciplinary collaborations (Boden, Borrego, & Newswander, 2011). Mentoring could continue beyond the PhD as peers support each other during early career development.

The present study is limited by a reliance on a single perspective. How these data may generalise to other informal peer mentoring relationships is unknown. Further studies are needed on the extent of informal peer mentoring amongst doctoral students and the value of these relationships to socialisation.

References

Bell-Ellison, B., & Dedrick, R. (2008). What do doctoral students value in their ideal mentor? Research in Higher Education, 49(6), 555-567. doi: 10.1007/s11162-008-9085-8

Boden, D., Borrego, M., & Newswander, L. (2011). Student socialization in interdisciplinary doctoral education. Higher Education, 62(6), 741-755. doi: 10.1007/s10734-011-9415-1

Chao, G. T., Walz, P. M., & Gardner, P. D. (1992). Formal and informal mentorships: A comparison on mentoring functions and contrast with nonmentored counterparts. Personnel Psychology, 45(3), 619-636. doi: 10.1111/j.1744-6570.1992.tb00863.x

Crisp, G., & Cruz, I. (2009). Mentoring college students: A critical review of the literature between 1990 and 2007. Research in Higher Education, 50(6), 525-545. doi: 10.1007/s11162-009-9130-2

Eby, L. T., Allen, T. D., Evans, S. C., Ng, T., & DuBois, D. L. (2008). Does mentoring matter? A multidisciplinary meta-analysis comparing mentored and non-mentored individuals. Journal of Vocational Behavior, 72(2), 254-267.

Eby, L. T., Rhodes, J. E., & Allen, T. D. (2008). Definition and evolution of mentoring The Blackwell Handbook of Mentoring (pp. 7-20): Blackwell Publishing Ltd.

Gardner, S. (2007). "I heard it through the grapevine": Doctoral student socialization in chemistry and history. Higher Education, 54(5), 723-740. doi: 10.1007/s10734-006-9020-x

Gardner, S. (2008). Fitting the mold of graduate school: A qualitative study of socialization in doctoral education. Innovative Higher Education, 33(2), 125-138. doi: 10.1007/s10755-008-9068-x

Gardner, S. K. (2010a). Contrasting the socialization experiences of doctoral students in high- and low-completing departments: A qualitative analysis of disciplinary contexts at one institution. The Journal of Higher Education, 81(1), 61-81.

Gardner, S. K. (2010b). Faculty perspectives on doctoral student socialization in five disciplines. International Journal of Doctoral Studies, 5, 39-52.

Hadjioannou, X., Shelton, N. R., Fu, D., & Dhanarattigannon, J. (2007). The road to a doctoral degree: co-travelers through a perilous passage. College Student Journal, 41(1), 160(118).

Hillier, S. L., Civetta, L., & Pridham, L. (2010). A systematic review of collaborative models for health and education professionals working in school settings and implications for training. Education for Health, 23(3).

Kram, K. E. (1983). Phases of the mentor relationship. Academy of Management Journal, 26(4), 608-625.

Landefeld, T. (2010). Mentors and mentoring. In J. E. Bell (Ed.), Mentoring and Diversity (Vol. 4, pp. 11-17). New York: Springer

Lankau, M. J., Riordan, C. M., & Thomas, C. H. (2005). The effects of similarity and liking in formal relationships between mentors and proteges. Journal of Vocational Behavior, 67(2), 252-265.

Lechuga, V. (2011). Faculty-graduate student mentoring relationships: mentors' perceived roles and responsibilities. Higher Education, 1-15. doi: 10.1007/s10734-011-9416-0

Linden, J., Ohlin, M., & Brodin, E. M. (2010). Mentorship, supervision and learning experience in PhD education. Studies in Higher Education, 1-24. doi: 10.1080/03075079.2011.596526

Luna, G., & Cullen, D. (1998). Do graduate students need mentoring? . College Student Journal 32(3), 322-330.

Paglis, L., Green, S., & Bauer, T. (2006). Does adviser mentoring add value? A longitudinal study of mentoring and doctoral student outcomes. Research in Higher Education, 47(4), 451-476. doi: 10.1007/s11162-005-9003-2

Ragins, B. R., & Cotton, J. L. (1999). Mentor functions and outcomes: A comparison of men and women in formal and informal mentoring relationships. Journal of Applied Psychology, 84(4), 529-550. doi: 10.1037/0021-9010.84.4.529

Rose, G. L. (2003). Enhancement of mentor selection using the iIdeal mentor scale. Research in Higher Education, 44(4), 473-494. doi: 10.1023/a:1024289000849

Rose, G. L. (2005). Group differences in graduate students' concepts of the ideal mentor. Research in Higher Education, 46(1), 53-80. doi: 10.1007/s11162-004-6289-4

Santucci, A. K., Lingler, J. H., Schmidt, K. L., Nolan, B. A. D., Thatcher, D., & Polk, D. E. (2008). Peer-mentored research development meeting: A model for successful peer mentoring among junior level researchers. Acad Psychiatry, 32(6), 493-497. doi: 10.1176/appi.ap.32.6.493

Stacy, A. M. (2006). Training future leaders. In C. M. Golde & G. E. Walker (Eds.), Envisioning the future of doctoral education (pp. 187-206). San Francisco: Jossey-Bass.

Turban, D. B., Dougherty, T. W., & Love-Stuart, M. S. (1997). Mentor demographic, relational demographic, and perceived similarity effects in developmental relationships. Paper presented at the 57th Annual Academy of Management Meeting, Boston, MA.

Weidman, J. C., Twale, D. J., & Stein, E. L. (2001). Socialization of graduate and professional students in higher education: A perilous passage? ASHE-ERIC Higher Education Report. Jossey-Bass Higher and Adult Education Series, 28(3).

Weinberg, F. J., & Lankau, M. J. (2011). Formal mentoring programs: A mentor-centric and longitudinal analysis. Journal of Management, 37(6), 1527-1557. doi: 10.1177/0149206309349310

Zalaquett, C. P., & Lopez, A. D. (2006). Learning from the stories of successful undergraduate Latina/Latino students: the importance of mentoring. Mentoring & Tutoring: Partnership in Learning, 14(3), 337-353. doi: 10.1080/13611260600635563

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From a Local Lecturer to an International Doctoral Researcher: A Journey into the International Academic World ®

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Abstract

Transitioning to postgraduate studies is not my doctoral research topic. Rather, it is a long-term, chaotic lived experience that I constantly reflect on during my academic journey. This paper presents a reflective narrative of my transition from a lecturer in Vietnam into an international doctoral researcher in Australia and how the journey is shaped by the complexities of personal, institutional, local, and global variables inherent in the experience. Specifically, I begin with the story of myself as a lecturer in Vietnam, which reveals the commitments, opportunities, and constraints that I had and the driving force and challenges behind my decision to pursue international doctoral research. I will then account for how I prepared for this transition and realized my goal to become an international researcher. However, any choice has gains and losses, and new freedom, opportunities and challenges are part of the doctoral experience I will share next. As the journey goes, I see how my international research experience is linked back to my lecturer experience that I value and the direction I am heading into international academia. I believe that by reflecting on this academic journey, I am able to reveal how and why my professional identity is transformed and how such transformation could contribute to the reshaping of the international academic world. It could also provide prospective postgraduate researchers with an overview of the pathways they may enter; supervisors and postgraduate research degree providers with implications for best facilitating postgraduate research students in their academic endeavours.

Introduction

My journey from a local lecturer to an international doctoral researcher is one of the most important professional development activities that I have had. Concurring with a social constructivist view, which sees learning and development as originating from participation in social practices and contexts (Brandt, 2006; Chiang, 2008; Crandall, 2000; Johnson, 2009; Roberts, 1998), I believe that in reconstructing my transition to an international doctoral researcher, I need to reflect back on the events that happened in this journey. This belief is also grounded in the sociocultural genetic approach, which sees that the only way to understand the many aspects of human development is to understand their origin and the very process by which they are formed (Vygotsky, 1978). Therefore, in this paper I give particular attention to my past experiences as a local lecturer in Vietnam, how I transitioned to my present position as a PhD student in Australia and the personal, institutional, local, and global contexts that shape this transition. In doing this I reveal my academic transitioning as well as identity development during this journey.

From a local lecturer: The unravelling of a researcher

The first part of this journey dated back in 2003 when I completed my BA in English language teaching and began working as a lecturer in a language teacher education university. During the first three and a half years of my employment, I taught English at different levels. I also did some research projects on English language learning and teaching. However, during this time I was committed to English teaching rather than research. This is partly due to my vision of research and the constraints in research practice at my university at the time. As a lecturer I was required to do at least one research project in each academic year, and that was perhaps the only source of motivation for me to do research during this time. I was not able to see the valuable benefits that classroom research can offer teachers and learners. I regarded research as a burden added to the many different tasks apart from teaching that a lecturer was required to complete. Although research was one of the main responsibilities of all lecturers at my university, conditions needed for research to develop were not available. Like most other lecturers, I had had no formal training in research methodology, no access to data-bases for literature review, and almost no time available to conduct rigorous research. Producing a research paper each year was simply a way to survive as an academic staff member.

The constraints in research practices and the limited promotional opportunities made me realize the need to upgrade my qualifications. Therefore, I took advantage of the professional development opportunities available and at the same time applied for funding to pursue a Master's degree overseas.

In 2007, I started my MA in applied linguistics in New Zealand. My MA education was an exciting and inspiring academic adventure and the defining point in my career. I worked within a diverse community of academics and attended a variety of courses, some of which were taught by world leading scholars in applied linguistics. The nurturing, scaffolding interactions I had with my supervisors, lecturers and fellow students and the courses I attended had great influence on how I viewed myself as an academic and who I wanted to become – a professional researcher. Some of the courses I completed were really enlightening and inspiring. They changed the way I saw research, language teaching and learning, and therefore challenged the old way I viewed myself as an academic. I started thinking about the teaching–research nexus, viewing teaching as the source of research ideas, and valuing the contributions of research to solving teaching – learning problems. Most of my MA research assignments, therefore, addressed learning and teaching issues. I learned to become a motivated researcher through research methodology courses, research assignments, and the conduct of a research project. I consider these initial research experiences my most important research apprenticeship because through these experiences I developed research skills, interest in research and researcher self-efficacy. At this point I had started thinking about the possibility of doing a PhD overseas and becoming a member of global academia, and I regarded research experience as the key to realize this aspiration.

Upon completing my Master's degree, I came back to my university and took up a new position. I was assigned to work in a fast-track English teacher education programme with a team of lecturers who had rich experience in teacher education. This work created many professional development opportunities for me. One aspect of my work during this period involved mentoring and supervising preservice teachers on teaching practice. When doing this work I identified that my preservice teachers were facing the same issues that I had faced back when I was a student teacher myself about six years before. Besides academic workload, they struggled with the working culture at schools that they had known little about. Their stories revealed that they needed so much more support both before and during the professional experience. I became interested in researching scaffolding for preservice TESOL teachers during the practicum

with a view that my research findings would be able to inform and transform practicum organization.

Another important aspect of my work before my PhD was teaching research methodology to undergraduate and postgraduate students of TESOL and supervising student research. This aspect of the job, although demanding much of my time and effort, was among the most rewarding experiences during my employment. My engagement with research as a lecturer and supervisor during this time reinforced my research competence, passion and self-efficacy. I learnt to see research as a joyful activity rather than the painful experience I viewed it in the past.

Despite providing me with useful areas to research, the numerous responsibilities I had upon coming back from my Master studies also limited the time and energy I had for my research activities. I developed many research interests and made a number of research plans, but I could not accomplish them due to time and resource constraints. Although I treasured the opportunities to develop expertise through my engagement in many different professional and academic activities, at times I felt desperate as I wanted to get more involved in research and publish more, but my other commitments kept pulling me back. After about two years, I decided it was time I got a break from work and pursue a PhD overseas.

However, there were issues challenging my decision to do my PhD overseas. As a married woman with a small child, I had to take into account many family issues. In order for me to realize my academic goals, my husband had to sacrifice his. Whether it is worthwhile was one of the most difficult questions for us. Finance was another obstacle because I was unable to do my PhD overseas without scholarships.

In preparation for my PhD application, I contacted a professor at an Australian university to request information about PhD studies and scholarships at his university. After looking at my CV, he said that the scholarships were extremely competitive and that I needed to present a much stronger publication record if I wanted to succeed. He also recommended ways that I could strengthen my profile. Although I felt upset about some of his comments, I have always been grateful for them. They reminded me that it was publications that counted and that I needed to put all my research skills and interests onto publications if I was determined to go on to PhD studies. That awareness has helped keep me on track with research. The following year saw me publish several papers in international journals and in the proceedings of a regional conference. This was followed by the invitation to join the board of editors from the Chief Editor at a ranked journal in my field. I also started collecting data for some other research projects planned for publishing internationally. That year marked my first firm step into the international academia in preparation for my doctoral studies. The following year I came to Australia as an aspiring doctoral student socializing into the international academic community.

Transitioning to an international doctoral researcher

In the previous section I reflected on my experiences as a local lecturer in Vietnam, how my journey into the international academic world started during this time, and how those experiences brought me to my PhD studies. My transition to doctoral studies was quite smooth. I had envisioned the new freedom and opportunities I would have as an international PhD student in Australia. However, much as I expected, the doctoral experience is never an easy path. In this section I focus on the new freedom and opportunities as well as the tensions and challenges I have experienced since I commenced my PhD.

One of the things I value best in my doctoral experience is my freedom and opportunities to pursue my research interests. First, I no longer find myself trapped with a high load of teaching, supervising, curriculum developing, meetings, teacher training, administrative work and, above all, teaching extra classes to earn a living like when I was in Vietnam. As a fully-funded student, I am fortunate not to have to cope with financial issues, which gives me the opportunities to focus on my studies. I also have chances to participate in many seminars, workshops, and conferences and have access to virtually all the resources needed for my research to take place. Moreover, I have frequent interactions with academics from different parts of the world, which I regard as the most beneficial activity for a PhD student. I have benefited much more than I expected from my supervisor meetings. Besides, participating in the Education Research Community and PhD Writers Group at my faculty allows me to share, discuss, and learn many things related to research.

As my candidature commenced, I also officially became a reviewing editor at an academic journal. The collaboration I have with my reviewing team and the role I play in knowledge creation are great opportunities for me to actively socialize into the international academia and provide service to my profession. Apart from that, I also take part in a book project. The book, edited by one of my supervisors, is aimed for publication in the international academic market. This exciting project and my collaboration with the project team are a great source of inspiration for me to determine to become a professional international researcher. I have also been working solely and collaboratively on several papers which I aim to publish in international journals and conferences. These activities affirm my membership of the global academia as a researcher.

On the other hand, I also experience many tensions and challenges in my new position as an international doctoral researcher. The first challenge comes from the different roles I play in different communities and complex, varied contexts. As Beauchamp, Jazvac-Martek, & McAlpine (2009) note, “sustaining effective and relatively positive experiences within these many contexts can involve tensions” (p. 266). Balancing my academic and family life can serve as a good example in this case. Although I am somehow familiar with multicultural environment from my MA experience, it is new for my husband and my son, especially when they did not speak good English at the time. During the first few months, settling my family in demanded a great deal of time. Given the limited amount of time in each day, the need to devote full time and effort to my PhD research, my participation in other academic activities and the time I needed to spend for my family, I had to work many extra hours and make a sound plan to manage all the activities.

The second challenge is my negotiation of a theoretical framework to underlie my doctoral research. Through my education and experience I have come to view sociocultural theory as a powerful theoretical lens to understand teacher learning. Although I am committed to this theoretical framework, it is not one that my supervisors and confirmation panel are attached to. Throughout the first year of my candidature, I was challenged by the tensions between my own philosophical and epistemological stance and that of my supervisors and confirmation panel. One of my supervisors suggested I use a different framework that she was familiar with. My confirmation panel also urged me to remain open to other frameworks. Making a strong justification of the framework has been my way to convince my supervisors, panel, and other readers of my work.

Another challenge I face is adapting to a different research culture. In Vietnam, things seem to be much simpler in many ways. For example, we do not have human ethics committee in Vietnam. Researchers only need to seek consent from the participants to conduct a study. It is also much easier to recruit participants in Vietnam since researchers do not have to follow rules.

Therefore, researcher–participant relationships tend to be more relaxed. However, in Australia, as I want to observe a teacher in her classroom with students under 18, regardless of the fact that I only focus on the teacher, I have to apply to the university Human Ethics Committee and the DEECD and obtain approval from many people including the principal of the teacher's school, the teacher, and the parents of every single student in the class. I also have to provide a detailed description of my research plan to convince the committees that my research does not do any harm to the participants. Although I am well aware of the necessity to go through human ethics as a standard procedure to ensure quality research, gaining ethics approval here is a painstaking experience that I have to learn to conform to.

Looking back and looking ahead: Academic identity development

There is a strong link between my lecturer experience and my international research activities. In my current doctoral research role, I have brought together my professional and academic experiences, knowledge, skills and expertise. My understanding of how language learning and teaching occurs and how teachers learn to teach has contributed to the development of my research interests and epistemological approach to research. My research is tied to my home context, especially my expertise, because from scratch I have always wanted my studies to contribute to transformation of practice in this context. My career as a lecturer provided invaluable apprenticeship for my current role as a researcher. On the other hand, my doctoral research offers me opportunity to reflect back and shed light on my previous practices.

Through my transition from a local lecturer to international doctoral researcher I have developed my academic identity. This development is framed by three dimensions including thinking about myself as, performing as, and being thought of as an academic (McAlpine, Jazvac-Martek, & Hopwood, 2009). My academic identity has developed through my participation in complex, varied academic contexts which imply a variety of influential factors. Doctoral students' personal, professional and academic experiences all contribute to shaping their academic identity and the activities they are engaged in (Jazvac-Martek, Chen, & McAlpine, 2011; McAlpine, et al., 2009). My case is no exception. I started my career with a vague idea of the role of research in academic life. My initial experiences as a lecturer in Vietnam defined me as a local academic struggling with my research responsibilities. Through my MA courses, I came to view research as an integral part of my academic activity. However, not until I started publishing and reviewing in an international journal did I see myself making the first step into the global academia. Participating in the academic culture of various academic communities while I am on my PhD studies shapes "a sense of how to engage and potentially contribute within these cultures" (Beauchamp, et al., 2009). I regard myself as a member of, contribute to, and am regarded as a member of the international academy. I intend to further develop my international academic career in future.

The stories of my academic journey, like those of many other academics (e.g. Geiblinger, 2010; Zavros, 2010), suggest that the international academic world is reshaping. It is no longer the territory of exclusively those working as "full" or tenured academics. It is now open to welcome doctoral students who, while working toward completing their degrees, take part in many other professional and academic activities such as publishing, manuscript reviewing, book editing, lecturing, tutoring, and so on. These activities legitimate their membership to the international academic community. More importantly, these academics come from a multitude of backgrounds. They bring to the table their own personal experiences, knowledge and skills that shape their academic identity, which in turns shapes the multidimensional nature of today's academia.

Conclusion

Doctoral researchers' academic journeys have been a popular subject of research. Many studies have reported stories similar to mine that besides meeting the requirements of doctoral programmes, doctoral researchers also participate in many other communities within varied cultures and contexts (Beauchamp, et al., 2009; Golde, 2000; Jazvac-Martek, et al., 2011; Lundell & Beach, 2003; McAlpine, et al., 2009). The studies suggest that these experiences all contribute to developing doctoral researchers' academic identity and careers. However, the different activities may have conflicting influences on this development, resulting in many difficulties doctoral students have to cope with. Studies in the U.S. found that difficulties from conflicting roles played by doctoral students are one of the main causes of a high rate of attrition (Golde, 2000). Although I treasured my academic journey so far, at times I feel I am under too much pressure from many different sources. Sometimes I feel I want to give up on my ethics application and choose an easier way to conduct my studies, which can take me through the ethics procedure easily. It is the tremendous support I have from my family, supervisors and colleagues that has helped me to go through these hard times and effectively complete my tasks. Prospective research degree students may see this journey as an overview of the pathway ahead of them. Those involved in educating research students should provide scaffolding support and encourage their students so that they can develop their academic career to their full potential through participation in varied academic activities both inside and outside the doctoral programme.

References

Beauchamp, C., Jazvac-Martek, M., & McAlpine, L. (2009). Studying doctoral education: Using activity theory tp shape methodological tools. Innovations in Educationa and Teaching International, 46(3), 265-277.

Brandt, C. (2006). Allowing for practice: A critical issue in TESOL teacher preparation. ELT Journal, 60(4), 355-364.

Chiang, M.-H. (2008). Effects of fieldwork experience on empowering prospective foreign language teachers. Teaching and Teacher Education, 24(5), 1270-1287.

Crandall, J. J. (2000). Language teacher education. Annual Review of Applied Linguistics, 20, 34-55.

Geiblinger, H. (2010). "Tumbling" through life… and expecting a safe landing: A narrative journey of an educational researcher. Paper presented at the AARE International Education Research Conference 2009, Canberra.

Golde, C. M. (2000). Should I stay or should I go? Student descriptions of the doctoral attrition process. The Review of Higher Education, 23(2), 199-227.

Jazvac-Martek, M., Chen, S., & McAlpine, L. (2011). Tracking the doctoral student experience over time: Cultivating agency in diverse spaces. In L. McAlpine & C. Amundsen (Eds.), Doctoral education: Research-based strategies for doctoral students, supervisors and administrators (pp. 17-36). New York: Springer.

Johnson, K. E. (2009). Trends in second language teacher education. In A. Burns & J. C. Richards (Eds.), The Cambridge guide to second language teacher education (pp. 20-29). New York: Cambridge University Press.

Lundell, D. B., & Beach, R. (2003). Dissertation writers' negotiations with competing activity systems. In C. Bazerman & D. Russell (Eds.), Writing selves/writing societies: Retrieved January 16, 2012 from http://wac.colostate.edu/books/selves_societies/lundell_beach/.

McAlpine, L., Jazvac-Martek, M., & Hopwood, N. (2009). Doctoral student experience in education: Activities and difficulties influencing identity development. International Journal for Researcher Development, 1(1), 97-109.

Roberts, J. (1998). Language teacher education. London: Arnold.

Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Masachusetts: Harvard University Press.

Zavros, A. (2010). The emergent researcher: One woman's journey into the academy. Paper presented at the AARE International Education Research Conference 2009, Canberra.

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Selecting criteria to evaluate qualitative research ®

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Abstract

While the evaluation of quantitative research frequently depends on judgements based on the "holy trinity" of objectivity, reliability and validity (Spencer, Ritchie, Lewis, & Dillon, 2003, p. 59), applying these traditional criteria to qualitative research is not always a "good fit" (Schofield, 2002). Instead, educational researchers who engage in qualitative research have suggested various sets of alternative criteria including: transferability, generalisability, ontological authenticity, reciprocity, dependability, confirmability, reflexivity, fittingness, vitality and, even, sacredness and goodness (Creswell, 2002; Garman, 1996; Guba & Lincoln, 1989; Patton, 2002; Spencer et al., 2003; Stige, Malterud, & Midtgarden, 2009).

While over one hundred sets of qualitative research criteria have been identified (Stige et al., 2009), some researchers warn against the absolute application of any criteria to qualitative research which is, by its nature, wide-ranging and varied, and does not necessarily lend itself to the straightforward application of any evaluation criteria. Nevertheless, whether or not criteria are applied at all in the research evaluation process, postgraduate students face a number of decisions associated with the process of evaluating qualitative research: 1) whether or not to adopt a set of appraisal criteria; 2) which criteria to select, if criteria are used; and 3) how to apply alternative approaches to criteria-focused evaluation. These decisions often require a paradigm shift (Khun, 1962) in the way postgraduate students perceive and approach their research. The messiness and complexity associated with such decisions can be confronting. This paper examines a number of approaches used by researchers to evaluate qualitative investigations in educational research.

Introduction

> *" … it is important to regularly dialogue about what makes for good qualitative research" (Tracy, 2010, p. 837)*

The problem of how to evaluate the quality of qualitative research is not a new phenomenon (Lincoln & Guba, 2000). On an individual basis, many qualitative researchers face the day-to-day dilemma of determining how to evaluate the quality of their research, especially when the "holy trinity" of objectivity, reliability and validity (Spencer et al., 2003, p. 59) does not suffice. Qualitative research is at times unquestionably evaluated using the criteria of quantitative research (Cohen & Crabtree, 2008; Lather, 2004). In fact, Howe (2004) argues that the dominant paradigm in educational research is scientifically based experimental research. Assumptions about the superiority of quantitative research can diminish the significance and value of qualitative research by overlooking the importance of matching fit for purpose when it comes to research paradigm, the epistemological stance of the researcher and the selection of methodology. This is something researchers were cautioned about over a decade ago in Lincoln and Guba's account of *paradigmatic controversies, contradictions and emerging confluences* (2000).

Cohen and Crabtree (2008) found that reviewers of academic research papers and research grant applications are more likely to adopt generic criteria to evaluate research, rather than adopting criteria relevant to the specific qualitative research used. Furthermore, Alvesson and Skoldberg question the assumption that pure facts and data are the "solid bedrock of research" (2009, p. 3) and suggest that qualitative research requires, by its nature, creative and open minded approaches that acknowledge blurriness, complexity and subjectivity. When considering the origins of expectations about research is conducted and evaluated, Lather (2004) found the application of quantitative evaluation criteria to qualitative research often takes place systematically at authoritative and government levels. This established practice renders the overuse of quantitative criteria as a matter of course and can make it difficult for the lone researcher or even groups of researchers to combat or refute the inappropriate application of mismatched criteria, intended for quantitative research, to qualitative research.

The problems associated with how to evaluate the quality of qualitative research are encountered by experienced researchers in many disciplines so it comes as no surprise to note that postgraduate higher degree students have difficulty in deciding how to evaluate their own qualitative research. Consequently, supervisors of postgraduate students may find themselves with the responsibility of instructing their students about how to evaluate their own qualitative research and the research of others. Since positivism is frequently viewed as the preferred and accepted method of research (Cohen & Crabtree, 2008) in some contexts, the value of qualitative research may be questioned by novice researchers (Freshwater, Cahill, Walsh, & Muncey, 2010, p. 497). Accordingly, the supervisor's role in this educative process may involve dispelling their students' misconceptions about the very nature of research itself.

This paper provides a discussion of the problems and possible challenges associated with the judgement of a piece of qualitative research using inappropriate criteria that may be more suited to quantitative research. The paper does not disregard the value of quantitative research but argues that a step in the postgraduate research student's learning journey should include close examination and identification of the tenets of qualitative *and* quantitative research, in conjunction with an analysis of the criteria or methods used to evaluate the quality of more than one type of research. At the conclusion of this discussion, a number of implications for supervisors of postgraduate higher degree students will be outlined, with a particular focus on guiding the choice of the novice researcher in how to evaluate the quality of their own research and the research of others.

The apple-orange problem: Evaluation of research

> *Imagine a beautiful, perfectly ripe, shiny, red apple, recently plucked from a healthy mature tree growing in a well maintained orchard. Now, imagine volunteering this apple as a candidate for "The Best Orange in the World" competition. The apple would be judged by criteria quite unrelated to the apple's natural characteristics. The apple would be judged by inappropriate criteria such as: dimpled orange skin, capable of producing orange juice and other qualities of an excellent orange. The poor old misjudged apple, despite its excellence, would be found seriously lacking if placed in the "The Best Orange in the World" competition. No matter how "good" the apple was in such a competition, its entry is doomed to failure. The apple is not a good fit when judged by criteria used to evaluate a good orange.*

How can we judge a good apple by the criteria of a good orange? This question is almost absurd in its inappropriateness. So, why is it that qualitative research is regularly evaluated using

criteria that guide the recognition of excellence in quantitative research: objectivity, reliability and validity, referred to by Spencer et al. (2003, p. 59) refer as the "holy trinity"?

While some researchers have been critical of evaluating qualitative methodologies from the theoretical standpoint of positivism (Lather, 2004), others openly admit that they apply positivist criteria when judging the quality of qualitative research. For example, after acknowledging "a long tradition of using qualitative case studies" in business-to-business marketing research, Beverland and Lindgreen analysed a collection of these case studies and found that: "… from a positivist viewpoint, there has been a steady improvement in how authors addressed issues of research quality in published qualitative case studies" (2010, p. 56). This process is problematic as it represents an attempt to evaluate a set of research studies using criteria that are not necessarily relevant to the research itself. The criteria are not a good fit with the research. The crucial moment of recognising whether or not the application of quantitative criteria is appropriate when judging the goodness of qualitative research, needs to be informed by an understanding of the paradigmic tenets of varied forms of research, research that is theoretically founded on epistemological, philosophical and methodological diversity.

While many researchers are aware of the need to match research paradigm with research methodology, some are not (Cohen & Crabtree, 2008; Lather, 2004). Such misunderstandings may misinform postgraduate researchers who are in the early stages of their higher degree journey. Thus, postgraduate higher degree students frequently require guidance when they encounter applications of mismatched criteria to qualitative research. Without asking the question, "Is this an appropriate way to evaluate this research?", the postgraduate student may find themselves in a position where they are unable to defend the theoretical and methodological directions they follow in the design and implementation of their research project. Evaluating the quality or otherwise of other researchers' work (for example, during the process of conducting a literature review), is a crucial skill to be developed in the postgraduate student. Understanding the importance of goodness of fit in relation to how research studies are conducted provides the postgraduate student with a strong foundation by which to conduct a critical literature review and, subsequently, to use the findings of the literature review to design their own research study. Furthermore, when in the stages of designing their own qualitative research studies, postgraduate research students may encounter questions such as the following from well-intentioned colleagues, publication reviewers and possibly some faculty staff:

- The sample is not large enough.
- How can you remove the researcher's bias from that study?
- How will you keep track of all the variables in that study?
- Would the same results be found if you repeated this research?
- Do you have statistical data to uphold your claims?

In the face of such questions, the higher degree research student would be best served by allowing the findings of the literature review to inform the research question and choice of methodology (Borrego, Douglas, & Amelink, 2009) which are informed by theoretically appropriate research paradigms. In some cases, quantitative methods may be most appropriate to adopt while in other cases, the intention and focus of the research may be best suited to an interpretivistic research paradigm and the associated implementation of qualitative methods (Greene & Caracelli, 2003). Whatever the choices required by the postgraduate student, they should be informed by the research question (Borrego et al., 2009), the research intention and context (Creswell, 2002), the nature of the research (Johnson & Christensen, 2012), the theoretical and methodological framework from which the research emerges (Cohen &

Crabtree, 2008) and by acknowledging the perspectives of the research participants (Alvesson & Skoldberg, 2009).

However, remaining resolute about being informed by such noble intents is not necessarily an easy, quick or effortless process. While struggling to align the research intention and the research method, the postgraduate student may well enter into a state of what Kiley describes as "stuckness" (2009, p. 293), where doctoral students, for example, encounter challenging threshold concepts about research. Although this position may be essential in the process of learning about the nature of research, remaining in this state of "stuckness" too long can cause unnecessary frustration for the postgraduate student and the supervisor. The role of the postgraduate supervisor may well be to assist the student to become "unstuck". The process of becoming "unstuck" may be catalysed by the postgraduate student engaging in a discussion about the epistemological implications of various research paradigms (Pintrich, 2002) and how epistemology impacts on research (Schwandt, 2000); What type of knowledge is the researcher searching for or constructing? How is this knowledge gathered, constructed, co-constructed and analysed? What type of knowledge is shared with and reported to the academic community at the conclusion of the research? Epistemology and its variant stances are central to the tenets of any type of research (Howe, 2004). The apple-orange problem described earlier in this paper is indicative of an epistemological muddle. Knowledge of how research paradigms are informed by specific epistemological stances could help postgraduate research students avoid becoming a casualty of such a conflict.

The problems associated with selecting appropriate criteria by which to evaluate the goodness of qualitative research is, therefore, not just related to the research paradigm and intention, but also to the epistemological beliefs held by both researchers and research participants. In some cases, the epistemology of the audience for whom the research findings are intended may also influence the nature of the research. In addition to questions of research paradigm and epistemological belief, the assessment of the quality of qualitative research is also dependent upon the field of inquiry and disciplinary field.

The challenge of how to assess qualitative research is evident in many fields including psychology (Cassell & Symon, 2011), engineering (Borrego et al., 2009), health (Freshwater et al., 2010; Hannes, Lockwood, & Pearson, 2010) and industrial marketing (Beverland & Lindgreen, 2010). In some cases, particular sets of criteria are recommended for specific types of qualitative research such as case study research (Beverland & Lindgreen, 2010), personal construct research (Viney & Nagy, 2011) and research in the field of health (Cohen & Crabtree, 2008; Freshwater et al., 2010; Hannes et al., 2010). The discrepancies and debates that are associated with the choices of how to evaluate qualitative research are evident across many disciplines and the postgraduate student will no doubt encounter such philosophical and paradigmic conflicts as they traverse the literature about research methodology.

The concept of "research" is frequently portrayed using metaphors of white-coated scientists busily identifying variables in experiments or grappling with statistical reports. A simple Google Image search for the term "researcher" results in an instant collection of graphic metaphors that feature test tubes, laboratory scientists hunched over microscopes and cartoons about the weird and wonderful uses of statistics. The "subjects" of inquiry are often inanimate – including microscopes, plastic models of atoms, statistical graphs, numeric data and bubbling liquids. There is rarely an interviewer, an ethnographer or an observer of human behaviour in sight. *Research as experiment* is the pervading paradigm, as it is in much popular media: internet, daily television news, movies and newspapers. When conducting research or being involved in research as a researcher-participant, these scientific-type metaphors for research are not helpful to the postgraduate research who may still be coming to terms with the underlying theoretical

tenets and the subsequent practical applications of qualitative research. Concepts that pervade and form the basis of qualitative research, such as researcher-as-participant (Patton, 2002), reflexivity (Alvesson & Skoldberg, 2009) and multiple voicing (Gergen & Gergen, 2000), are not necessarily part of the novice researcher's foundational understanding of research. As such, the assumption that quantitative research is "real research" is sometimes a point of troublesome knowledge (Perkins, 2006) and could be described as a threshold concept (Kiley, 2009; Meyer & Land, 2003) for postgraduate research students.

Figure 1: Results of a Google Image search for the term "Researcher"

With the discrepancies associated with quantitative and qualitative research in mind, the juxtaposition of judging the quality of qualitative research with criteria more suited to quantitative research can hinder the postgraduate researcher's progress. The following section of this paper aims to provide a set of associated concepts with which to examine, question and evaluate criteria that may be adopted in interpretivistic or qualitative research studies.

To use or not to use criteria?

Qualitative researchers are not known for their propensity to follow a pre-defined set of recipe-style guidelines. Nor are they particularly comfortable with applying a rigid set of standards to guide the selection or use of research methodologies. Rather, they attempt to recognise the diversity and complexity of their research participants and the context, and, subsequently, work *with* rather than *within* the boundaries or contexts of their research settings. Unlike the general consensus evident amongst researchers about the criteria by which to judge quantitative research methodologies, there is understandably less clarity and formulaic direction about which criteria to apply to qualitative research. Garman (1996) suggests that, unlike quantitative research, "qualitative research is relatively lacking in canons and conventions" (p. 5). Tong, Sainsbury and Craig (2007, p. 350) go so far as to suggest that "no consolidated reporting framework exists for any type of qualitative design". Because of the wide-ranging nature of

qualitative research, it is not necessarily a "unified field" (Cohen & Crabtree, 2008, p. 338) so the choice of which criteria to use, apart from the consideration of whether or not to use criteria at all, can be a dilemma for the experienced researcher and the postgraduate student alike.

Despite the confusion about how to evaluate qualitative research, the need exists to tackle this topic, especially for the postgraduate neophyte researcher. Spurred on by the pioneering work in this area by Guba and Lincoln (Guba & Lincoln, 1989; Lincoln, 1995; Lincoln & Guba, 1985) on *fourth generation criteria* and *emerging criteria for quality in qualitative*, many other researchers followed their lead by constructing sets of criteria by which to evaluate the goodness of qualitative and interpretive research (Creswell, 2002; Driessen, Van Der Vleuten, Schuwirth, Van Tartwijk, & Vermunt, 2005; Flick, 2004; Freebody, 2003; Patton, 2002; Tong et al., 2007; Viney & Nagy, 2011). Back in 2001, Geelan suggested that, "If positivist standards of validity and reliability are no longer considered appropriate for some forms of educational research, however, new standards for justification and representation, explicitly stated within the research, will be necessary" (p. 129).

The investigation of complex phenomena is not a straightforward process (Tong et al., 2007). While one group of researchers expound the value of using a new and relevant set of criteria for judging the quality of qualitative researchers, other researchers caution against the absolute application of any criteria or standards to qualitative research. Howe issues a general warning against a standards approach in the field of education: "the standards-setting movement in education is inherently about power and control" (Howe, 2004, p. 57).

Nevertheless, whether or not the research is "good research" is still an important question to ask, despite the research paradigm under which the research is conducted or experienced. Those who access findings from any type of research are first and foremost interested in the "goodness" of the research as such qualities reflect on the trustworthiness (Lincoln, 1995; Patton, 2002) of its findings. When making evaluative judgements about qualitative research, there are many sets of criteria that can be used to guide our judgement. Despite the varied positions proposed by the qualitative researchers themselves, postgraduate higher degree students will likely be faced with decisions about which, if any, set of criteria to apply to their own studies. Following is an account of some of these sets of criteria.

While not suggesting a pre-defined set of criteria to apply prescriptively to qualitative research, Viney and Nagy (2011) guardedly suggest "A set of *possible* criteria" that may be used in the particular research context of personal construct psychology. Their cautious use of the term *possible* represents a position where they have inched away from the position of an absolute ban in using criteria in qualitative research. Instead, general descriptive terms are often offered to explain the features of such criteria. For example, Guba and Lincoln suggest various types of authenticity (Guba & Lincoln, 1989), goodness (Lincoln & Guba, 2000), confirmability (Lincoln & Guba, 1985) and fairness (Lincoln & Guba, 2000). Flick (1992, 2004) uses the criteria of rigour, breadth and depth; Eisner (1991) refers to coherence, consensus and instrumental utility; and Mays and Pope (2000) simply adopt the principles of validity and relevance.

When grappling with how to evaluate portfolios, the content of which are typically more qualitative than qualitative, Driessen et al. (2005) used a number of research strategies (including member checking, prolonged engagement, triangulation) to ensure they achieved credibility and dependability of their evaluation processes. In the absence of a comprehensive checklist of criteria for reporting qualitative studies, Tong et al. (2007) created their own checklist including 32 items, which they refer to as a *consolidated criteria for reporting qualitative research (COREQ)*. In the context of nursing research, Freshwater et al. (2010) focus on the criteria of rigour and relevance, while Hannes, Lockwood and Pearson (2010) focus mainly on validity.

Cohen and Crabtree (2008), after analysing research studies that focused on rigour in qualitative research, found seven criteria for good qualitative research: (1) carrying out ethical research; (2) importance of the research; (3) clarity and coherence of the research report; (4) use of appropriate and rigorous methods; (5) importance of reflexivity or attending to researcher bias; (6) importance of establishing validity or credibility; and (7) importance of verification or reliability. This list-style set of criteria is supplemented by an emphasis on the significance of relevant language to analyse qualitative research. While acknowledging the vast diversity of qualitative research, Tracy (2010) recommends the adoption of a common language by which to discuss the quality of qualitative research. She contributes to the conversation about how to evaluate qualitative research by providing a set of eight key markers of quality in qualitative research: (a) worthy topic, (b) rich rigor, (c) sincerity, (d) credibility, (e) resonance, (f) significant contribution, (g) ethics, and (h) meaningful coherence".

Richardson's (1997) notion of the crystallisation of data is enabled through the analysis of both qualitative and quantitative data to ensure what Gergen and Gergen refer to as "multiple voicing" (2000, p. 1025). Spencer et al.'s (2003) framework for evaluating interpretivistic research proposes that good qualitative research should be contributory, defensible, rigorous and credible. They purport that the epistemological underpinnings of the research should also be acknowledged and featured in the research methodology and reporting method.

Other criteria, especially those suggested by Garman (1994, 1996), Richardson (1997) and Spencer et al. (2003), are largely associated with the aesthetics of research processes and products rather than just the rationality of inquiry. Such criteria convey a sense of the emotional intensity, vitality and even the spiritual or moral value of research processes and findings. A movement to incorporate these elements of research was predicted by Lincoln and Guba over ten years ago: "We may also be entering an age of greater spirituality within research efforts" (2000, p. 185). Freebody also acknowledged the aspect of research that was not preoccupied with rationalism by describing qualitative research as a "moral effort for researchers and readers" (Freebody, 2003, p. 218).

This recognition of the emotional, personal, moral and spiritual characteristics of research represents a diversion from the direct application of criteria by which to judge the quality of research, whether it be quantitative or qualitative. The process of acknowledging the aesthetics of research is associated with the researchers' and the participants' emotional involvement, the researcher's commitment and enthusiasm, and the manner in which the findings are presented to readers, especially in regards to how the research report or thesis communicates discovery, excitement and insight. The view of research that acknowledges logic, future impact and credibility, as well as emotional and spiritual pursuits, can be likened to Schulman's manner of defining scholarship as "acts of the mind or spirit that are undertaken in disciplined ways and subsequently made public so that members of one's intellectual community can judge their worth and then use them to support the more general program of the community" (1999, p. 160).

The bounds of this paper do not extend far enough to contain a full analytic or aesthetic account of the wide array of criteria, language, dimensions and questions that have been offered by researchers over the years by which to evaluate the quality of qualitative research. However, the following table attempts to provide an interconnected overview of some of these attempts. The criteria in the following table are presented in the form of guiding principles where were informed by the four central principles of Spencer et al.'s (2003) framework for evaluating interpretivistic research (contributory, rigorous, defensible, credible), as well as being informed by Garman's (1994, 1996) recommendations that research should be judged by its vitality and aesthetics. These principles have been transformed into guiding questions to assist the novice researcher to reflect on how these principles apply to the processes of designing and conducting qualitative research.

Table 1: Guiding Principles and Criteria used to Evaluate the Qualitative Nature and Methods of Research

Guiding Principle	Guiding Question	Specific Criteria from Literature*
Contributory in advancing wider knowledge or understanding about policy, practice, theory or a particular substantive field.	Have the findings of this study contributed to our knowledge and understanding of the educational beliefs of university teachers and students? How has being involved in the research benefited the participants?	Significant contribution (Tracy, 2010) Instrumental utility (Eisner, 1991); utility (Garman, 1994, 1996); useability Transferability or applicability; naturalistic generalisability (Stake, 1978; Stake & Trumbull, 1982); extrapolation (Patton, 1990, 2002); retrospective generalisability (Eisner, 1991); fit between the situation studied and others (Schofield, 2002); illuminative fertility (Shank & Villella, 2004) Future focus and contribution to research directions Ontological and educative authenticity (Guba & Lincoln, 1989) Reciprocity (Patton, 1990, 2002) Importance of the research (Cohen & Crabtree, 2008); worthy topic (Tracy, 2010)
Rigorous in conduct through the systematic and transparent collection, analysis and interpretation of qualitative data.	Are the methods used to gather, analyse, interpret and present the data rigorous, systematic and transparent? - Gathering data - Interpreting and analysing data - Reporting the findings	Openness and clarity (Cohen & Crabtree, 2008) Ethics; carrying out ethical research (Cohen & Crabtree, 2008; Tracy, 2010) Referential adequacy Resonance (Tracy, 2010) Use of multiple sources, multiple voicing (Gergen & Gergen, 2000); fairness (Lincoln & Guba, 2000) Rich rigour (Tracy, 2010); rigour (Cohen & Crabtree, 2008; Flick, 2004; Freshwater et al., 2010; Viney & Nagy, 2011) Transparency of data gathering methods, prolonged engagement (Driessen et al., 2005) Thick description Systematic primary and secondary interpretations Transparency of data analysis methods Empathic neutrality (Patton, 1990, 2002) Verite' (Garman, 1994, 1996); fittingness Descriptive validity (Maxwell, 2002); verisimilitude (Garman, 1994, 1996); investigative depth (Shank & Villella, 2004) Interpretive validity (Maxwell, 2002); interpretive adequacy (Shank & Villella, 2004) Credibility (Driessen et al., 2005; Tracy, 2010; Viney & Nagy, 2011)

Table 1: Guiding Principles and Criteria used to Evaluate the Qualitative Nature and Methods of Research

Guiding Principle	Guiding Question	Specific Criteria from Literature*
Defensible in design by providing a research strategy that can address the evaluative questions posed.	Is the research design of this study defensible and trustworthy, and linked to the study's research questions?	Goodness (Lincoln & Guba, 2000; Smith, 1993); integrity (Garman, 1994, 1996), fittingness or consistency Dependability Auditability; audit trail (Whitt, 1991); transparency of methods, participatory accountability (Shank & Villella, 2004) Confirmability (Lincoln & Guba, 1985) Reflexivity (Alvesson & Skoldberg, 2009; Cohen & Crabtree, 2008; Creswell, 2002); transparency of researcher's ideas, or external reliability (LeCompte & Goetz, 1982) Triangulation (Driessen et al., 2005); crystallisation (Richardson, 1997)
Credible in claim through offering well-founded and plausible arguments about the significance of the evidence generated.	Are the findings credible and supported by evidence?	Peer debriefing, peer confirmability, member checking (Driessen et al., 2005) Participant debriefing, participant confirmability Consensus and meaningful coherence (Cohen & Crabtree, 2008; Eisner, 1991; Tracy, 2010) Theoretical, descriptive validity and interpretive (Maxwell, 2002); relevance (Freshwater et al., 2010; Mays & Pope, 2000) Verisimilitude (Garman, 1994, 1996); investigative depth (Shank & Villella, 2004) Interpretive adequacy (Shank & Villella, 2004)
Affective in nature by acknowledging the excitement associated with research discoveries, the emotional involvement of the participants and the enthusiasm of the researcher.	Do the research processes and findings communicate the emotional elements of how the participants and the researcher engaged in the research study?	Vitality and aesthetics (Garman, 1994, 1996) Sacredness (Lincoln & Guba, 2000); sacred places (Richardson, 1997) Sincerity (Tracy, 2010) Moral effort for researchers and readers (Freebody, 2003)

While Table 1 demonstrates the various terms and phrases associated with many researchers' endeavours to create a set of criteria appropriate to the process of evaluating qualitative research, the table's content also illustrates the complexity of selecting the most appropriate criteria for a particular research study, if any are appropriate at all. In fact, the criteria used to evaluate qualitative studies appear to be under just as much scrutiny as the research itself.

After considering the positions put forward in this paper regarding the challenge of how to evaluate the quality of qualitative research, the postgraduate student may be left with a different question from "What criteria should I use to judge the quality of my qualitative research?" After an analysis of the paradigmic diversity of the theoretical influences and foundations of qualitative research, the higher degree student may, understandably, approach

their supervisor with the question, “When designing, conducting and experiencing qualitative research, should I use evaluation criteria at all?”

The postgraduate supervisor’s challenge

With the aforementioned dilemmas and complexities associated with evaluating qualitative research in mind, supervisors of postgraduate research students are often left with more than one challenge associated with the process of guiding their students through the mire of choices that present themselves when conducting qualitative research. Following are a set of suggestions that may, when considered alongside the student’s personal characteristics and needs, the nature of the issue being researched and the supervisor’s disposition, provide some useful recommendations for how to facilitate the learning of postgraduate students about the theoretical and practical nature of qualitative research and how to fairly evaluate it.

Epistemology. The nature of research is irretrievably connected to the nature of knowledge and epistemological beliefs (Howe, 2004; Pintrich, 2002; Schwandt, 2000). Without engaging in a reflective and ongoing discussion about how research methodologies and strategies are connected to and driven by the researcher’s and the research participants’ attitudes to knowledge and truth, the postgraduate student may struggle with making theoretically informed decisions about how to design and conduct a practical qualitative inquiry. Greene and Caracelli (2003), in their chapter titled, *Making paradigmic sense of mixed methods practice*, advocate the recognition and analysis of philosophical beliefs in conjunction with the practice of inquiry and research. Before choosing an appropriate research paradigm to operate within, and definitely before any methodological choices are made, the postgraduate student could be encouraged to explore the nature of epistemology in research, their own epistemological beliefs (Hofer & Pintrich, 2002) and the beliefs of others, and make plans for how to incorporate conflicting, blurred and varied epistemologies ranging from naïve to sophisticated (Brownlee, 2002) into their research.

White-coat research perceptions. While some higher degree research students may enrol in their postgraduate course of study with an understanding of the diversity of qualitative, quantitative and mixed mode research, others may bring to their study a narrower view of research, possibly influenced by the prevailing view of society about traditional research (Alvesson & Skoldberg, 2009; Cohen & Crabtree, 2008; Lather, 2004). The supervisor of such students may find it helpful to facilitate the expansion of their students’ perspectives about the nature and value of varied forms of research. Assisting their students to understand research as a process which can extend beyond the bounds of experimental methods, the postgraduate supervisor may play an instrumental role in preventing the philosophical narrowness associated with what Lincoln and Cannella speak of as “methodological conservatism” (2004, p. 10). Encouraging postgraduate student researchers to focus on the research question (Borrego et al., 2009, p. 53) prior to the choice of methodology may also assist in achieving the aim to broaden and deepen the postgraduate student’s understanding of the nature of research.

Thesis examiners. Although this decision is not necessarily left in the postgraduate student’s hands, a choice of appropriate readers of the student’s final thesis should be seriously considered by the student’s supervisor to ensure that the reader’s philosophical, epistemological and theoretical position is commensurate with the nature of the research represented by the final thesis. The theoretical disposition of the thesis reader should be closely analysed through an exploration of their previous work. Failure to match the research in the thesis with an appropriate reader is akin to entering an apple into a competition for the best orange, mentioned earlier in this paper.

The question of criteria. Whether or not to use criteria and, if appropriate, whether to use criteria to evaluate the postgraduate student's research is a question that should be asked. The answer to this question should ideally be considered through conversations between the supervisor and the postgraduate student, in which epistemological positions are addressed alongside decisions about practical methodological issues and appropriate research paradigms. An analysis of the nature of the research being conducted could be the driving force behind how or if evaluative criteria are used by the postgraduate researcher.

Conclusion

Although this paper does not claim to offer a *magic bullet* for solving problems about how, why or whether to evaluate the "goodness" of qualitative research, it provides a platform from which higher degree students and their supervisors may consider the messy trails they find themselves traversing in the fields of qualitative research. The paper offers a collection of issues to consider, a set of questions to ask and multiple sets of criteria to explore when attempting to determine the quality of qualitative research. While posing the question of "What evaluative criteria are most appropriate for judging the goodness of qualitative research?", the paper also asks the question "Should criteria be used at all?" Rather than attempting to squeeze the round peg of qualitative research into the square hole that is the home of much qualitative research, this paper highlights the intrinsic value of qualitative research and the ensuing recognition of the need to judge such research by the very tenets of its being. Instead of comparing apples with oranges, or comparing qualitative research with quantitative research, the paper has argued from the premise of soundly and fairly judging the quality of apples based on the qualities of good apples, of judging the quality of oranges based on the qualities of good oranges, and of judging the quality of qualitative research based on the qualities of good qualitative research.

References

Alvesson, M., & Skoldberg, K. (2009). Reflexive methodology: New vistas for qualitative research (2nd ed.). London: Sage.

Beverland, M., & Lindgreen, A. (2010). What makes a good case study? A positivist review of qualitative case research published in Industrial Marketing Management, 1971–2006. Industrial Marketing Management, 39(1), 56–63.

Borrego, M., Douglas, E. P., & Amelink, C. T. (2009). Quantitative, qualitative, and mixed research methods in engineering education. Journal of Engineering Education, 98(1), 53-66.

Brownlee, J. (2002, 7-10 July). Students learning to teach: Conversing with students about their epistemological beliefs. Paper presented at the Quality Conversations: Higher Education Research and Development Society of Australasia (HERDSA) Conference, Edith Cowan University, Perth, Western Australia.

Cassell, C., & Symon, G. (2011). Assessing 'good' qualitative research in the work psychology field: A narrative analysis. Journal of Occupational and Organizational Psychology, 84(4), 633–650.

Cohen, D. J., & Crabtree, B. F. (2008). Evaluative criteria for qualitative research in health care: Controversies and recommendations. Annals of Family Medicine, 6(4), 331-339.

Creswell, J. (2002). Educational research: Planning, conducting and evaluating quantitative and qualitative research. New Jersey: Pearson Education.

Driessen, E., Van Der Vleuten, C., Schuwirth, L., Van Tartwijk, J., & Vermunt, J. (2005). The use of qualitative research criteria for portfolio assessment as an alternative to reliability evaluation: A case study. Medical Education, 39(2), 214–220.

Lather, P. (2004). This is your father's paradigm: Government intrusion and the case of qualitative research in education. Qualitative Inquiry, 10(1), 15-34.

LeCompte, M. D., & Goetz, J. P. (1982). Problems of reliability and validity in ethnographic research. Review of Educational Research, 52(1), 31-60.

Lincoln, Y. S. (1995). Emerging criteria for quality in qualitative and interpretive research. Qualitative Inquiry, 1(3), 275-289.

Lincoln, Y. S., & Cannella, G. S. (2004). Dangerous discourses: Methodological conservatism and governmental regimes of truth. Qualitative Inquiry, 10(1), 5-14.

Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. California: Sage Publications.

Lincoln, Y. S., & Guba, E. G. (2000). Paradigmatic controversies, contradictions and emerging confluences. In N. K. Denzin & Y. S. Lincoln (Eds.), Handbook of qualitative research (2nd ed., pp. 163-188). California: Sage Publications.

Maxwell, J. A. (2002). Understanding and validity in qualitative research. In A. M. Huberman & M. B. Miles (Eds.), The qualitative researcher's companion (pp. 37-64). Thousand Oaks & London: Sage Publications.

Mays, N., & Pope, C. (2000). Quality in qualitative research. In C. Pope & N. Mays (Eds.), Qualitative research in healthcare. London: BMJ.

Meyer, J., & Land, R. (2003). Threshold concepts and troublesome knowledge: Linkages to ways of thinking and practising within the

Eisner, E. W. (1991). The enlightened eye: Qualitative inquiry and the enhancement of educational practice. New York: Macmillan Publishing Company.

Flick, U. (1992). Triangulation revisited: Strategy of validation or alternative? Journal for the Theory of Social Behaviour, 22(2), 175-197.

Flick, U. (2004). Design and process in qualitative research (B. Jenner, Trans.). In U. Flick, E. v. Kardoff & I. Steinke (Eds.), A companion to qualitative research (pp. 146-152). London: Sage Publications.

Freebody, P. (2003). Qualitative research in education: Interaction and practice. London: Sage.

Freshwater, D., Cahill, J., Walsh, E., & Muncey, T. (2010). Qualitative research as evidence: Criteria for rigour and relevance. Journal of Research in Nursing, 15(6), 497-508.

Garman, N. (1994, 5 August). Qualitative inquiry: Meaning and menace for educational researchers (Keynote address). Paper presented at the Mini-Conference: Qualitative Approaches in Educational Research, The Flinders University of South Australia.

Garman, N. (1996). Qualitative inquiry: Meaning and menace for educational researchers. In P. Willis & B. Neville (Eds.), Qualitative research practice in adult education (pp. 11-29). Ringwood, Victoria: David Lovell Publishing.

Geelan, D. R. (2001). Feyerabend revisited: Epistemological anarchy and disciplined eclecticism in educational research. Australian Educational Researcher, 28(1), 129-146.

Gergen, M. M., & Gergen, K. J. (2000). Qualitative inquiry. In Y. S. Lincoln & E. G. Guba (Eds.), Handbook of qualitative research (2nd ed., pp. 1025-1046). California: Sage Publications.

Greene, J. C., & Caracelli, V. J. (2003). Making paradigmic sense of mixed methods practice. In A. Tashakkori & C. Teddlie (Eds.), Handbook of mixed methods in social & behavioural research (pp. 91-110). Thousand Oaks, CA: Sage.

Guba, E. G., & Lincoln, Y. S. (1989). Fourth generation evaluation. Newbury Park, California: Sage.

Hannes, K., Lockwood, C., & Pearson, A. (2010). A comparative analysis of three online appraisal instruments' ability to assess validity in qualitative research. Qualitative Health Research, 20(12), 1736-1743.

Hofer, B. K., & Pintrich, P. R. (Eds.). (2002). Personal epistemology: The psychology of beliefs about knowledge and knowing. Mahwah, N.J.: Lawrence Erlbaum Associates.

Howe, K. R. (2004). A critique of experimentalism. Qualitative Inquiry, 10(1), 42-61.

Johnson, B., & Christensen, L. (2012). Educational research: Quantitative, qualitative, and mixed approaches (4th ed.). Thousand Oaks, CA: Sage.

Khun, T. S. (1962). The structure of scientific revolutions. Chicago: University of Chicago Press.

Kiley, M. (2009). Identifying threshold concepts and proposing strategies to support doctoral candidates. Innovations in Education and Teaching International, 46(3), 293-304.

disciplines. Edinburgh: University of Edinburgh.

Patton, M. Q. (1990). Qualitative evaluation and research methods. Newbury Park, CA: Sage Publications.

Patton, M. Q. (2002). Qualitative research and evaluation methods (3rd ed.). Thousand Oaks, California: Sage Publications.

Perkins, D. (2006). Constructivism and troublesome knowledge. In J. Meyer & R. Land (Eds.), Overcoming barriers to student understanding: Threshold concepts and troublesome knowledge (pp. 33-47). New York: Routledge.

Pintrich, P. R. (2002). Future challenges and directions for theory and research on personal epistemology. In B. K. Hofer & P. R. Pintrich (Eds.), Personal epistemology: The psychology of beliefs about knowledge and knowing (pp. 389-414). Mahwah, New Jersey: Lawrence Erlbaum Associates.

Richardson, L. (1997). Fields of play: Constructing an academic life. New Brunswick, New Jersey: Rutgers University Press.

Schofield, J. W. (2002). Increasing the generalisability of qualitative research. In A. M. Huberman & M. B. Miles (Eds.), The qualitative researcher's companion (pp. 171-203). Thousand Oaks & London: Sage Publications.

Schulman, L. (1999). Professing educational scholarship. In E. C. Lagemann & L. S. Shulman (Eds.), Issues in education research: Problems and possibilities (pp. 159-165). San Francisco: Jossey-Bass Publishers.

Schwandt, T. A. (2000). Three epistemological stances for qualitative inquiry. In Y. S. Lincoln & E. G. Guba (Eds.), Handbook of qualitative research (2nd ed., pp. 189-213). California: Sage Publications.

Shank, G., & Villella, O. (2004). Building on new foundations: Core principles and new directions for qualitative research. The Journal of Educational Research, 98(1), 46-55.

Smith, J. (1993). After the demise of empiricism: The problem of judging social and educational inquiry. Norwoods, New Jersey: Ablex.

Spencer, L., Ritchie, J., Lewis, J., & Dillon, L. (2003). Quality in qualitative evaluation: A framework for assessing research evidence. London: National Centre for Social Research, Government Chief Social Researcher's Office, UK.

Stake, R. E. (1978). The case-study method in social inquiry. Educational Researcher, 7, 5-8.

Stake, R. E., & Trumbull, D. J. (1982). Naturalistic generalizations. Review Journal of Philosophy and Social Science, 7, 1-12.

Stige, B., Malterud, K., & Midtgarden, T. (2009). Toward an agenda for evaluation of qualitative research. Qualitative Health Research, 19(10), 1504-1516.

Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. International Journal of Qualitative Health Care 19(6), 349-357.

Tracy, S. J. (2010). Qualitative quality: Eight "Big-Tent" criteria for excellent qualitative research. Qualitative Inquiry, 16(10), 837-851.

Viney, L. L., & Nagy, S. (2011). Qualitative methods in personal construct research: A set of possible criteria. In P. Caputi, N. Crittenden, L. L. Viney & B. M. Walker (Eds.), Personal Construct Methodology: John Wiley & Sons.

Whitt, E. J. (1991). Artful science: A primer on qualitative research methods. Journal of College Student Development, 32, 406–415.

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Graduate Research to Research Career: Transferable Skills Training Models ®

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Abstract

Over the last decade, concern has grown over employment destinations for PhD graduates, and in tertiary institutions there has been a parallel rise in the development and delivery of programs and courses focused on developing transferable skills. Following the apparent success of research training schemes overseas, in Australia, discussion has commenced on a research workforce strategy for 2020 and on defining quality of research training, including transferable, or 'broader' skills training in the higher degree by research.

Transferable skills are sometimes classified as the skills resulting from research training that apply in other work environments, and sometimes as 'generic' or professional skills, which are often absent from research training in overt ways. This paper looks at current models of transferable skills training as options for strengthening career and employment choices for Australian PhD graduates, and considers the question: if we are looking to smooth the transition from graduate researcher to research career, is transferable skills training the answer?

Introduction

Over the last decade and more, concern has grown over employment destinations for PhD graduates, and in tertiary institutions there has been a parallel rise in the development and delivery of programs and courses focused on developing transferable skills. Following the apparent success of large scale training schemes overseas, in Australia, discussion has commenced on a Government-led research workforce strategy for 2020 and on the quality of research training, including transferable or 'broader' skills training in the higher degree by research (Department of Innovation, Industry, Science and Research [DIISR], 2011a; DIISR, 2011b; Haynes, 2010; Vitae Impact and Evaluation Group, 2011).

With predictions of a future workforce lacking in researchers, and the current workforce finding too many PhDs on the market for traditional PhD roles, tertiary institutions and governments are taking stock of the research training environment, and re-evaluating the PhD (DIISR, 2011a; DIISR, 2011b). The PhD is still the passport to a research career in and out of academia—a Group of Eight (Go8) response to the Australian government's 2010 consultation on the research workforce reminds us that 'good research training produces more than a narrow set of technical skills' (Go8, 2010:6). If we consider that transferable skills are those learnt for one purpose that are able to be transferred as effective tools to a new circumstance then the PhD has plenty to offer. A certain amount of translation is necessary, however, to ensure that employers, and employees-to-be are speaking the same language. We show below that further work on where PhDs go—and more importantly, why—is necessary.

This paper endeavours to consolidate current definitions of the term 'transferable skills' in the hope of providing a common terminology for discussion of the skills training agenda. We pay a visit to the difficult area of graduate researcher employment destinations and consider whether

we really understand enough about where PhD holders go, or the effect of transferable skills on employment outcomes. The paper then provides an overview of transferable skills training in the international context where activities have inspired or paralleled developments in Australia. Through this preliminary exploration of current models and discussions of transferable skills training overseas, as well as in institutions in Australia, we consider the options available for strengthening career and employment opportunities for Australian PhD graduates. With a view to encouraging further research and discussion on the issue of transferable skills in graduate research degrees, the aim of the paper overall is to answer the question: If we are looking to smooth the transition from graduate researcher to employment, is transferable skills training the answer?

What are transferable skills?

Frequently the term 'transferable skills' is conflated with the terms 'generic', 'professional' or 'soft' skills (Nerad and Heggelund, 2008; Rudd et al, 2008). These latter terms denote skills and attributes that are professionally useful and make a candidate employable, but can be gained from a range of professions and educational experiences: they are not specific to any one profession, and are not distinct character traits that emerge from doctoral training. We propose the definition of 'transferable skills' as skills explicitly gained through the process of completing a research higher degree that are also useful in a wide array of professions outside academia and indeed outside a research focused career.

When we say 'transferable skills training', we do not refer to adding training in the much broader professional skills to the PhD program. The aim should be to focus on identifying and developing the skills that students already obtain as *a direct result* of completing a PhD (See Wellcome Trust, 2009). Rudd et al (2008:1) distinguish between 'PhD-completion skills' – those acquired in the normal course of successfully completing PhD research – and 'professional skills' – career competencies that may need to be learned in addition. We understand 'transferable skills training' to focus on the former. These skills are the point of difference in terms of the employability of a research graduate.[4] Transferable skills training programs should ideally focus on developing and articulating the competencies that research students attain whilst completing a PhD, and ensuring that candidates have a clear understanding of their own strengths and where to most fruitfully apply them. Some examples of transferable skills and other attributes gained through the process of completing a PhD are presented in the list below:

- Research Skills
- Oral Communication of complex research
- Leadership
- Understanding of project management
- Understanding ethics and integrity
- Critical thinking
- Understanding of commercialisation & entrepreneurship
- Developing methodology & research design
- Project partnerships and networks
- Team-based problem solving
- Cross cultural communication and collaboration
- Self-awareness of personal effectiveness/efficacy
- Career planning and strategic thinking
- Understanding intellectual property rights
- Technical writing
- Grant writing
- Contextualising own research

[4] *In this paper, the terms PhD graduate, research graduate and PhD holder refer to someone who holds a PhD or higher degree by research (HDR). PhD student, or graduate researcher refers to someone engaged in doing a PhD or higher degree by research.*

Different parts of the world of course have different ways of drawing boundaries between types of skill development. For example, a European University Association (EUA) report lists most of the skills above as 'Scientific training in core research skills', and networking, team-building, and leadership as 'transferable (generic) personal and professional skills and competences [sic]' in a separate category, implying they are inherently separate from the 'scientific training' that occurs as a result of doctoral training ((EUA, 2005:19); see also Lee & Aitchison, (2009); Bitusikova (2009)). Many students have little or only an ambiguous awareness that they have skills and attributes that apply beyond the arena of research, and can have difficulty articulating them to potential employers. While students are in the process of undertaking a PhD, it can be difficult to focus on what synthetic skills they are developing whilst their attention and energy is focused on specialist subject matter and methodologies. A transferable skills program, therefore, needs to balance the attention of doctoral training *thesis completion* which is very much about a produced outcome and end goal, with what George Walker and others describe as the process of *formation*: the development of a graduate researcher into a rounded professional who has cultivated the intellect, characteristics and strengths that come with the transition from student to graduated doctoral scholar (Breslow, 2006; Walker, 2008).

There is little agreement over the content or delivery method of additional skills training that doctoral graduates should acquire. Indeed, the point of a PhD has never been to create a complete and made-to-order employee ready for any career. It has always been a research apprenticeship, producing graduates who are flexible, problem solvers, critical thinkers and well acquainted with recent theoretical or technical developments in their field. Taking a further step beyond skills training, when considering transferability itself, it is problematic to assume that labelling skills (professional or otherwise) as transferable means that people possessing those skills will 'transfer seamlessly to workplaces' (Gilbert et al, 2004; Mowbray and Halse, 2010:653).

Souter et al surveyed researchers and employers and found that there were a range of skills and attributes valued by both groups, shown in Table 1, as well as some marked differences (2007:22-23). What is striking about this list, and the idea of transferable skills in general, is that many of the items listed are not skills that can be acquired through training, but are attributes attained only through experience. This highlights the need for universities, employers and research graduates to spend time clarifying and identifying the transferable skills, professional skills, and personal attributes that are necessary for the workplace, as well as the means of delivery of skills courses.

Table 1. Skills and attributes valued by researchers and employers (after Souter et al 2007:22-23).

Researchers believe they possess	Researchers believe employers are looking for	Employers are looking for researchers to have
Maturity	Fast learner	Communication
International exposure	Communication and interpersonal skills	Intellectual ability
Cultural flexibility	Time management	Teamwork
HR and day-to-day management skills	IT	Planning
Negotiating	Project/people management	Analysis
Mentoring	Teamwork	Presentation
Self-motivation	Innovation	Interpersonal
Tutoring	Self-management	Task orientation
Organisational skills	Technical know-how	Adaptability
Presentation skills	Ambition	Enthusiasm
Work experience		Technical

International Context

There are two issues at play—at first glance they are in apparent conflict, however, they have each provoked very similar responses from governments and tertiary institutions around the world. First, recent government reports and academic literature in Australia and abroad indicate that from 2020, world economies will be largely knowledge based (DIISR, 2011a). As a consequence, greater numbers of research qualified workers - and in particular STEM (Science, Technology, Engineering and Mathematics) workers - are required to feed the workforce of that global knowledge economy (Access Economics, 2010; Allen Consulting Group [Allen], 2010; Bradley et al, 2008; Edwards, 2010; Roberts, 2002). To put it bluntly: the supply of research graduates will very soon fail to meet demand, and as a result tertiary institutions and governments internationally are now competing to create and sustain the 'most competitive and dynamic knowledge-based economy in the world' (Kehm, 2008:67).

Second, for at least the last twenty years, various commentators have complained of reduced and less attractive opportunities for employment in academia. Rising numbers of doctoral students, reduced funding, falling faculty numbers, and the prevalent cycle of short term contracts leading to prolonged postdoctoral employment have, for many, not led to the expected reward of stable long term employment in academia (Benton, 2003; Edwards, 2009; Katz, 1999; Kehm, 2011; Cyranoski et al, 2011; *The Economist*, 2010). In short, the traditional PhD is no longer perceived as adequate preparation for employment, (even for an academic career), even though it was not designed to prepare graduates for industry roles (Gilbert et al, 2004). The current supply of research graduates has outstripped demand in their traditional area of employment. As a consequence, larger numbers of graduates and postdoctoral researchers seek employment outside academia and it is apparent that the transition of research graduates into non-academic careers is often a difficult process. The Allen (2010) and Access Economics (2010) reports on the research workforce indicate that bottle necks are also forming in industry: researchers enter an organisation as junior staff, and through promotion stay with that organisation for the long term. Vacancies arise only when promotions occur, leading to difficulties for those, such as postdocs, seeking to find work outside academia at a commensurate level of experience and pay.

At issue is the fact that research graduates do not always realise the transferability of the skills obtained during their degree into areas outside academia. Similarly, research graduates and their potential employers do not always share a common language to discuss skills and attributes (Mowbray and Halse, 2010).

A forerunner in the current doctoral transferable skills training movement was the implementation of recommendations made by Sir Gareth Roberts (Roberts, 2002). Roberts reported on the decline in supply of STEM skilled people in the UK and a central issue he highlighted was the apparent lack of transferable skills demonstrated by research graduates. Roberts recommended that PhD candidates receive two weeks per year of transferable skills training (Roberts, 2002). The application of this recommendation has led internationally to broader discussions on what transferable skills are, and how to prepare graduate research students during candidature for employment in industry. A primary outcome of the Roberts Review has been the introduction of skills training programs across the UK, which have led to a number of other countries adopting similar approaches, some of which we discuss below.

Australian policy context

It is clear that in Australia, government has a major role in this agenda. *Building Australia's Research Capacity,* the final report from the House of Representatives Inquiry into Research Training and Research Workforce Issues in Australian Universities was tabled in the Federal Parliament in December 2008. The report recommends extending the length of doctoral candidature by six months and refers the need for additional skills training to a new 'Research Workforce Strategy' (Commonwealth of Australia, 2009; House Standing Committee on Industry Science and Innovation [House Standing Committee], 2009).

DIISR convened and released the Research Workforce strategy in April 2011. The aspirations outlined in the strategy include ensuring: the global competitiveness of Australian industry through access to research qualified employees; that the public sector has sufficient researchers; that Higher Degree by Research (HDR) graduates have the skills and attributes necessary for employment; and that communication between industry and universities is effective in growing innovation. In relation to transferable skills and research training, the report describes among its key future priorities for research training, the 'development of new models of research training that explicitly focus on the professional employment needs of graduates' (DIISR, 20011b:24). It further states that the government will 'give consideration to the implications of accommodating additional generic... skill development in research degrees for the... periods of nominal support provided under key scholarship programs, such as APAs and IPRS', but makes no firm commitment to increase funding for these programs (DIISR, 20011b:24).

In October 2011, the Commonwealth released a consultation paper on research training in Australia as a component of the broader Research Workforce Strategy. The purpose was to find ways of measuring the quality of research training efforts in Australian universities not tied solely to the speed at which students were completing their degrees. The paper offers for discussion the question, 'Should Australian higher degrees by research include broader skills training?' (to which the government's own strategy answered clearly in the affirmative less than six months prior) and 'if so, should this be through compulsory coursework or through some other mechanism?' (DIISR, 2011a:19-20).

It is clear that while only a small component of the overall research training review, the Commonwealth's policy context provides an explicit recognition of the need for HDR students to be provided with additional skills training. While we note that both the submissions and the government's response to the *Defining Quality for Research in Australia* consultation are yet to be released, Canberra's policymakers are arguably anticipating that universities will present a unified position on the need for and extent of transferable skills training, and a solid justification for why universities are in the best position to develop and deliver their own skills training programs.

Graduate destinations

The overall impression from the Roberts review, and from employer surveys in the consultation papers described above, is that PhD graduates are not adequately prepared for roles outside academia (Roberts, 2002). Understanding the intended and actual destinations of graduate research students is an elusive pursuit, yet crucial in the transferable skills agenda.

A difficulty in the discussion to date is that graduate destination data, especially national statistics, are at best focused only on short term career progression (usually 3 to 5 years) . Exceptions include, but are not limited to the UQSRC report 'PhD Graduates 5 to 7 Years Out

(Western, Boreham & Kubler et al, 2007), and CIRGE (Center for Innovation and Research in Graduate Education) 'P.h.D.'s Ten Years Later' (CIRGE, 1996). The data is captured at the macro level, and appears removed from the experiences of academics and research graduates. Universities and government bodies tracking employment trends require more detailed information on research graduate destinations before embarking further on programs to enhance the research degree. Universities should be, but appear not to be, best placed to identify and understand what kinds of transferable and professional skills training their doctoral graduates most need. They have access to skilled researchers to gather the data, alumni to track, connections to employers, and would ultimately benefit from these networks in being able to demonstrate employment outcomes, thus aiding student recruitment (Stacy, 2006; Taylor et al, 2006)[5].

'The doctorate of today is not based purely on curiosity-driven research...but is often also driven by the needs of stakeholders including governments, industry and commerce' (Bitusikova, 2009:202, Taylor and Beasley, 2005). Thus, employers are critical stakeholders in graduate employability as they stand to benefit significantly from the skills, knowledge and networks that freshly minted doctoral graduates bring. Universities must engage employers to gauge what their hiring expectations are (Commission of the Future of Graduate Education in the United States [FGE], 2010). Knowing what employers understand about the value of PhD graduates would be helpful: their strengths, approaches to problem-solving, and capacities as scholars and thinkers pushing the boundaries of their discipline.

The closest and most immediate professional relationship doctoral students have is with their supervisors. Unfortunately, most supervisors are ill-equipped to advise students on post-PhD career destination trajectories when the graduate moves beyond academia (See Leonard and Becker, 2009).[6] Keeping in touch and informed about where previous students have established careers is central to counteracting this. Establishing a greater link between alumni a few years into their post-PhD career with academics and current PhD students would be advantageous for all involved.

A number of North American institutions have developed strong connections between the activities of graduate schools, the usual home for campus-wide services directed at PhD candidates, and student careers and employment advisory services (Taylor et al, 2006). If Australian universities are to have greater stakeholder engagement with employers regarding hiring expectations for PhD students, then careers and employment support services are natural partners for graduate schools and faculty based HDR support services.

University alumni associations are another obvious partner in this effort because they are in contact with former students over the long term, and have well developed mechanisms for targeting particular ex-student cohorts (Souter et al, 2007). Partnerships between graduate schools, career and employment services, and alumni associations are the ideal nexus for developing a better understanding of PhD destinations, employer expectations and the mechanisms by which universities can prepare students to be competitive and successful in non-academic careers. Graduate destination data, in short, may lay the strongest foundation for developing and targeting effective transferable and professional skills training programs.

[5] *There are other benefits: if students feel informed and confident about the reasons for taking a PhD, and can see a long term plan for themselves, it is very likely that this will increase the rate at which they complete a PhD in the first place (See Stacy, 2006:188-97).*

[6] *Further, Gilbert et al (2004), describe the tension that underlies graduate research where academics, in particular supervisors, see transferable skills training as distracting students from the business of research, and, citing Raber (1995:48), describe it as a move towards training 'exquisitely trained technicians who will have great trouble leading exploratory research'.*

Graduate destinations in the UK

The Vitae series of reports 'What do researchers do?' are based on data collected through the UK's Destinations of Leavers of Higher Education Surveys, conducted by HESA (the UK Higher Education Statistics Agency). They provide an overview on what happens in the first three years of post-PhD careers, and are among the most comprehensive graduate destinations data currently available (Careers Research and Advisory Centre [CRAC], 2011). In the 2011 report, the patterns of employment reveal that just over 40% of doctoral graduates who responded to the survey find employment in higher education, and that across five occupational 'clusters' the proportions are:

> *Higher education: 19%*
> *Teaching and lecturing in higher education: 22%*
> *Research (not in the higher education sector): 18%*
> *Other teaching roles: 6%*
> *Other 'common doctoral occupations' (such as health care, senior management, engineering professionals,*
> *business, finance and statistical professionals): 27% (Vitae, 2011:12).*

While it is tempting to align employment destinations, and high workforce participation rates with positive reactions to the Roberts' agenda, further work needs to be done on how these trends relate. A criticism voiced in the evaluation of the Roberts implementation so far, is that no benchmarks were set against which to measure outcomes (Hodge 2011). One issue with current destination data is that three year data covers roughly a first postdoctoral fellowship contract. The reports hint at movement between clusters, but the data stops short of the transition from early career to mid-career. The analysis in the reports, while providing comprehensive descriptions of the statistics, also stops short of investigating in any depth why research graduates take up their first roles, and further, why they move on from those roles.

Australian graduate employment destinations and the research workforce

Census data shows that people with doctoral qualifications in Australia, as in the UK, have high workforce participation rates, yet few positions requiring a PhD appear to be available (Edwards, 2010). This apparent disparity emphasises that the skills obtained during a PhD are transferable, flexible and employable outside of academia, and outside of research-specific roles. PhD graduates are productive in the workforce in a wide range of jobs with the current Australian format of the PhD, but as discussed below, current circumstances do not reflect this.

Department of Education, Employment and Work Place Relations (DEEWR) trend data also show that over the past 5 years, people with tertiary qualifications were the largest contributor to Australia's employment growth, and that projected growth to 2015 shows skill level 1 qualified people will contribute up to 41% of employment growth.[7] However, beyond the broad categories of 'skill level 1'; 'professional scientific and technical services', and 'education and training' in the broader government reporting on employment destinations, where people with research higher degrees are employed is invisible.

Data specifically collected on the destinations of research graduates in Australia is unfortunately not fine grained. Postgraduate destination data show that for 2010, 79% of PhD graduates surveyed were available for full time work. Of those, 85% were in full time employment at the

[7] *Reported percentages have been rounded to the nearest whole percent recorded in SkillsInfo, 2011.The five levels of skill: Bachelor degree and higher (level 1), to advanced diploma and diploma, certificate IV, certificate III and II, certificate I/secondary education (level 5).*

time of the Graduate Destination Survey (GDS). 30% of those were in full time employment for the first time, which means many research graduates undertake a PhD when they already have some experience in the workplace (Graduate Careers Australia [GCA], 2011). By comparison, 76% of all graduates surveyed in 2010 were employed full time, and another 15% worked part time (GCA 2012). As a whole, Australia's 2011 full time employment rate was 67%, part time employment 28%, and unemployment at 5% (ABS 2012).

Of all research postgraduates (PhD/Masters by Research) who responded to the GDS: 46% were employed in the education sector, with 36% of those employed in higher education, and 10% in 'other education' roles. Like the UK 'What do researchers do?' report, GDS reporting does not demonstrate whether these roles were academic or professional, sessional, part time or full time roles, which may skew our understanding of the availability of academic positions. The GDS does attempt, however, to 'broadly gauge' whether postgraduates think their qualification helped them to find employment (GCA, 2011:21). For over 60% of respondents, the qualification was a formal requirement, and they considered that it was also important to their job.[8]

In overall Australian job forecasts, DEEWR data shows that most employment growth to 2015-16 will be in highly skilled jobs. It is estimated that 38% of these growth jobs will need skill level 1 qualifications[9] (Access Economics, 2010; Allen, 2010; SkillsInfo, 2011), but it must be remembered that not all skill level 1 jobs require a research degree.

The Allen (2010) report surveyed a diverse range of employers and used eight survey participants as case studies. Amongst responding employers, PhD or Masters by research qualified staff only made up 40% of their workers (Allen, 2010:28).[10] They also found that four categories of employers wanted the following skill sets:

> *Business: problem solving, teamwork, planning and organising*
> *Government: communication and self-management*
> *Research centre: communication, problem solving, self-management*
> *University: problem solving, communication, initiative and enterprise, self-management (Allen 2010:29-30).*

These groups claimed skills gaps amongst their researchers as:

> *Business acumen (commercial experience, appreciation of the industrial context, time pressure to achieve results)*
> *Valid experience*
> *Team work and project management skills*
> *Organisation skills (ability to take direction, meet deadlines, deliver on tasks). (Allen, 2010:31)*

Strangely, whilst commenting on what researchers lack, two thirds of the respondents believed that 'newly employed researchers often, or very often have the necessary skills to be a productive employee' (Allen, 2010:36). Employers overall often conflate experience and skills – there are a number of 'skills' listed above that can only be achieved through working in a particular sector or business environment for a substantial period of time. While Australian

[8] Reflecting on this concept, and the employability of research graduates, Berman and Pitman (2010), look into the importance of a PhD and how its transferable skills translate in university administration. Neumann & Tan (2011) and Crossouard (2010), also look into the 'repositioning' of the doctorate as a qualification for employment outside of academia in recent times.

[9] Countering this is the point noted in Cutler (2008), that investment in Australia's Research and Development expressed as a proportion of the GDP has been shrinking over time. Thus, recent moves by the Chief Scientist to establish interest from primary school in STEM disciplines and therefore STEM employment, will involve some considerable effort into encouraging business and industry in Australia to invest in developing the R&D sector (see Health of Australia's Science Report (2011), http://www.chiefscientist.gov.au/2011/10/health-of-australian-science-report/).

[10] The rest were technician and other staff with VET, bachelor degree, or no minimum qualification (Allen, 2010.) See pp.29-30 for a breakdown of qualification by business type.

Research Council (ARC) Linkage APA(I) scholarships, Cooperative Research Centres (CRC) PhD and postdoctoral positions, and the new ARC ITRP (Industrial Transformation Research Program) and some university programs are all aimed at providing some level of practical working-environment experience, employers need to clarify their expectations of research graduates and contribute to the overall cause by running their own training.[11] It should also be recognized that graduate research degrees are not designed to meet the needs of *every* specific sector or employer, nor for the duration of any one graduate's entire career; in the same way that industry trains its new (undergraduate) graduate intakes, perhaps industry employers need to consider training graduate research intakes for the specific competencies expected in their particular sector.

What do transferable skills training programs currently look like?

The United Kingdom

The UK is 'recognised as leading the development of transferable skills training and research career development internationally. In particular, moves to embed researcher skills development as a core part of the UK's PhD have commanded international respect' (Hodge, 2011:5). The Vitae organisation and its wealth of programs, resources, and information clearly show that what Mowbray and Halse (2010) term the 'skills push', has been led by the UK. The majority of skills training in the UK stems from government investment of £20 million pounds per annum over eight years delivered regionally to 178 institutions to implement the recommendations of the *SET* report (Roberts, 2002.) While originally Roberts identified STEM disciplines as needing the most attention, his recommendations have been applied across all disciplines. Independent organisations such as Vitae have been established in order to coordinate the delivery of skills training and researcher development across the UK. Roberts funding was initially awarded at around £800 per research council funded student towards access to at least 2 weeks' skills training per year of their degree. Funding awarded per head, and allocated regionally ensured that institutions collaborated to share responsibilities for delivering the training, and students were able to select the topic of the training as well as where and when they would attend. The courses take the form of nationally delivered (often) residential courses in personal/life development, research, leadership, digital applications and career development. [12]

The United States of America

In 2010, The Commission of the Future of Graduate Education in the United States (FGE) released their findings in a report called *The Path Forward: The Future of Graduate Education in the United States.* It estimated that around half of all doctoral degree recipients found employment outside the academy, recognising that the proportions vary widely by discipline

[11] *Many organisations already have a graduate intake program where a considerable period of time is devoted to making over bachelor degree holders "in their own image" – it would seem that the transition of research graduates into various workforces (including universities) would be less difficult if comprehensive induction programs equivalent to graduate intake programs were run.*

[12] *The Vitae website was constructed as a means of ensuring the long term sharing of best practice, including communication with the research community and beyond. It stores information on training courses, candidature, career planning advice for postgraduates and researchers, policy and practice information stemming from Roberts' funded programs. It also provides information to supervisors, managers and employers. In evaluating the progress of the Roberts agenda the early prediction is that much of what has been established online seems viable to continue for the long term, however, the Hodge Review (2011) indicates that it is unclear what funding mechanisms have been put in place to continue the face to face delivery of training.*

(FGE, 2010; Stimpson, 2006).[13] The FGE made recommendations for US universities that are applicable in Australian universities. One is the need to provide appropriate mentoring and information about employment opportunities 'to help more students understand the career options available to them and select graduate programs that will prepare them for their chosen career goals' (FGE, 2010:42).

The FGE recognises that there is no US government program that has done this as effectively as the Vitae program, and advises that American graduate schools need to make every effort to develop and implement programs that train the attributes discussed above in their graduates. The FGE argues that such programs should be an essential part of every doctoral student's experience, and that governments could favour these programs in grant solicitations where the program does not delay the completion of the degree.

Other research into the state of graduate education in North America has made similar recommendations. In 2008, CIRGE completed an investigation into social science PhD graduates five or more years beyond graduation. The authors found that skills gained through completing a PhD were overwhelmingly transferable to business, government and non-profit employment contexts. Among the professional skills, for which PhD students can and should receive additional training whilst completing their degree, the authors found that 'working with diverse groups in interdisciplinary contexts' and 'working in teams' was critical to success in over 665 careers outside the academic sector (Rudd et al, 2008:8-9).

Other countries are moving to implement large, sector wide training programs. The German Excellence Initiative (GEI), for example, is a competitive funding scheme launched in 2005 which awarded €1.9 billion over 5 years and has just received renewed funding from the German government for another 5 years. The GEI set out to make Germany a more attractive research location, and enhance the reputation of German universities. It has just entered its evaluation phase (DFG, 2012).

In summary, international models for research training and skills training include direct involvement by government that goes beyond funding in order to create internationally competitive future workforces. At the regional and institutional level, there is awareness of the need for career guidance, and skills training has become more systematic and structured. In the UK a collaborative, government funded model has been positively received.

Australian Universities

Models of skills training - Australia

Over the last decade Australian universities have developed an assortment of approaches to delivering skills training to research higher degree candidates ranging from individual workshops through to comprehensive transferable skills and professional development programs. No comprehensive government funding similar to the Roberts' or GEI currently exists although the ARC's research networks, the recently released Industrial Transformation Research Program (ITRP) (which offers a greater commitment to ensuring doctoral students gain practical work experience in industry settings), funding for Centres of Excellence and Cooperative Research Centres (CRCs), plus the now defunct Commercialisation Training Scheme have all been

[13] *The needs of a range of employers in the American private sector were also evaluated and identified five specific 'soft skills' needed for students entering industry: professionalism; communications; teamwork/collaboration; critical thinking/problem solving; and ethics/social responsibility (Benenson Strategy Group [BSG], 2009.) It could be argued that some of these are not 'skills', but values, which are harder to train.*

incentives to encourage interest in collaboration and commercialisation amongst the Australian research community (Australian Research Council [ARC], 2012). Table 2 below provides a summary of Group of Eight (Go8) skills training approaches.

Table 2. Skills training approaches at some Australian universities

INSTITUTION	PROGRAM	DETAILS
Australian National University	TOAST, GILP, and APSP	Provides a comprehensive program of research training and other skills training designed to provide PhD candidates with skills for future careers. http://researchstudents.anu.edu.au/ TOAST (Tool for online assessment of skills and training), GILP (Graduate Information Literacy Program) ASP (Academic and Professional Skills Program)
University of Melbourne	Developing Effective Researchers	The UpSkills program, part of the developing effective researchers framework, offers workshop series focused on candidature milestones, transferable and professional skills, including Start of Career workshops for junior academics. The Graduate Certificate in Advanced Learning and Leadership is a concurrent degree focused on leadership experiences. http://www.gradresearch.unimelb.edu.au/
University of Adelaide	RED: Researcher Education and Development	RED is a program of professional development and skills training for graduate research students (RED research degrees) and academic staff (RED research career programs) http://www.adelaide.edu.au/red/
University of Queensland	UQ Career Advantage PhD Program	This new streamed doctoral program divides the cohort into three groupings; students select from a program with an international, commercial or academic focus. http://www.uq.edu.au/grad-school/career-advantage-phd/
The University of New South Wales		A range of professional skills training aimed at improving candidates' communication skills (3Minute Thesis, conference presentation training), academic writing workshops, careers consulting, grant-writing and time management workshops, all of which are run centrally through UNSW's Graduate Research School. http://research.unsw.edu.au/units/graduate-research-school
University of Western Australia		A graduate research school with a dedicated graduate research education and training team. Along with research skills, provides a statistics clinic and academic skills training. http://www.postgraduate.uwa.edu.au/students/resources
Monash	exPERT	Workshop and seminar series delivered through the exPERT program, some targeted for PhD students. Aimed to support students in completing their research, but there are also workshops on skills needed in post- PhD careers, including general project management, presentation skills, assertiveness, intellectual property rights, writing and editing skills. http://www.mrgs.monash.edu.au/seminars/expertcategories.html
University of Sydney		No centrally delivered programs.

While this table offers only a sample of the programs available at Australian institutions, it appears that Australian university-based transferable skills and professional development programs offer comparable coverage, at least in intent, to those offered through Vitae, and to the approaches suggested by the FGE. As discussed above, to discover whether these programs achieve their aims, the obvious next step is to invest effort in understanding where research graduates go, and to ensure that they have the ability to recognise their transferable and professional skills and how these fit with future roles.

Conclusion

We posit that transferable skills in doctoral training should be defined as those skills learned as part of the research degree process and that can be applied to academic and non-academic careers. Furthermore, skills learned in training programs concurrent with, but separate from explicit doctoral training should be termed 'professional' skills, as these skills are often perceived as making research graduates more effective, and more marketable outside of academia. There is a strong argument for increasing the awareness of research graduates and employers about both skills sets as part of their training.

Significant further work, however, needs to be done on identifying where research graduates go and what employers want from them; without this, we make blind assumptions and are taking a scatter-gun approach that may have limited effectiveness in building a globally competitive research workforce and enabling research graduates to find appropriate careers.

Some effort has been made towards understanding the dimensions of the research workforce but further work should include comprehensive longitudinal tracking of research graduates. Details gained from such tracking will allow better decisions to be made about the structure of PhD training: does it really lack what industry needs? Or will robust partnerships with industry peak bodies and professional associations assist in helping universities and industry to clarify their needs?

The apparent success of the UK model, results of the nascent US plans and the implementation of the GEI are important in informing Australian efforts at providing a clear and comprehensive framework through which research graduates may enter the non-academic workforce. In Australia to date, the ARC's Linkage grants, CRCs and the new ITRP are worthwhile endeavours, but hardly on the same scale as funding schemes overseas. Universities must take a strong lead with government on research training quality, modes of funding and transferable and professional skills training. The current impasse, where consultation leads to strategy, which leads to renewed consultation, rather than funding, implementation and evaluation, needs to be cleared before any effective national approach can be put into operation.

So, if we are looking to smooth the transition from graduate researcher to employment, is transferable skills training the answer? Our view is a resounding "Yes" - Transferable skills training as we have defined it currently makes research graduates employable, and professional skills training makes them marketable. The gap lies in translation from the academy to industry. Graduate researchers need to be aware of the transferable skills gained from their research degree, and employers, including academic employers, need to have a clearer idea of what they are looking for.

References

Access Economics. (2010). Australia's future research workforce: supply, demand and influence factors, a report by Access Economics Pty for Department of Innovation, Industry Science and Research.

The Allen Consulting Group. (2010). Employer Demand for Researchers in Australia, Final Report. Report to the Department of Innovation, Industry, Science and Research.

Australian Bureau of Statistics (ABS) (2012). Labour Force Australia. Retrieved from http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/F756C48F25016833CA25753E00135FD9?opendocument

Australian Government, Department of Education, Employment and Workplace Relations (2011). Australian Jobs 2011, Canberra. Retrieved from http://www.deewr.gov.au/Employment/ResearchStatistics/Pages/AustralianJobs.aspx

Australian Government, Department of Innovation, Industry, Science and Research (2011a). 'Defining Quality for Research Training in Australia: A Consultation Paper', Canberra: Commonwealth of Australia.

Australian Government, Department of Innovation, Industry, Science and Research. (2011b). Research Skills for an Innovative Future: A Research Workforce Strategy to Cover the Decade 2020 and Beyond. Canberra: Commonwealth of Australia.

Australian Research Council. (2012). Industrial Transformation Research Program. Retrieved from http://www.arc.gov.au/ncgp/itrp/itrp_default.htm.

Benenson Strategy Group. (2009). The Springboard Project American Workforce Survey. Roundtable.

Benton, T. (2003). So You Want to Go to Grad School?, The Chronicle of Higher Education June. Retrieved from http://chronicle.com/article/So-You-Want-to-Go-to-Grad/45239

Berman, J.,& Pitman,T. (2010). Occupying a 'third space': research trained professional staff in Australian universities, Higher Education 60,157-169.

Bitusikova, A. (2009). New Challenges in Doctoral Education in Europe. In D. Boud & A. Lee (Eds), Changing Practices of Doctoral Education (pp.204-5). London: Routledge.

Bradley, D., Noonan,P., Nugent, H.,& Scales, B.(2008). Review of Australian Higher Education, Final Report. Canberra: Australian Government.

Breslow, R. (2006). Developing Breadth and Depth of Knowledge. In C.M. Golde et al. (Eds), Envisioning the Future of Doctoral Education: Preparing the Stewards of the Discipline, (pp.167-187). San Francisco: Wiley.

Center for Innovation and Research in Graduate Education (CIRGE). (1996). Research on Ph.D.'s Ten Years Later. Retrieved from http://depts.washington.edu/cirgeweb/c/research/.

Commission of the Future of Graduate Education in the United States (FGE). (2010). The Path Forward: The Future of Graduate Education in the United States. Washington DC: Council of Graduate Schools.

Commonwealth of Australia. (2009). Powering Ideas: An Innovation Agenda for the 21st Century, Canberra: Commonwealth of Australia.

Careers Research and Advisory Centre (CRAC). (2011). Careers in Research Online Survey (CROS) 2011 Analysis of UK aggregate results. Retrieved from http://www.vitae.ac.uk/CMS/files/upload/CROS2011_Report_Web.pdf

Graduate Careers Australia (GCA). (2012). Media Release New Graduate Outcomes. Retrieved from

http://www.graduatecareers.com.au/wp-content/uploads/2012/01/gca002468.pdf

Group of Eight (Go8). (2010). Group of Eight response to DIISR consultation paper: Meeting Australia's research workforce needs. Canberra: Group of Eight.

Haynes, K. (2010). Analysis of university reports on career development and transferable skills training (Roberts) payments. The Professional and Higher Education Partnership Ltd. Retrieved from http://www.rcuk.ac.uk/documents/researchcareers/Analysis20042009RobertsReports.pdf

Health of Australia's Science Report (2011), http://www.chiefscientist.gov.au/2011/10/health-of-australian-science-report/

Hodge, A. (2011). Research Councils UK (RCUK) response to independent review of researcher skills development (Hodge Review). Retrieved from http://www.rcuk.ac.uk/documents/researchcareers/RCUKresponsetoHodgeReviewJanuary2011.pdf

House Standing Committee on Industry, Science and Innovation: Inquiry into Research Training and Research Workforce Issues in Australian Universities, Australian Government Response to Committee report, 'Building Australia's Research Capacity'.(2008). Retrieved from http://sydney.edu.au/ab/committees/grad_studies/2010/Govt_Rsch_Training_Rpt.pdf

Katz,J. (1999). Don't Become a Scientist! Retrieved from http://wuphys.wustl.edu/~katz/scientist.html

Kehm, B. (2007). Doctoral Education in Europe and North America. A Comparative Analysis. In: U.Teichler (Ed.), The Formative Years of Scholars (Wenner-Gren International Series Vol. 83). (pp.67-78). London: Portland Press.

Lee, A., & Aitchison, C. (2009). Writing for the Doctorate and Beyond. In D.Boud & A.Lee (Eds), Changing Practices of Doctoral Education. (pp.87-100). London: Routledge.

Leonard, D., & Becker,R. (2009). Enhancing the Doctoral Experience at the Local Level. In D.Boud and A.Lee (Eds), Changing Practices of Doctoral Education.(pp.71-87). London: Routledge.

Mowbray, S., & Halse, C. (2010). The purpose of the PhD: theorising the skills acquired by students, Higher Education Research and Development, 39(6), 653-664.

Nerad, M.,& Heggelund, M. (Eds) (2008). Towards a Global PhD? Forces and Forms in Doctoral Education Worldwide. Seattle: The University of Washington Press.

Neumann, R., & Tan,K.K. (2011). From PhD to initial employment: the doctorate in a knowledge economy, Studies in Higher Education,36(5), 601-614.

Rudd, E., et al. (2008). Professional Development for PhD Students: Do They Really Need It? In CIRGE Spotlight on Doctoral Education # 2. Seattle: The University of Washington.

Roberts, G., (2002). SET for Success: the Report of Sir Gareth Roberts' Review The supply of people with science, technology, engineering and mathematical skills. The Report of Sir Gareth's Review, HM Treasury.

SkillsInfo. (2011). New Jobs: Employment trends and prospects for Australian Industries, 2011. Retrieved from www.skillsinfo.gov.au

Crossouard, B. (2010). The (re-)positioning of the doctorate through the eyes of newly qualified researchers, 21st Century Society, 5(3),197-214.

Cutler, T. (2008). Venturous Australia, building strength in innovation: a Review of the National Innovation System. Canberra: Australian Government.

Cyranoski, D., Gilbert,N., Ledford,H., Nayar, A.,& Yahia,M. (2011). The PhD Factory, Nature 472, 276-279.

'The disposable academic: Why doing a PhD is often a waste of time', The Economist. (2010). Retrieved from http://www.economist.com/node/17723223

Deutsche Forschungsgeminschaft (DFG). (2012). Evaluation Studies. Retrieved from http://www.dfg.de/en/dfg_profile/evaluation_statistics/programme_evaluation/studies/index.html

Edwards, D. (2009). Issues Facing Scientific Research Employment in Australia. Issues, 88, (September), 4-7.

Edwards, D. (2010). The future of the research workforce: estimating demand for PhDs in Australia. Journal of Higher Education Policy and Management, 32(2), 199–210.

European University Association (EUA) (2005). Doctoral Programs for the European Knowledge Society final report, EUA, Strong Universities for Europe. Brussels: European University Association. Retrieved from www.eua.be.

Gardwood, J. (2011). A conversation with Peter Lawrence, Cambridge: "The Heart of Research is Sick, Lab Times, Analysis, 2, 24-31.

Gilbert, R., Balatti, J., Turner, P., & Whitehouse, H. (2004). The generic skills debate in research higher degrees. Higher Education Research & Development, 23(3), 375-388.

Graduate Careers Australia (GCA). (2011). Postgraduate Destinations 2010: A report on the work and study outcomes of postgraduates. Melbourne: Graduate Careers Australia Ltd. Retrieved from http://www.graduatecareers.com.au/wp-content/uploads/2012/01/Postgraduate-Destinations-2010.pdf

Souter, C., Shinton, S., & Ball. C. (2007). What Do Employers Want? In R. Hinchcliffe, T. Bromley, & S. Hutchinson, (Eds). Skills Training in Research Degree Programmes: Politics and Practice. (pp.15-27). Maidenhead: McGraw Hill Open University Press.

Stacy, A., (2006). Training Future Leaders. In C.M. Golde et al. (Eds), Envisioning the Future of Doctoral Education: Preparing the Stewards of the Discipline, (pp.187-207). San Francisco: Wiley.

Stimpson, C., (2006). Words and Responsibilities: Graduate Education in the Humanities. In C.M. Golde et al. (Eds), Envisioning the Future of Doctoral Education: Preparing the Stewards of the Discipline, (pp.390-419). San Francisco: Wiley.

Taylor, C., (2006). Heeding the Voices of Graduate Students and Post-Docs. . In C.M. Golde et al. (Eds), Envisioning the Future of Doctoral Education: Preparing the Stewards of the Discipline, (pp.46-65). San Francisco: Wiley.

Taylor, S., & Beasley, N. (2005). A Handbook for Doctoral Supervisors. London: Routledge.

Western, M., Boreham, P., Kubler, M., Laffan, W., Western, J., Lawson, A., & Clague, D. (2007). PhD Graduates 5 to 7 Years Out: Employment Outcomes, Job Attributes and the Quality of Research Training Final Report (Revised). Brisbane: The University of Queensland Social Research Centre (UQSRC)

Vitae. (2011). What do researchers do? Career paths of doctoral graduates. England: CRAC/RCUK. Retrieved from http://www.vitae.ac.uk/researchers/1272/Publications.html

Vitae Impact and Evaluation Group. (2011). Annual Report. Cambridge: Careers Research and Advisory Centre (CRAC) Limited. Retrieved from http://www.vitae.ac.uk/CMS/files/upload/IEG_Annual%20Report2011_Web.pdf

Walker, G.E., (2008). Rethinking Doctoral Education for the Twenty-First Century. San Francisco: Jossey-Bass.

Wellcome Trust. (2009). Review of Wellcome Trust PhD Training: the Student Perspective, London: The Wellcome Trust.

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Developing a framework for recording and reporting the narrative of the research higher degree student ®

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Abstract

Narratives of the research higher degree student are typically collected through student experience surveys. Based on the premise that decision makers require the results of these surveys to be provided to them in a manner that mirrors both institutional and governmental measures of quality, the University of Sydney has successfully developed an evidence-based and forward-looking framework for this purpose.

This paper will focus on the development of this framework, elements of which include: a consistent taxonomy used in the analysis of qualitative data; colour coding to facilitate identification across related documentation, and a standardised but flexible reporting mechanism. I will also show how the framework and reporting structure has evolved over time to better reflect the changing needs of stakeholders.

Once a framework has been created, it is possible to transfer its components to many aspects of the analysis, evaluation and reporting process, thereby forming a common language of communication across the university. The second part of this paper will concentrate on how this has been achieved, and demonstrate the generic nature of the framework and its capabilities, one which is easily transferable for use by other institutions.

In conclusion, it is important to note that frameworks should always be a constant work in progress. The process is not static, and must be continuously revisited in accordance with the changing needs of decision makers, and the reframing of strategic and operational requirements.

Introduction

The student voice is a powerful instrument which can be used in the shaping of their experiences as students and graduates of our universities. Students are one of the key stakeholders in higher education and have a right to be heard on issues that affect their total university experience, and those of future students (Williams & Cappucini-Ansfield, 2007). The source of this valuable information is to be found in a variety of places, but most notably in student satisfaction surveys that are administered to both current students and graduates, and which garner quantitative and qualitative data on the research higher degree student experience. Whilst results from the analysis of quantitative data is regularly reported, there is limited activity on the qualitative data front, which is rarely studied or reported in a systematic way (Scott et al, 2008). It becomes a hidden hinterland of voice, which if explored and mapped, will deepen our understanding of, and inform strategies to improve, the student experience (Batchelor, 2008). The evaluation, analysis and reporting of the research higher degree student experience is inextricably linked with the requirement that reporting mechanisms should mirror both institutional and national measures of quality. The development of a framework by which research training received by our postgraduate research students can be evaluated, analysed and reported is a valuable adjunct to the evaluation, analysis and reporting process. This paper

will focus on the development of such a framework, based on the Student Research Experience Questionnaire (SREQ), at the University of Sydney. It will further delineate how, due to its generic nature, this framework is easily transferable for use by other universities. Finally, the need for constant revision of the framework, in response to stakeholder demands, forms the final section of the paper.

Rationale

The formation of the Tertiary Education Quality Standards Association (TEQSA) in July 2011 heralded a new environment for measuring and evaluating the student experience, with the main focus being on outcomes and standards for learning and teaching, and, by inference, coursework. It is unclear how these standards will accommodate institutions, such as the University of Sydney, which have research enhanced learning and teaching at the core of their missions. Additionally, it is important that the appropriate placement of research higher degree training activities within the standards framework be considered by TEQSA (University of Sydney, 2011). The June 2011 discussion paper *Developing a framework for teaching and learning standards in Australia higher education and the role of TEQSA*, advocates the use of student surveys to generate data that can be used to measure and evaluate learning and teaching, and to provide information on student engagement with their environment and programs. They further suggest that a newly developed survey, the University Experience Survey (UES), might be the ideal tool to collect data on high level learning outcomes (TEQSA, 2011). It is unclear how this new instrument might incorporate the research higher degree experience.

A workshop held by Deans and Directors of Graduate Studies of the Group of Eight Universities (DDoGS) universities in March 2010 focussed on developing a vision for Go8 PhD programs, qualifications and management, and identifying steps to realise this vision. Centring on the themes of high quality students, supervision, facilities, programs, scholarship schemes, research, data and examinations, the workshop came up with related visions for 2013, and practical steps that could be taken to attain that vision (Go8 DDoGS, 2010). Outcomes from this workshop, together with those from the Fourth Annual Strategic Leaders Global Summit, *Measuring quality in (post)graduate education and research training*, held in Brisbane in September 2010, provide a framework by which quality in research higher degree training may be measured and evaluated (Council of Graduate Schools, 2011) . Delegates at this summit developed a set of principles and practice for assessing the quality of postgraduate education and research training. Relevant to the subject of this paper, developing a framework for measuring the research higher degree student experience of research and research training is principle number 9, which states that:

> *The success of future assessment efforts depends on the refinement of existing tools, qualitative and quantitative, and the development of new methodologies for measuring quality. Key priorities in this area include the comparison of tools existing or under development, the exchange of best practices in their use, and the development of new technologies that support assessment and the sharing of data.*

Measuring quality: student surveys

Student experience questionnaires are one of the tools by which quantitative and qualitative measurements of the quality of research training are already being measured in Australian tertiary institutions. The Postgraduate Research Experience Questionnaire (PREQ) is administered annually by Graduate Careers Australia to recent graduates of our tertiary institutions, whilst a range of universities also administer similar surveys to current students. Examples include the University of Sydney 'Student Research Experience Questionnaire' (SREQ) which mirrors the PREQ, the University of Melbourne 'Research Experience Survey (MRES), and the University of Western Australia 'On Supervision, Candidature and Research' (OSCAR) survey. Typically, these ask students to respond to survey items on a Likert Scale (strongly agree to strongly disagree), as well as asking them to provide, in narrative form, observations on their research higher degree experiences.

The importance of sharing data and methodologies across all our institutions can only be achieved if we speak a common language for describing the quality of the research training experience. At a national level, Graduate Careers Australia publishes a Postgraduate Research Experience Report into the research experience perceptions of the research higher degree graduates who responded to the PREQ. Seven aspects of the research degree experience are covered in the report: supervision, intellectual climate, skill development, infrastructure, thesis examination, goals and expectations, and overall satisfaction. Results of the quantitative analysis of survey item responses are reported at a national rather than institutional level. Since all institutions receive their own results, reported against the same themes as the national report, it is easy for comparisons to be made with the national results. However, comparison against similar institutions e.g. Go8, ATN, Innovative groups of universities has to be achieved on a group to group basis. It should be noted that analysis of qualitative data is not provided at either an institutional or national level, with institutions being provided simply with a file of transcribed comments. This important narrative of the research student experience, against which quality can be measured, is therefore often left untapped.

Looking more closely at the surveys administered to current students, or those whose voice is most critical to improving the quality of the research training experience, variation in the style and content of the surveys precludes direct comparisons. However, since most surveys interrogate students on their experience of supervision, candidature, resources, and overall satisfaction, these terms can be used as a basis for comparison and/or benchmarking. Again, in the collection of student narratives on their experiences, variation occurs in the manner in which this is requested from students. The SREQ asks respondents to comment on the best experiences of their degree experience and those that can be improved; the MRES asks specific questions on the students' experiences of supervision, resources, support, and overall satisfaction; and OSCAR does not collect qualitative data. Comparison at a national level, therefore, is fraught with problems – which tools can be compared, which methodologies can be used to measure quality, how can best practice be exchanged?

Comparing the student narrative

As already stated, whilst it is possible to compare quantitative data across institutions, the same cannot be said of qualitative data, which is often not analysed in a systematic way, but just returned to faculties as free text. A framework for reporting the student narrative, as received through the answers to open questions in student surveys, is required. This framework should closely mirror that used for the analysis of quantitative data, have the capacity to be changed

according to strategic and operational requirements of the institution, and be adaptable to all parts of the analysis, evaluation and reporting process.

At the University of Sydney we have developed such a framework, based on the internally administered Student Research Experience Questionnaire which collects the views of current research higher degree students on: Supervision, Climate, Infrastructure, Graduate Attributes, and Overall Satisfaction. Since this tool is distributed to all our research higher degree students, both doctoral and masters by research, and currently has a 72% response rate, it provides a good benchmark by which the quality of research training at the University may be measured. It also provides an already identifiable and meaningful structure against which the research higher degree student narrative can be reported to our stakeholders: Deans and Associate Deans of faculties, Senior Executive Group Research Training Committee, student associations, academic staff involved in research training, and senior management. The framework which is described in the body of this paper was constructed using the categories and themes already present in the SREQ. But first let's look at why we should analyse the student narrative.

Why analyse the student narrative?

Vital to the dissemination of the student narrative, collected through the open ended questions of the aforementioned student experience surveys, is their analysis into meaningful data. Palermo (2003) and Scott (2006) both contend that simply collecting these comments, and sending them back to stakeholders as free text, is not enough to provide information on the student experience. Few have the time or the resources to thoroughly analyse and study the comments and ascertain the strengths, weaknesses or areas in need of improvement for research training within their own faculty, let alone across the whole institution. Moreover, the complexity of the student narrative, coupled with an ever increasing amount of data to interpret each survey, rules out interpretation simply by reading each comment. It should be noted here, that the current SREQ database of student comments runs to over 35, 000 comments collected over nine years, and increasing exponentially every survey. In 2010 alone, 3000 students provided 4500 responses to the open questions on areas of best practice and areas in need of improvement. (NB: more students provide positive responses than negative). With four or five themes per comment, often running up to half a page in length, a system for analysing and reporting the student narrative was considered essential. Crucial to this process was the development of an in-house framework, including a taxonomy and colour coding system.

Framework criteria

In the area of analysis and reporting of the research higher degree student narrative, or qualitative data from student experience surveys, a framework is considered to be a basic conceptual structure, or set of categories, sub-categories and aspects used to describe research training and the student experience. According to DIISR (2011), existing frameworks for measuring the quality of the research training experience include the Australian Code for the Responsible Conduct of Research, which includes a section on the supervision of research trainees; and universities' guidelines or policies on research training and supervision. However, neither of these covers the whole gamut of the research training experience which also includes physical and financial infrastructure, academic environment, collegiality, and the development of graduate attributes and disciplinary skills (DIISR, 2011; Norman 2009, 2010). To be successful a framework used in the analysis and reporting of the research higher degree student experience must contain all of these required elements, as well as having the capacity to respond to, and include, further elements as they appear in the student narrative, or are required to inform institutional and faculty strategies and initiatives.

The analysis of qualitative data is dependent on finding items within a data set, and creating stable lists which can be used to develop a taxonomy (Symons, 2007). Further analysis of the data will identify recurring patterns or themes that can be used to form sub-categories or aspects of the taxonomy. First and foremost, reportage and analysis of student narrative must be comprehensible, in a language that is easily understood by recipients (Compte, 2000). Therefore, it follows that the framework used for the reporting should also follow a structure that stakeholders will understand, and that is already in place within the institution. In the case of the University of Sydney, this was found in an already existing structure – that of the internally administered SREQ. This survey, which commenced in 2002, measures student satisfaction in terms of five major categories: Supervision, Infrastructure, Climate, Generic Skills, and Overall Satisfaction. On their own these categories are too broad to provide stakeholders with detailed data on the student experience. A hierarchical structure was considered essential for more detailed interpretation of the student narrative and the *Taxonomy for analysing, evaluating and reporting the research higher degree student experience* (Symons, 2010) was created.

Taxonomy creation

Categories, sub-categories and aspects

The creation of a taxonomy or classification scheme requires the following elements:

- A list of categories – found in the major categories used in the analysis and reporting of the quantitative data
- A list of sub-categories by which data can be further analysed, and which can be used in the reporting structure – found in the interrogation of survey items, and in recurring themes of student comments
- A list of aspects – these are not used in the reporting structure, but may be used in providing information to stakeholders
- Based on the experience of the University of Sydney in the creation of their taxonomy, sources of the information required to populate the above elements may be found in a range of sources. These include, but are not limited to:
- The factors used in the reporting of quantitative data changed to reflect current usage: Quality of Supervision, Research Climate, Quality of Infrastructure and Graduate Attributes and Overall Satisfaction.
- Items in the SREQ or similar survey instrument, which have been shown to cluster together to form the above factor scales
- Characteristics of each scale which may not be explicitly included in the survey items e.g. levels of supervision; constituents of University graduate attributes.
- Samples of comments from student surveys. Frequency of topics not interrogated in the SREQ highlight issues that are important to students. These may be included as either sub-categories or aspects. For example: In the survey itself, Overall Satisfaction consists of one item: *Overall, I am satisfied with the quality of my research higher degree experience*. However, in the Taxonomy, this has been expanded to include a range of aspects mentioned by respondents, and which are not included in other categories: Quality of degree; Reputation of University/ staff; as well as general comments on satisfaction.

The following extract, from the category Supervision, shows the sub-categories and aspects which are included in the taxonomy, and are taken from all of the above sources:

Sub-category	Aspect
Supervisor(s)	supervisor/ associate supervisor usefulness of sessions with availability and frequency of meetings with feedback on work understanding and empathy
Supervision processes within faculty	general comments on supervision evaluation of supervisors by faculty training
Management of Candidature	guidance on thesis, literature review, topic etc workload progress reports
IP and plagiarism	intellectual property academic honesty and plagiarism

Scope notes and explanatory notes

The final step in creating a taxonomy is the inclusion of scope notes which explain the coverage of each aspect, enable analysts to distinguish between similar concepts, and identify the correct category for homonyms. Taken directly from library science practices, scope notes ensure consistency of subject usage by specifying the range of subject matter to which the category, sub-category, or aspect may be applied (Symons, 2007). Within the taxonomy, scope notes take the form of "answers the question", and are used to define the sub-category or aspect. They are particularly useful when the same word or phrase is used to describe different aspects of the student experience. Together with explanatory notes, they help the analyst to correctly place comments received from students. An example, again from the Supervision section of the taxonomy is provided in the following table:

Formatting the taxonomy

Having determined the dimensions of the taxonomy, and gathered the terms to be used from the sources listed above, and prepared the scope notes, the next stage is to organise them into a usable and meaningful format. Following the principles for developing a taxonomy, outlined by Morante (2004): determining scope (student experience of research training); reviewing subject authorities (SREQ factors); and gathering terms, the next stage in the process is to organise them into a format that would be easily understood, and also provide a framework for reporting the student experience to stakeholders. The linking of sub-categories and aspects, with their associated scope notes, to the main SREQ categories or factors, provides a structure that is easily used in the presentation of the student narrative to stakeholders.

Aspect or component	Answers the question: [scope notes]
Supervisor	Is the supervisor knowledgeable? e.g. have the relevant subject expertise Is the student happy with their supervisor? Does the student have a good relationship with their supervisor? *Place here comments that mention individual supervisors by name* *When comments mention problems with changing supervisors etc, place in Supervision process.*
Associate Supervisor	*As above but for Associate Supervisor or Co-Supervisor*

Aspect or component	Answers the question: [scope notes]
Supervisory Team	*As above but for comments that mention both supervisors, or mention supervisory team as a concept.*
Availability and frequency of meetings	Is the supervisor available for meetings? Does the student meet regularly with their supervisor? Can the student contact the supervisor easily? Email, phone etc How frequently does the student meet with their supervisor?
Usefulness of meetings	Are meetings with supervisors useful? Are meetings with supervisors productive?
Feedback on work	Is feedback on work supplied regularly? Is feedback timely and constructive? Are comments provided on work provided to supervisor? *Use for supervisor feedback only; comments from the non-supervisory team go in Climate: Environment: supportive.*
Understanding and empathy	Does the supervisor take time to understand problems the student may be having (academically and personally)? Does the supervisor help with difficulties? Does the supervisor show care and concern for their students?
A note about analysing comments which include the word supervision: *Comments that do not refer specifically to supervisors are included in this sub-category e.g. Supervision is good and I greatly appreciate the University's support as a part-time student* *Comments that appear to relate to supervisors are included in the Supervisor sub-category e.g. My supervision has been extremely helpful. I receive expedient and helpful feedback about what I have done, and I what I ought to do.*	

The final product

Before the Sydney taxonomy was released for general consumption, consultation as to its accuracy and efficacy was required: Was the hierarchical order correct? Were aspects assigned to the correct place in the hierarchy? Had anything been missed out? Would it provide a suitable framework for analysing, reporting and evaluating the research higher degree student experience? To this end, the draft taxonomy was distributed to relevant staff across the University, including the convenor of the Foundations of Research Supervision course, for feedback. Further changes were made, including additional explanatory notes, moving of aspects from one category to another, and the inclusion of an introduction which includes information on the SREQ, and the construct of the taxonomy. The taxonomy is now in its second edition, with a new edition expected in late 2012.

Reviewing and updating the taxonomy

The areas of research training that students comment on across the years do not remain static, and, accordingly, the taxonomy used to analyse and report on the student narrative should also not remain static. As students' observations on their experiences change, and they include new aspects, as well as increasing reference to previously little mentioned aspects, it becomes imperative to revisit the taxonomy on a regular basis with a view to improving its currency and relevance to the existing environment. Whilst the categories themselves remain static as they are inextricably linked to quantitative data reporting measures, new sub-categories and aspects are added on a regular basis. The taxonomy, therefore, may be considered to be a continuous work in progress, which, due to constant review and updating processes, constantly reflects the current nature of the student experience. Recent additions to the taxonomy include: Annual progress reviews, Statistical skills, Training needs analysis, Associate supervisor, Supervisory team, and Supervisor: Understanding and empathy.

Using the taxonomy structure to analyse the student narrative

At the University, a combined automatic and manual process is used to analyse the qualitative data from the SREQ. The first part of the process involves the adaptation of functionalities within the NVivo software analysis tool: nodes, text and matrix queries. The taxonomy structure, with its inherent categories, sub-categories and aspects directly translates into the NVivo node and child node hierarchy used in coding. Descriptive terms from the taxonomy and survey items, synonyms, and scope notes are used to construct text queries which, in turn, will provide the content for each node and child node. Scope and explanatory notes are used in the manual part of the process, as each coded comment is checked for accuracy and reassigned to its correct place in the coding structure as required (Symons, 2008). Finally, matrix coding queries facilitate the production of statistical data which is input into reports, by providing the analyst with data on the number of times each node or child node is mentioned by students responding to the SREQ.

Colour coding

A colour code is a system for displaying information by using different colours. Key Performance Indicators for research training, including student satisfaction results from the SREQ, are used to identify specific areas of the research higher degree student experience against which performance can be measured at faculty and institutional level. So, how do these combine in the analysis, evaluation and reporting of the student experience based on qualitative and quantitative data from the SREQ? The taxonomy mirrors the structure of the SREQ and is used in the analysis, evaluation and reporting of the research higher degree student experience to all stakeholders. One means of facilitating recognition of key concepts within the reports and other related documentation is colour coding, linking all parts of the process by an easily identifiable code. For example, Aqua identifies data relating to Supervision in each document connected to the analysis: descriptive information on each sub-category and aspect in the taxonomy; statistics relating to the percentage of comments received per aspect in individual faculty spreadsheets; charts relating to both qualitative and quantitative data, and tables relating to comparative qualitative data and key issues in reports. Similarly, Olive green identifies all documentation relating to Infrastructure; Purple: Climate; Red: Graduate Attributes; and Dark Blue: Overall satisfaction.

Reporting the student narrative

Once a framework, including taxonomy and colour coding, has been developed, it is a simple matter to translate this to stakeholder reports. It is expected that reports will provide information on all aspects of the research higher degree student experience, and draw on the narratives received through student survey responses to illustrate and augment the quantitative data. To this end, reports on the research higher degree student experience are divided into five main sections: Quality of supervision, Quality of infrastructure, Research Climate, Graduate Attributes, and Overall satisfaction – providing direct correlation to a) the quantitative reporting framework, c) the taxonomy, and c) the key performance indicators for research training. At the University of Sydney reports are provided to stakeholders, faculties, senior management, staff and students in the semester after the survey has been administered.

Each faculty SREQ report includes the following information:

- An executive summary highlighting key trends in the student experience for the faculty. This is aimed at providing Deans and Associate Deans with a high level overview of key issues to address.
- Arrangement by SREQ factors

- Integration of analysis of the outcomes of both quantitative and qualitative data from the SREQ.
- Comparative quantitative and qualitative data from the SREQ.
- Key issues within each category from the latest surveys, including: main focus and distribution of qualitative data. Illustrative sample comments from domestic and international students are included here.
- Statistical information on student enrolments and response rates to the SREQ.

The institutional report follows the same structure. However it also includes faculty comparative data for each of the SREQ factors, thereby allowing senior management to gauge how each faculty is travelling in comparison with each other. In an environment of mutual accountability, faculties are asked to respond to, and make publicly available, these reports (Symons, 2012).

Flexible reporting

In the same way as the taxonomy requires flexibility in its construct, so too does the reporting mechanism. Since it is very important that the reports are, and continue to remain, comprehensible, readable, and actionable, stakeholder consultation and feedback is included in the review and evaluation cycle. At the end of 2011, all faculties were asked to suggest improvements in the reports and these will be taken on board for the 2012 reports. These included:

- Providing information on the analysis and counting of comments from an appendix to the front of the report;
- Including more information on aspects included within each sub-category e.g. types of facilities;
- Providing a wider range of comments for each sub-category (at the moment these are limited to four comments on best practice and four for suggested improvements for each category); and
- Including, as an attachment, the detailed SREQ quantitative data report i.e. the results for each survey item.

Unsolicited feedback is also taken on board and implemented where practicable. For example, the inclusion of student enrolment figures as well as data on how many students responded to the SREQ and answered the open questions, occurred directly as the result of feedback from one Dean.

Responding to change

The production of a taxonomy, the use of colour coding, and the flexible reporting mechanism haven't just happened overnight. Over the past nine years there have been many iterations of both the taxonomy and the reporting structure. The taxonomy has moved from a simple list of headings used in analysis, with no structure and no explanatory notes, and, moreover, no direct link to the SREQ factors used in the quantitative analysis to a structured, hierarchical list of categories, sub-categories, aspects and scope notes. Reports were simply a list of the most common areas of best practice and the most common areas in need of improvement, with a sample of comments attached to each aspect. Headings in the reports were not standardised, and not grouped according to areas of the research higher degree student experience. In short, they were not actionable or useful to faculties who wished to use the data to put in place strategies to improve their students' experiences. The above changes were wrought directly in response to stakeholders' needs. Reports that directly reflected key performance indicators and that correlated to the way in which the quantitative data was reported, were required, and consequently implemented. The success of the change is evident by the way in which stakeholders are embracing the reports and using them to identify and ameliorate improvements in the student experience.

Extending the use of the framework

The use of the framework in analysing, evaluating and reporting the student narrative is implicit in the way in which it has been constructed i.e. it mirrors the SREQ factors and survey items and provides, to stakeholder, an easy and understandable language of communication. This language, due to its base of SREQ components, is one that can be understood by any person within the university who has contact with research students in general and research training in particular. For example, Infrastructure equals facilities, funding and services; Climate means environment and culture; Graduate Attributes directly relates to University policy, which outlines the attributes that graduates are expected to have acquired before graduating. The use of colour coding within the framework means that information on each of the factors is easily identifiable, even if it is not directly labelled with that factor. Therefore information on supervision will have Aqua appear somewhere within the documentation, either in the header and footer, or in graphs, or in table outlines; information on Infrastructure will similarly be coloured Olive green. In time this colour coding will become known across the university and come to form a common visible language for identifying information related to the student narrative on their experiences. Recent examples of how the use of the framework has been extended include: the provision of information packages to working parties looking at training needs, supervision, and revision of the PhD degree program; the student experience of library services; and the utilisation, operation and management of faculty specific research higher degree student spaces.

The generic nature of the framework, together with its capability of being able to be broken down into component parts, or extended as required, means that its use can also be extended to uses outside the SREQ. We have already mentioned that the SREQ mirrors the PREQ. The framework is therefore entirely adaptable for use in reporting the PREQ results to stakeholders, with the following differences:

- An additional Category, Thesis Examination, with concomitant sub-categories and aspects is included in the taxonomy, with the colour orange assigned to all relevant documentation.
- Due to the low numbers of comments from respondents (250 – 300 compared to 2500 – 3000 from the SREQ), reporting is limited to institutional level, unless specifically requested from faculties.

Trials with the Australasian Survey of Student Engagement, administered by ACER to coursework students, proved that the Student Course Experience (SCEQ) Taxonomy could be adapted for use with other student satisfaction surveys (Symons and Radloff, 2009). Similarly, the SREQ Taxonomy could be adapted for the analysis and reporting of qualitative data from the National Research Student Survey, also conducted by ACER. This survey examined career intentions and the extent of teaching preparation provided to research higher degree students in Australian universities, which correlate to the following sections of the SREQ taxonomy: Research climate: career preparation, interaction with students, work environment; Overall satisfaction: quality of the degree, overall satisfaction; and Supervision: supervisor(s) (Edwards et al, 2011)

The MRES and OSCAR surveys conducted respectively by the University of Melbourne and the University of Western Australia, whilst not following the same format as the SREQ, elicit similar information from their research higher degree students. Therefore, it follows that, the SREQ framework could be easily transferred and adapted to match the needs of these and other institutions, who use the student narrative to improve the experiences of their postgraduate research students.

Conclusion

Qualitative and quantitative data from student evaluations of research training are a valuable source of information for faculties and university management seeking to improve the experiences of their students. However, with increasing volumes of data and demands on time, careful consideration must be given to how this information is communicated to best contribute to improvements to the student experience. For this to occur, it is essential that persons responsible for reporting this data to stakeholders be amenable to change in the requirements of both government and faculties, and adapt accordingly. Consistent but adaptable frameworks, that can be easily transferred to other reporting mechanisms are an essential part of the reporting process, and should be constructed with this in mind, be under constant review and update, and match the changing demands of stakeholders.

References

Batchelor, D. (2008). Values hinterland of voice. Society for Research into Higher Education Conference, Liverpool, UK.

Compte, M. Le (2000). Analyzing qualitative data. Theory into practice 39(3), 146-154

Council of Graduate Schools (2011) Global perspectives on measuring quality: Proceedings of the 2010 Strategic Leaders Global Summit on Graduate Education, September 13 – 15, 2010, Brisbane, Australia Washington, DC: Council of Graduate Schools

Group of Eight, Deans and Directors of Graduate Studies (2008). Go8 higher degree by research training: a report on the outcomes of a planning workshop held on 6 March 2008 at the University of New South Wales. An initiative of the Deans and Directors of Graduate Studies of the Group of Eight Universities. Turner, ACT: The Group of Eight Ltd

Department of Innovation, Industry, Science and Innovation (2011). Research skills for an innovative future: a research workforce strategy to cover the decade to 2020 and beyond. Canberra, Australia: DIISR

Edwards, Daniel; Bexley, Emmaline; and Richardson, Sarah. (2011) Regenerating the academic workforce: the careers, intentions and motivations of higher degree research students in Australia: findings of the National Research Student Survey (NRSS). http://research.acer.edu.au/higher_education/23

Group of Eight, Deans and Directors of Graduate Studies (2011). Measuring quality in higher degree by research training: outcomes from the Group of Eight workshop held March 12, 2010 and from the Fourth annual strategic leaders' global summit, measuring quality in (post)graduate education and research training. Turner, ACT, Australia: Deans and Directors of Graduate Studies.

Morante, M (2004) Creating useful taxonomies: metadata, taxonomies and controlled vocabulary. SLA Annual Conference Nashville, TN, June 5-10

Palermo, J. (2003). 20 years on – have student evaluations made a difference? Proceedings of the Australian Universities Quality Forum 2003

Palmer, N., (2009) The Research Education Experience, Report for the Department of Innovation, Industry, Science and Research. Melbourne, Council of Australian Postgraduate Associations (CAPA),

Palmer, N., (2010) Minimum Resources for Postgraduate Study 2010. Melbourne, Australia: Council of Australian Postgraduate Associations (CAPA),

Scott, G. (2006). Accessing the student voice: using CEQuery to identify what retains and promotes engagement in productive learning in Australian higher education. Canberra: DEST, 2006

Scott, G., Grebennikov, L., & Shah, M. (2008) Using qualitative data to prove and improve quality in Australian Higher Education. Paper presented at the Australasian Higher Education Evaluation Forum, Melbourne

Symons, R. (2007). Taxonomy evolution: the changing face of reporting the student experience at the University of Sydney. Paper presented at the 2007 Evaluation Forum, Brisbane

Symons, R (2008). Colour coding, KPIs and the road to Damascus. Paper presented at the Australian Higher Education Evaluation Forum, Melbourne.

Symons, R (2010) Taxonomy for analysing qualitative data from the Student Research Experience Questionnaire (SCEQ) and the Postgraduate Research Experience Questionnaire (PREQ) 2nd ed Sydney: University of Sydney

Symons, R (2012) Down to the last drop: squeezing the most out of a databank of research higher degree student narratives. Paper presented at the Quality of Postgraduate Research Conference, Adelaide, SA

Symons, R.Y and Radloff, A. (2009) Analysing qualitative data from the AUSSE (SEQ and SSEQ): a workshop. Workshop presented at the AHEEF 2009, Byron Bay, NSW

Tertiary Education Quality and Standards Agency (TEQSA) (2011). Developing a framework for teaching and learning standards in Australian higher education and the role of TEQSA. Melbourne, Australia: TEQSA

University of Sydney (2011). University submission to TEQSA teaching and learning standards. Sydney, Australia: University of Sydney.

Williams, J., & Cappucccini-Ansfield, G. (2007). Fitness for purpose? National and institutional approaches to publicising the student voice. Quality in Higher Education, 13(2), 159-172

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Transitioning to Doctoral Study in Non-profit Independent Higher Education: A Case Study ®

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Abstract

How does a private, non-profit higher education institution achieve a successful transition into doctoral study? Drawing from the experience of the evolution of two doctoral courses at Tabor Adelaide over the last decade, this case study will be a narrative of the development of doctoral study, the range of obstacles encountered, and the attainment of quality assurance in one such institution in Australia.

Tabor Adelaide has offered a Doctor of Ministry (coursework and thesis) program since 2001 and a Doctor of Theology (thesis only) since 2009. It sought accreditation of a PhD program in Creative Writing in 2009, but was asked to do more work on that submission. Currently there are 21 students in the DMin course and 4 in the ThD program.

In this paper we describe the multiple problems associated with offering doctoral programs in independent higher education without government funding and self-accrediting status, and how they were overcome throughout the state-managed accreditation process. In particular, we will outline the multiple ways in which the quality of the program has been assured, e.g. through the establishment of a network of internationally-recognised scholars to complement Australian teaching faculty, the development of global linkages, and continual enhancement of research thesis processes.

Finally, we identify important lessons learnt regarding the development of doctoral programs in constrained contexts, both financial and regulatory, as a direct result of our experience in developing the Tabor doctoral program, and suggest how our findings will be useful to those facing similar situations.

Introduction/Context

Tabor Adelaide is a private multidenominational Christian Education Centre offering government-accredited courses at tertiary level. It commenced on a faith basis as a small part-time Bible College in 1979 with 35 students housed in two transportable classrooms at a local high school in Adelaide. Over the past three decades, the college has experienced a number of significant transformations without losing sight of its central goal of equipping its graduates to make a difference in today's world.

The Tabor Adelaide transition to offering doctoral programs within the last decade can be viewed as an instance of organizational change. Graetz & Smith (2010) have identified ten of the most common philosophies of change. They are:

The Biological Philosophy, emphasising incremental change in response to Darwinian-like natural selection to environmental context.

The Rational Philosophy, which seeks to achieve the optimal alignment between the organization's composition, competencies and state over time and its environmental context.

The Institutional Philosophy, where it is expected that organizations increase homogeneity within their sector over time, and where they view the shaping mechanisms to be the institutional environment rather than the competition for resources.

The Resource Philosophy, where successful organizations are the best at acquiring, developing and deploying scarce resources and skills.

The Contingency Perspective, where organizational performance is a consequence of the fit between two or more variables, such as an organization's environment, use of technology, strategy, structure, systems, style or culture.

The Psychological Philosophy, which is founded on the importance of personal and individual experience in an organization.

The Political Philosophy, which assumes that the clashing of opposing political forces creates change in an organization.

The Cultural Philosophy, which is particularly concerned with the collective experience of change and the shared values that guide them.

The Systems Philosophy, which looks beyond the simplistic causal views of management and constituent parts of organizations, focuses on the importance of holistic analysis rather than focusing on compartments of organizations.

The Postmodern Philosophy, which dispenses with grand theories of organizational change, instead viewing change as a function of socially constructed views of reality contributed by multiple players.

In summary Graetz and Smith argue that no one philosophy can adequately encompass all the complexities of organizational change, and that competing and complementary philosophies need to be taken into account to manage the process of change or institutional transformation. They conclude that the different philosophies demonstrate the complementary and competing forces in organizations as they manage the tension between continuity and change which involve a number of alternatives such as certainty vs. uncertainty, tight vs. loose control, large vs. small-scale change, slow vs. fast change and internal vs. external stimuli.

However, before we begin our contextual consideration of transition to doctoral study at Tabor Adelaide and locate the narrative of organizational change along these dimensions, a brief narrative of the college's profile and journey to doctoral studies is in order.

Introduction to Tabor Adelaide: Narrative of a journey

Following Tabor's founding in Adelaide in 1979, satellite colleges were established in Melbourne (1988), Sydney and Perth (1992), and an annexe in Hobart (2000). These colleges are now all independent entities. The Adelaide campus is housed in historic heritage listed buildings which are National Trust listed – they served in the past as an orphanage and more recently an Education Centre.

The college is grounded in a number of central commitments, which have remained constant throughout its expansion:

- Learning and teaching takes place within an explicitly Christian and multidenominational framework. This is not to say that we are dogmatic – our faith is a sure faith but not a closed faith. Tabor Adelaide is, at the same time, a place of robust enquiry and transformational Christian learning.
- Tabor is committed to academic excellence. Since the early 1990s all courses – from certificate through to doctoral programs – have gone through the normal rigorous assessment processes before being accredited by the South Australian Government. Freedom of academic inquiry is embedded in its learning values, and the college has recently established new initiatives to establish a robust research capacity.
- Tabor's size is small relative to many higher education providers in Australia, with around 450 EFTSLs currently enrolled. This affords the opportunity for personal academic direction and care, with ready access to teaching faculty. The sense of community amongst staff and students is very strong, and was a significant feature identified by the AUQA panel when it audited the college in 2010.

In summary, Tabor's mission, outlined in the current Strategic Plan (2010), is to create and sustain a multi-disciplinary, supportive learning community that produces graduates, scholars and researchers recognised for their contribution to Christian mission and civil society through their informed, vibrant and gracious Christian faith, academic excellence, professional competence and social and cultural awareness.

In the early 1990s, when the four main campuses still operated closely together, course accreditation was centralised in Adelaide, which was the central hub (National Office) of the college. However, in the first half of the decade two significant shifts occurred. Government accreditation practices changed as States started to assume responsibility for accrediting higher education courses. Secondly, campuses began to adopt a more autonomous role – in 2003 the closure of the National Office in Adelaide heralded Tabor's more diversified structure as campuses became increasingly self-governing.

In 1996, the introduction of undergraduate degree courses in Teacher Education signalled an exciting new direction in Tabor Adelaide's curriculum offerings. At this time, there was a growing conviction that the college should expand its course offerings to include masters and doctoral awards, stimulated by the vision of a more academically-qualified faculty. Up to 1998, Tabor's courses were confined to certificate, diploma, bachelor and graduate diploma level.

Masters degrees in theology, ministry, counselling and intercultural studies were first approved in the second major round of accreditation in early 1998. In1999 two new professional courses joined the growing portfolio of postgraduate awards: a Master of Education, and a Doctor of Ministry (DMin) course, with both coursework and research components.

Doctor of Ministry

A major feature of the Doctor of Ministry (DMin) is the integration of advanced academic skills with the practice of Christian ministry. This occurs through a combination of coursework and research, involving biblical study, wide and critical reading, and theological reflection and analysis, which are related and applied to actual ministry settings.

At a 2004 meeting of the Council of Australian Deans and Directors of Graduate Education, a framework for best practice in Australian doctoral programs was approved, following a 2002 revision of a document entitled *Guidelines: Professional Doctorates*. The framework recognises the diversity of research and research training needs, contexts and outcomes, and this was taken into account in the 2008 revision of the Tabor Doctor of Ministry course. In addition, the Council's emphasis on the necessity for original and significant research was also considered within the framework of diversity. The structure of the Doctor of Ministry course was therefore revised in such a way as to offer four broad categories of study – *pastoral*, *educational*, *academic* and *intercultural* – each relating to specified areas of interest and desired outcomes.

Doctor of Theology

In 2009, Tabor introduced its first research-only award, the Doctor of Theology (ThD), which – similar to the most recent DMin structure – recognises the diversity of research in contemporary theology. Accordingly the ThD embraces four disciplinary specializations integral to the course: biblical studies, systematic and historical theology, practical theology and contextual theology.

Dimensions of organizational change at Tabor

Earlier, we identified, after Graetz and Smith (2010), the following dimensions of organizational change, which can now be applied to Tabor Adelaide in the context of its transition to doctoral programs: level of certainty, level of control, scale of change, the speed of change and the locus of the stimuli for transformation. We have summarised them by situating them along continua between extremes of scale in the categories as shown in Table 1.

Table 1: Dimensions of Organizational Change Experienced at Tabor

DIMENSION	EXTREME 1	LOCATION ON SCALE	EXTREME 2
Level of certainty	Certain	_ _ _ _ _ _ _ x _ _	Uncertain
Level of control	Tight	_ _ x _ _ _ _ _ _ _	Loose
Scale (conceptual)	Large scale	_ _x _ _ _ _ _ _ _	Small scale
Scale (size of student cohort)	Large scale	_ _ _ _ _ _x _ _ _	Small scale
Speed of change (DMin)	Slow speed	_ _ _ _ x _ _ _ _	Fast speed
Speed of change (ThD)	Slow speed	_ _ x _ _ _ _ _ _	Fast speed
Locus of stimulus	Internal stimuli	_ _ _ _ x _ _ _ _	External stimuli

The level of certainty was closer to the uncertainty than the certainty end of the spectrum. When Tabor, or 'House of Tabor', was founded in 1979 as a small Bible College for the spiritual development of Christians, doctoral programs were nowhere on the agenda. However, as the College's courses in Ministry, Christian Studies and Counselling became more widely known and appreciated, the demand for postgraduate professional development became increasingly apparent to the college's senior leadership, and the certainty level in favour of doctoral program development increased. However, as will be discussed later, a number of important inner dynamics made the transformation more certain.

Level of control: During the 1990s many of the faculty were engaged in informal conversations about the future direction of the college, and, as we will see, these were instrumental in bringing about significant change in the college's educational offerings. However, paradoxically, these discussions took place within a tightly controlled organizational framework with a strong leadership focus.

Scale of change: For Tabor the introduction of doctoral study was a large change in conceptual terms. Very few of the Tabor staff themselves were qualified at the doctoral level and the idea of Christian ministers having doctoral qualifications was uncommon at that time. However, over the last 10 years the Doctor of Ministry course has become a recognised component of Tabor's higher education provision, with the Doctor of Theology beginning to attract an increasing degree of interest. It is anticipated that the next round of accreditation will feature an application for an expanded suite of doctoral awards.

In terms of the *scale of student numbers* at Tabor, the doctoral initiative was relatively small in size. For example, in 2005, six years after the accreditation of the DMin program, a total of 12 students had been enrolled and only one had graduated. Currently there are 25 students in the doctoral programs, 4 of whom are enrolled in the Doctor of Theology course. The growth in student numbers in masters courses reflects a similar pattern. It should be noted that the number of doctoral candidates has been carefully calibrated in line with the College's staffing and infrastructure capabilities.

The speed of change was quite different between the two doctoral programs. The introduction of the Doctor of Ministry course occurred a year or two after the accreditation of a suite of masters degrees, having taken a further year to prepare for submission. However, the research-only Doctor of Theology course required more extensive consultations, discussions and development time, and an attempt in 2005 to prepare a document for accreditation was deferred until the successful 2009 application.

The locus of stimuli for the development of the doctoral programs was a mixture of internal and external. Internally there was a growing conviction that doctoral courses were consistent with the developing capabilities as well as the mission of the college. Externally it was perceived that there was a growing demand for further educational attainment especially amongst professional ministry practitioners. By the early 1990s the DMin had become a popular award, offered by a number of theological providers both in Australia and world-wide.

In summary, these dimensions of organizational change reflect the variety of pressures and opportunities that confronted Tabor Adelaide in its transformation as a provider of doctoral programs. In our concluding comments, we draw from this brief analysis in summarizing what we have learnt as a private higher education provider operating within a number of internal and external constraints.

Rational Philosophy of Change

Overall it appears that of the ten philosophies of change or transformation identified by Graetz and Smith (2010), the two that have implicitly guided the development of the Tabor Adelaide doctoral programs have been the Rational and System Philosophies. The aspects of Tabor's doctoral program development that fit the Rational Philosophy model can be identified as:

1. *Alignment of Tabor's composition with its environmental context*
2. *Alignment of Tabor's competencies with its environment*
3. *Alignment of Tabor's state over time with its environment*

The Rational Philosophy assumes that organizations are purposeful and adaptive (Van de Van and Poole, 1995; Kezar, 2000 – as quoted in Graetz and Smith, 2010). Change occurs because senior managers and change agents deem it necessary.

1. Alignment of Tabor's composition with its environmental context

When Tabor Adelaide had been in operation for about a decade and a half, the organizational leaders identified the need for postgraduate programs. Initially these were at the masters level, but doctoral programs were also envisaged, especially the professional Doctor of Ministry, incorporating coursework and a thesis. The disciplinary context in which the most urgent need was identified was Christian ministry and theology. The perception of the environment served by Tabor was that ministers and pastors in churches needed further professional development,

involving the acquisition of broader ministry concepts and more advanced studies which included processes such as critical thinking, debate and reflection.

It was not enough to provide basic diploma and undergraduate level courses, where experienced expert lecturers would share their scholarship and passion for the field; ministry practitioners needed to broaden their understandings of issues of concern in their profession and to develop their independent skills and capabilities for research and analytical thinking in masters and doctoral level programs. This view was held by the principal (institutional CEO) and the Head of Ministry (the relevant discipline head) in particular. Thus the composition of Tabor's educational profile changed from teaching at the diploma and undergraduate levels to a wider range of courses up to and including postgraduate programs with doctorates.

2. Alignment of Tabor's competencies with its environment

In order for Tabor to provide doctoral level programs the competencies of its academic team needed to be upgraded. This meant that alongside the recognition of the need for the provision of postgraduate programs by potential students of Tabor Adelaide, a conscious initiative was undertaken to encourage existing staff to improve their qualifications; for example, one of the authors of this paper undertook to complete a doctoral program of his own at this time, completing it in 2004, and other staff members also commenced doctoral studies. The push for improving staff qualifications across the college is a continuing policy of the college and currently about 8 staff members are upgrading their qualifications to doctoral level. The staff quality improvement is also reflected in the college seeking to recruit highly qualified staff, preferably with doctoral qualifications.

3. Alignment of Tabor's state over time with its environment

The idea of 'state' here is teleological: it refers to an organization taking action to move towards a goal, or end state (Van de Ven & Poole, 1995). When Tabor started, the most urgent concern was for church workers to be provided with better training and education for their tasks. This reflected the college's fundamental mission. The initial courses begun in 1979 were at certificate or diploma level, without government accreditation, as was common to many other Bible colleges at the time. As the college matured, its courses broadened and were accredited in South Australia at certificate, diploma and bachelor degree levels. Postgraduate studies, including the two doctoral courses, have been added over time as a measure of Tabor's commitment to scholarly excellence and academic freedom. Since the mid 1990s, the college has re-conceptualized its vision from being a training and teaching institution to one that demonstrates academic excellence in teaching and research.

Thus the move to the provision of postgraduate courses, culminating in two doctoral level courses, can be seen as an interaction between Tabor educational provision matching the perceived needs of its client population and the need to provide appropriately accredited programs. Tabor not only interacted with perceived client needs, but also with the regulatory environment in South Australia and nationally. As the other campuses of Tabor were established in Victoria, Tasmania, New South Wales, and Western Australia, Tabor's National Office in Adelaide interacted with the appropriate regulatory framework for the delivery of private higher education courses. Eventually the other campuses became independent entities, functioning under differing state higher education regulations.

So overall the facets of the Rational Philosophy of organizational change that we can identify in transformation to doctoral study level provision at Tabor are: (1) the process was guided by

intentional direction from the senior management, (2) deliberate efforts were made by the management to shape the composition of the courses, and (3) the competencies of the staff and the state of the college offerings over time were improved and expanded to meet the needs of the client environment.

Systems Philosophy of Change

There are important aspects of Tabor's transformation to offering doctoral programs that resonate significantly with Systems Philosophy. The primary characteristic of 'systems thinking' is its holistic nature, whereby organizations are viewed as open systems capable of self-organization. Characteristic of this philosophy of change is the relational dynamic inherent in all organizational structures, a dynamic that is too easily overlooked in ordered, controlled and logically-structured philosophies of change.

In the third edition of her book *Leadership and the New Science*, suggestively sub-titled 'Discovering Order in a Chaotic World', Margaret Wheatley, the well-known speaker and consultant on change management, reminds us how hard it is for people to surrender their own preferred worldview. In the face of a rapidly changing—and challenging—environment, we react "by applying old solutions more frantically. We become more rigid about our beliefs. We rely on habit rather than creating new responses."(Wheatley, 2006, p.xi).

In the 1990s, shortly before Tabor Adelaide's intentional move into postgraduate awards in ministry and theology, there was a growing awareness that the world in which we lived was more uncertain, less predictable and characterised by radical shifts and a more globally dynamic environment. Wheatley, amongst others, questioned the basic assumptions of a predictable, mechanistic view of reality associated with Newtonian science. She presented us with a new perspective on organizational leadership based on quantum imagery, with its emphasis on such features as unpredictability, relationality, interconnectedness, discontinuity and self-organization.

When scientists talk about *complexity*, they refer to intricate self-organising patterns of cells, organisms, neural networks in the brain, ecosystems … indeed the whole cosmos. *Chaos theory* refers not to total disorder, but to unaccountable natural processes in which extraordinarily complex patterns arise unpredictably out of turbulence. This is what we mean by emergence, a higher-level order arising out of disorder.

Now, we would not want to give the impression that the academic environment at Tabor in the 1990s was one of 'disorder'! Rather, alongside the more purposeful and linear processes at work in the college which birthed the growing conviction that the college should expand its course offerings to include masters and doctoral awards – as discussed earlier – other more creative processes were at work. Within the context of the college's vigorous ministry and theology orientation, one phrase sums up the outworking of a systems philosophy of change at Tabor during the 1990s, and into the new millennium – 'doing theology'.

This phrase needs some clarification because of its critical role in Tabor's transition to doctoral education. We will explain it within the context of one important feature of faculty life that emerged during the 1990s. This decade saw a number of our teaching faculty engaging in informal discussions and debates about the nature of our calling as academic practitioners in a Christian college. In his seminal book, *The Christian Mind*, Harry Blamires reminds us that our responsibility is not to seek a 'Christian line' concerning this or that particular issue; what is needed first of all is "a Christian dialogue in which a given issue can be expressed and known by the thinking Church. And even then that is not the beginning. For there is something before the

Christian dialogue, and that is the Christian mind – a mind trained, informed, equipped to handle data of secular controversy within a framework of reference which is constructed of Christian presuppositions." (Blamires,1966, p.4).

Those of us who met together during this period were challenged about the need to hold together two fundamental dimensions of the Tabor identity – spiritual depth and academic excellence. It was incumbent upon all of us in the college to ensure that our spiritual heritage, rooted in evangelical Pentecostalism, was not compromised in our vision to sustain a high standard of scholarship in our teaching. In fact, that is a mantra that has been reinforced again and again throughout the college's growth as it has evolved into an accredited private higher education provider. But we also realised as we met during that formative period in the 1990s that it was also incumbent upon us to cultivate what the noted theologian Alister McGrath calls in a recent book a 'passionate intellect' (McGrath, 2010)

In their history of Tabor's pioneering years, (*The Tabor Miracle*, p.97) Dennis Slape and Lorraine Beard (2008) record that the educational environment at Tabor by the end of the 1990s was holistic, embracing head, heart and hand. Elaborating on the 'head' element of this triad, they cite a key principle under the rubric *Head – A Community of Enquiry*: "Tabor College is not only a community of Christian conviction, but also a community of enquiry. Students are not indoctrinated with 'Christian truth', but encouraged to think deeply and seriously about what it means to live as a Christian in the world today. *They are invited to 'do theology' while they are at college, and so to be equipped for their ongoing journey of faith"* (our italics).

'Doing theology' means that we are all theologians, on a journey of discovery (what some would call *theologia viatorum*, or 'theologising on the way'). This is not to argue for an abandonment of inherited, implicit truth, but to be willing to expose our 'received theology' to critical analysis, and to wrestle with it in an ongoing process of theological reflection. 'Received – or implicit – theology' is the dogma, the theological understanding inherited, perhaps unconsciously, by those who are called to journey through Christian life and ministry. Much of this may not be very carefully thought through – hence the importance of making explicit the beliefs to which we adhere, so opening them to correction, revision or affirmation.

This is the theological context that shaped the scholarly discussions that energized many of us during the 1990s. We produced informal papers for discussion, and carried on our conversation in the corridors and over lunch. But it did not get lost in a vacuum of 'intellectual debate'. The dynamic engendered by the 'doing theology' conversations found ready acceptance in many parts of the college, and its impact was multiplied as different colleagues joined in the discussions. Graetz and Smith point out that "the presumption of critical interrelationships between parts is the unique contribution of the systems philosophy," (Graetz & Smith, 2010,), and there is little doubt that 'systems thinking' contributed critically to the introduction of postgraduate awards at the end of the decade, with the Doctor of Ministry program finding its place amongst those awards.

This, the first of Tabor Adelaide's two doctorates, was accredited in 1999, and set the college on a trajectory, culminating in the accreditation of its first research-only award, the Doctor of Theology, (ThD) in 2009. The ThD presents an opportunity for the development of in-depth knowledge, understanding and skills which are relevant for personal Christian living and for a variety of professions, such as the ordained ministry, theological teaching, Christian writing, academic scholarship and similar vocations.

Quality assurance

The quality assurance process for the doctoral programs at Tabor consisted, in the first instance, of state level accreditation of private higher education provider courses. Until 2012 the process was managed by the Department of Further Education, Employment and Science (DFEEST). The process of having a new course approved involved the formation of a course development committee, the preparation of a detailed proposal, the submission of the proposal to DFEEST, assessment of the proposal by an expert advisory committee drawn from academics from the relevant fields and then final approval or rejection of accreditation by the DFEEST delegate. This process ensured that course quality was thoroughly scrutinised at all stages. Each of the courses was approved for a limited time only, usually 5 years, and then they would need to go through a similar rigorous re-accreditation process.

Much has happened during the ten years between the introduction of these two doctoral courses in order to ensure that the quality assurance of the doctoral program is sustained. In 2005 a new networking forum was introduced for students enrolled in postgraduate ministry and theology courses, incorporating student presentations, guest speakers, seminars and discussion sessions held on a regular basis at the college campus. This forum, now known as the Tabor Adelaide Postgraduate Fellowship (TAPF) was launched by the Director of the Doctor of Ministry program at Fuller Theological Seminary in the USA. It has now been extended to embrace all disciplines of study, and reflects an emerging academic community of scholars, educationalists, and ministry practitioners at the college.

In 2007 the first overseas visiting scholar (from Fuller Seminary, California) was invited to teach an intensive seminar in Tabor's postgraduate program. Subsequently, 14 more scholars from around the world have contributed to the program, alongside others from within Australia (including Tabor faculty). This exciting development has become a regular feature of the Tabor postgraduate program, enabling students to engage in stimulating academic learning with top-class scholars in small-group intensive settings.

As acknowledged in the college's recent AUQA report (AUQA, 2010), Tabor Adelaide has now established a solid research and scholarship profile in its traditional core area of ministry and theology. Academic staff in this area have an impressive track record of publication and active participation in scholarly networks. Other disciplines are now beginning to develop in a similar way.

In 2011 a Memorandum of Understanding was established with St John's College at Durham University in the UK. Two Tabor faculty members have already been invited to take up visiting fellowships at Durham, where the Department of Theology and Religion has established an international reputation as one of the world-leading departments in its field. The MoU envisages faculty and student exchanges, joint research initiatives, reciprocal postgraduate supervision arrangements, benchmarking, and joint publishing initiatives. The college has also developed an informal partnership with Fuller Theological Seminary in the USA, where one of the authors has been a regular adjunct professor over the past ten years. Collaborative links with a science-religion research institute, the Faraday Institute based at Cambridge University in the UK, have also been established.

Also last year, Tabor launched a new research institute, the Graeme Clark Research Institute, named after the distinguished Australian scientist Graeme Clark, inventor of the bionic ear. Already the institute has run a successful international conference and it is now embarking on a range of research activities in the broad context of Christian service to the community, with a particular focus on the relationship between science and faith

The significant developments in postgraduate studies and research over the past decade, ensuring that a high standard of scholarship infuses the doctoral program, have taken place within a number of operational boundaries and constraints, to which we now turn.

Problems, Constraints and Solutions

The context of Tabor itself provided a number of constraints and barriers to the development of doctoral programs. In Table 2 the organizational context of Tabor is described as a matrix of dichotomies where Tabor Adelaide's characteristics are indicated by bold type.

Table 2: Context of Tabor Adelaide

DIMENSION	ALTERNATIVE 1	ALTERNATIVE 2
Sector	Public	**Private**
Government funding	Funded by government	**Not funded by government**
Profit orientation	For profit	**Not for profit**
Basic organizational philosophy	Secular	**Faith-based (Christian)**

These characteristics could be seen as barriers or boundaries with regard to possible course initiatives, but they also provided some opportunities not available to institutions with the alternative characteristics. Tabor is a private institution, and thus is not able to access the public support afforded to public institutions, such as universities. On the other hand the restrictions of laws and regulations relating to public institutions do not apply as strictly to a private institution, offering it the potential to develop a more distinctive profile than a public university.

The lack of government funding in particular means that students entering a doctoral program at Tabor could not expect Commonwealth student funding support for themselves, nor for the institutional infrastructure, e.g. library. As noted earlier this meant that the areas of doctoral study offered were very carefully defined in terms of resource availability and strategic expertise. However, this also meant that the students who undertook the courses were often more highly motivated by intrinsic interest in the courses than those seeking cheaper courses in other institutions.

The "Not for Profit" characteristic of Tabor meant that it could offer programs that would not necessarily make huge surpluses, but rather met the missional goals of the college and the needs of the community the college serves. Finally, the faith-based rather than secular organizational philosophy meant that those people wishing to experience courses based on a Christian world-view would find relevant and appropriate courses at Tabor. However, such a provision would not be attractive to many people whose world-views were different, thus reducing the number of possible students in Tabor courses.

Given this context, the development and offering of Tabor doctoral courses has experienced a number of significant operational constraints. One response has been to engage external supervisors to broaden the range of possible offerings. The engagement of international experts to provide regular intensive postgraduate courses has also contributed to this pool of available expertise. Collaboration with international partners, such as Fuller Theological Seminary in the USA and Durham University in the UK, has also strengthened the range of theological best practice available in Tabor's programs.

Tabor's strategic response to its funding limitations in terms of doctoral courses developed and offered, and the restriction of student numbers to match available resources has been accompanied by a continuing strong missional commitment and dedication. This has led to the development of relevant new initiatives and student satisfaction with courses across all of its programs. For example, the overall student satisfaction with Tabor programs in the 2011 graduate survey was 91.3 % agreement with the question: "*Overall, I was satisfied with the quality of this course*." Because of the small number of doctoral graduands so far from Tabor programs it is not possible at this stage to give meaningful graduate survey figures for these programs.

Conclusion

So what have learned from our experience of transitioning to two new doctoral programs, lessons that might be relevant for other small institutions facing similar situations?

- We have discovered that a private provider with no government backing need not be discouraged from developing doctoral programs if it works closely with its stakeholders and constituent community. Small size should not be perceived as a barrier to the delivery of quality doctoral courses.
- Serendipitously, the two philosophical approaches – rational and systems – have proved to be effective in facilitating the transition to doctoral awards at Tabor Adelaide. In particular, the critical interrelationships implicit in the focus on 'doing theology' have been particularly valuable within the 'systems thinking' philosophy of change.
- We have discovered the importance of defining strategically the needs of the client group, so that appropriate parameters can be developed to ensure that the program will work within the constraints of institutional expertise and infrastructure. However, it is also important to realise that if a real need exists in the stakeholder community, people are prepared to contribute more towards their continuing education than would be expected of them in government funded institutions.
- The program quality is critical. Tabor has adopted a number of ways of improving the program quality, e.g. by improving the quality of the staff expertise, by engaging expertise at state, national and international levels as required, and by developing an improved research profile for the institution as a whole.
- The global collaborative links that Tabor has developed in recent years has ensured a depth of expertise that would otherwise not have been possible in the context of its doctoral program. We suggest that other small-scale institutions contemplating a transition to more advanced awards might consider a similar intentional academic networking policy.
- We learned that we needed to be assiduous in improving all elements of postgraduate research thesis procedures in order to guarantee the quality of the thesis component in the two doctoral awards. Whilst we have not been able to develop this feature of doctoral course development in this paper, it has been a significant ingredient in the overall picture.
- Finally, for Tabor, the transitioning of educational programs to doctoral level has been a journey of faith. We are convinced that it is possible to combine academic excellence and Christian faith in a way that encourages creativity and educational enterprise, leading to high levels of student satisfaction.

References

Australian Universities Quality Agency (2010) Report of an audit of Tabor Adelaide. Melbourne: AUQA.

Blamires, H. (1966) The Christian mind: how should a Christian think? London, SPCK.

Graetz, F. & Smith, A.C.T. (2010) Managing organizational change: A Philosophies of Change approach. Journal of Change Management, 10(2), 135-154.

McGrath, A. (2010) The passionate intellect: Christian faith and the discipleship of the mind. Downers Grove, IVP.

Slape, D., & Beard, L. (2008) The Tabor Miracle. The pioneering years of Tabor College (1979 – 2005). Adelaide: Chapter 7 Publications.

Tabor Adelaide (2010) Tabor Adelaide Strategic Plan 2010 – 2013. Millswood: Tabor Adelaide.

Wheatley, M. J. (2006) Leadership and the New Science: Discovering Order in a Chaotic World, Villiston, VT: Berrett-Koehler Publishers, Inc.

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Non-refereed Papers

Dimensionality in Research Education

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Distinctive features of graduate study include opportunities for professional specialisation and research. These are supported to varying degrees by teaching and assessment practices and support for independent research. Given the relatively un-structured learning environment in research higher degrees, there are likely to be 'ingredients' unique to the research training environment that are instrumental in supporting successful outcomes.

Particular domains have emerged to broadly describe aspects of this environment that are salient for both students and supervisors and potentially useful in supporting successful outcomes. These include:

- Infrastructure and resources for research;
- Supervision and examination;
- Intellectual climate and collegiality;
- Skills and professional development; and
- Administrative and support services.

Some attention has been given to date to the development and use of outcome indicators which more or less reflect these domains (GCA, 2011). Following the work of Luca (2011) and Booth and Frappell (2011), this paper addresses input and process dimensions to the research training experience, and their potential definition and measurement. The paper aims to inform discussion on the way in which the definition and measurement of dimensions in graduate study might also serve as indicators of quality and performance, and the potential role these might play in a move to a more standards-based approach to supporting and rewarding quality in research education.

Context

In October 2011 the Australian Government released *Defining Quality*, a consultation paper focussing on quality aspects around research training. The paper addressed the quality of the physical and intellectual environment, the flexibility and 'fit' of the scheme and its broader fitness for purpose in supporting research education. A second paper, due for release in June 2012, is set to address technical aspects of the scheme, including options for how results from the Federal Government's research quality measurement exercise, the Excellence in Research for Australia Initiative (ERA), may influence funding allocations under the RTS scheme. While addressing different issues, the two papers are related. Funding formulae are typically associated with measures of performance, and those in turn are taken as measures of quality. Conceptions of what constitutes quality are therefore likely to inform the indicator mix which will eventually determine the distribution of federally funded places and possibly also scholarships from 2013.

The *Defining Quality* consultation paper is the first part of a two-stage consultation process informing review of the Federal Government's scheme for funding research education: the Research Training Scheme (RTS) (DIISR, 2011a). The RTS is the national tuition scheme for domestic places in research masters and PhD study, which alongside the Australian

Postgraduate Award scheme is the principal support program for research education in Australia (DIISR, 2011c). Review of the RTS comes as part of the Federal Government's *Research Workforce Strategy* (DIISR, 2011b). The *Defining Quality* consultation paper is well prepared and development of the *Strategy* has been an example of best practice in public policy development. However, this initiative is due to intersect with two other Federal Government initiatives: the Excellence in Research for Australia Initiative (ERA) and the formation of the new Tertiary Education Quality and Standards Agency (TEQSA) (ARC, 2011; Australian Government, 2011b). This intersection will have important implications for the definition and measurement of quality and standards in research training in Australia, and for prospects for continued innovation and improvement in this area in the future.

Indicators for quality in research education

What are the indicators for quality in research education? It is generally agreed that supervision, resources, administrative and support services, a collegial environment and opportunities for advanced skills development are the principal 'ingredients' for a quality research training environment (QAA, 2004; The Council of Deans and Directors of Graduate Studies in Australia, 2008; CHE, 2010; Palmer, 2010a; Palmer, 2010b; Booth & Frappell, 2011; GCA, 2011; Group of Eight Deans of Graduate Studies, 2011; Luca, 2011). The *Defining Quality* consultation paper provides a valuable opportunity to 'put some meat on the bones' of some of these dimensions.

Anticipating the subsequent paper and how some of these dimensions may be reflected in indicators for quality: some types of activity may be amenable to measurement by *performance* indicators, while others are more clearly *threshold* requirements, above which the measurement of performance (and the use of reward funding) is of questionable value. These in turn may be reflected in indicators for either inputs, processes, outputs or outcomes (Linke, 1992). These could employ criteria that are externally referenced to a specific requirement, or that provide a scaled means of comparison either within or between institutions. In some cases, it may also be possible to reflect variation over time, where available information allows longitudinal comparison. These are summarised in the table included as Appendix I, along with examples of dimensions, aspects and characteristics they might be employed to reflect. Broad dimensions and aspects from Appendix I are summarised in Table 1 below.

Table 1 Potential dimensions and aspects of a quality research training environment

Dimension	Aspect
Infrastructure and resources for research	Infrastructure, equipment, facilities and resources provided to support research, appropriate to enabling successful and timely completion.
Supervision and examination	Quality in supervision, and of the examination process.
Collegiality and intellectual climate	An open, collegial and productive learning environment, with support for doing and learning about research.
Skills and professional development	Opportunities for personal and professional development, including the development of skills and professional capabilities.
Administrative, student support and QA policies, programs and strategies	Administrative and student support services and programs. Policies, programs and strategies to promote and assure quality and to manage risk.

Collegiality for example could reasonably be reflected in both threshold and performance characteristics, with 'quality' reflected in performance measures like the *Intellectual Climate* subscale of the Postgraduate Research Experience Questionnaire (PREQ) (GCA, 2011). Quality in supervision on the other hand may be more readily reflected in threshold indicators for the kinds of programs and strategies employed to support good supervisory practice, with student evaluations of the quality of their experience of research supervision as performance measures for their effectiveness. Similarly in the case of infrastructure and resources, both threshold and performance measures could be employed to reflect both 'input' characteristics (such as policies outlining minimum resource standards) and 'outputs' (student evaluations of the accessibility and availability of those resources, for example) in the provision of infrastructure and resources for research.

Threshold indicators for inputs and processes are a more direct measure of quality than the prospect that performance might be reflected in measures like student evaluations alone. While outcome measures are important, they can be a very vague reflection of the standard of what's actually being offered to students. The importance of both *threshold* and *performance* indicators in providing a more comprehensive reflection of the quality of the research training environment highlights the importance of strategies like quality audits as a means of monitoring and supporting continuous improvement in addition to the use of scaled measures of performance. An over-reliance on outcomes measures of quality at the expense of input or threshold indicators therefore can risk becoming more an exercise in obfuscation than one of transparency.

The summary included as Appendix I is intended to demonstrate the potential dimensionality of characteristics salient and useful in supporting a quality research training environment, and the types of indicators that may be used to reflect them, rather than represent an exhaustive list of those characteristics per se.

ERA as a measure of quality in research and research training

It has been proposed that funding for research training in Australia be informed by results from the Australian Government's *Excellence in Research for Australia* (ERA) Initiative (Senators the Hon Kim Carr and Chris Evans, 2010). However, does it make sense to use a performance measure for the research output of academic staff as either a threshold or performance indicator for the quality of the research training environment for students? ERA was developed as a measure for quality in research; it tells us nothing directly about the quality of the research training environment. In this sense ERA reflects neither quality nor performance in research training. However, there are grounds for employing ERA as an indirect measure for some aspects of the research training environment, where quality and scale in the academic publishing activity of university staff can be demonstrated to have a positive influence on the research training environment for students.

ERA currently measures the publishing activity of university staff above a certain level of activity. On these grounds, ERA is a good framework for 'research quality', where the quality of the research activity of academic staff is understood to be reflected in their refereed publications in preferred journals. If this is the case then ERA is already performing a valuable function in lending some transparency to the usual institutional hype regarding the quality and scale of their research activities. This transparency is certainly useful for prospective research students. What ERA doesn't measure however is the publishing activity of research students themselves.

This is odd, really, given the suggestion that ERA is somehow also a measure of quality in research training.

The *Defining Quality* consultation paper acknowledges that ERA reflects the quality and scale of publishing activity in a given discipline above an assessment threshold, below which there may still be 'pockets of excellence' (DIISR, 2011a). The paper notes that ERA 2010 had a low volume threshold on citation analysis of 50 indexed publications over a six year period for each field of research. Where thresholds were not met, data submitted was not assessed, and institutions were not considered research active in those areas. Two key questions to be addressed here are:

- Do the *threshold* requirements for quality in research training look the same as the threshold requirements for ERA assessment; and

- Does poor *performance* on ERA reflect poorly on the research training environment?

'Scale' may feature among dimensions of a quality research training environment, but is really only one of many (and in many disciplines, a fairly inconsequential one). Scale *may* be important in what might be described as 'capital intensive' research, or where team-based research plays a central role in the research enterprise. In other discipline areas however, from a student perspective, 'critical mass' may be as simple as two or more colleagues knowing what they are on about in their research. Supporters of the use of ERA in determining RTS funding would cite 'critical mass' in research activity as being among the desirable characteristics of preferred destinations for research higher degree students. Even if this is the case it is certainly not the only one, and for those students or those disciplines where it is a salient factor students themselves will vote with their feet where ERA results are made publicly available and accessible (perhaps via the MyUniversity website) (ARC, 2011; Australian Government, 2011c).

So does it make sense to employ any measure of scale as a *threshold* requirement? There are grounds for suggesting that evidence of at least some research activity should be a threshold requirement in order to be able to enrol research higher degree students. This requirement already exists in the National Protocols for Higher Education Approval Processes (MCEETYA, 2007), and will continue as clause 3 of TEQSA's Provider Category Standards for universities (TEQSA, 2011). To employ ERA as a threshold measure for this however seems too demanding on institutions with small academic departments, even at the broad (two digit) field of research level.

As a *performance* measure however there may be some grounds for considering ERA results alongside other measures for a quality research training program. Scale in publishing activity already accounts for 10% of the current RTS performance index, alongside research degree completions (50%) and research income (40%) (Other Grants Guidelines (Research), 2010). There are grounds for suggesting that ERA replace publications data from the Higher Education Research Data Collection in the RTS performance index, potentially bringing measures of both quality and scale to the publication component of the index. This could make sense as a performance measure in place of a measure of scale alone. As a performance measure ERA could potentially replace the existing publications component plus something in the order of 15% of the research income proportion of the index. This might end up not being such a bad thing for institutions that are still building their capacity to compete in the external research income stakes.

It is important to note however that an ERA component of an RTS performance index would still only reflect quality and scale in the publishing activity of academic staff (and potentially also of

research students, were ERA improved to collect information on those publications also). While useful, ERA does not provide a reliable reflection of either quality or performance in research training. This is simply not what it was designed to do.

Possibility and normativity in regulation and standards

TEQSA's *Standards Framework* describes both threshold and performance standards. Threshold standards describe the conditions providers are required to meet in order to offer courses and enrol students, while performance standards describe dimensions along which institutional performance may be compared. The kinds of things evaluated by each are qualitatively different, and these are measured in different ways. The aim of the DIISR consultation paper is to identify how quality in research training may be measured and encouraged. Indicators developed through this exercise will form part of TEQSA's standards for research, which are grouped with *teaching and learning* and *information* domains as performance standards (Tertiary Education Quality and Standards Agency Act, 2011).

Among challenges in moving to a standards-based approach to regulation and quality assurance is that possibility can be taken to imply normativity – that is – just being able to identify and measure a particular activity is taken to imply that it should feature among standards for a particular area. This conflates what you *could* do with what you *should* do.

Simply identifying something that could be established as a standard does not automatically mean that it would be a good thing to do. Good practice strategies for example sit awkwardly in this kind of standards-based approach. While offering a free laptop to each commencing research higher degree student is identifiable as an example of good practice (Palmer, 2010a, pp.26-27), it seems excessive to employ this as a threshold standard for all institutions enrolling research students. It may or may not make sense to establish some or all of the activities outlined in Appendix I as either threshold or performance standards, but in identifying potential dimensions, aspects and characteristics of a quality research training environment, it is important not to conflate what *could* be done with what *ought* to be done. 'Standardisation' in this sense also limits institutions' ability to distinguish themselves from one another in attracting prospective research students. The Federal Government should therefore consider only identifying a core set of threshold requirements, above which institutions should be free to negotiate as part of the existing Compacts process (Australian Government, 2011a). Institutions should be able to distinguish themselves through a range of strategies based on their strengths and their strategic mission, over and above an agreed minimum (which could be revised to support improvements in system-level standards over time).

There is a risk that a negative regulatory mindset might displace a culture of innovation and improvement in the move toward a standards-based approach to regulation and quality assurance. Institutions should be allowed to compete on quality rather than be bound by regulation. There is a danger that a negative regulatory mindset would serve to value making new rules for things over actually doing things. For example, if ERA is a robust and defensible exercise in measuring quality in the research output of university staff at scale it should stand in its own right, or at least perform its function as an indicator of performance for that which it was designed to measure. If it is doing its job properly and its findings are made accessible, it will serve an important function in informing the decision-making of prospective research students. Overregulation using ERA as a threshold measure, or as a dominant influence in the funding mechanisms for research student places or scholarships or both (at the expense of measures like research student completions) will do more to create perverse incentives than it will to support

improvements in the quality of the research education experience in Australia. If quality and scale in the refereed publications of academic staff are actually important aspects of the research training environment, research students themselves will vote with their feet. The possibility that ERA *could* be employed as part of a standards framework in a variety of ways doesn't automatically mean that it *should* in every case.

TEQSA's Standards Framework needs to be refined to provide for both threshold and performance measures within each domain. This would certainly alleviate some confusion and anxiety around its implementation. This distinction should apply for research standards in particular, and is critical in the case of research training. In this way, there is at least some chance that these standards can in fact serve the aims of transparency, of measuring quality and of encouraging the quality improvement and quality enhancement activities of universities. A degree of caution is needed in establishing dimensions, aspects and characteristics of a quality research training environment as 'standards'. There is a risk that a negative regulatory mindset will end up being more costly in terms of time, resources, productivity and scope for innovation in support of quality in research education. Allocating public funds in support of research education based on transparent and defensible indicators for quality is a good thing to do. It is clearly in the national interest. What research education in Australia needs are defensible minimum standards for the provision of research training, performance measures (if used) without too many perverse incentives, and continuation of the culture of innovation and improvement we have seen develop over the last 15 years. At risk is the opportunity to build on existing strengths and for some genuine reforms.

Appendix I: Dimensionality in Research Education - Potential Dimensions, Aspects, Characteristics and Measures

Key: T - threshold; P - performance | I - input/process; O - output/outcome | C - criterion referenced; S - scaled/comparative; L - longitudina | *regardless of status as a potential standard, performance measure or threshold requirement.

Dimension	Aspect	Characteristic	Activity type*	Indicator Type*	Criterion type*	Measure	Criterion
Infrastructure and resources for research	Infrastructure, equipment, facilities and resources provided to support research, appropriate to enabling successful and timely completion.						
	Each institution should have a readily-accessible policy on resources for research doctoral candidates (DDoGS).	Adoption of minimum resource standards policy	T	I	C	Audit	Policy is in place
		Accessibility of minimum resource standards policy	P	I	C	Audit	Policy is accessible
		Enforceability of minimum resource standards policy	P	I	C	Audit	Policy is enforceable
		Implementation of minimum resource standards policy	P	I	C	Audit	Policy is appropriately implemented with good compliance
	Secure desk and study space (DQ).	Secure desk and study space specified in minimum resource standards policy	T	I	C	Audit	Secure desk and study space specified in minimum resource standards policy
		Reported accessibility of a suitable working space	P	O	S	Infrastructure Subscale PREQ03	Comparative
	Physical resources and access to research facilities including research infrastructure, laboratory or other facilities required across a range of disciplines (DQ).	Access to necessary facilities and equipment specified in minimum resources policy	T	I	C	Audit	Access to necessary facilities and equipment specified in minimum resources policy
		Reported access to necessary equipment	P	O	S	Infrastructure Subscale PREQ12	Comparative
	Information technology (IT), including computer access, technical support, specialist software and the facility to securely store large amounts of data (DQ).	Access to computing facilities specified in minimum resource standards policy	T	I	C	Audit	Access to computing facilities is specified in minimum resource standards policy
		Access to necessary specialist software specified in minimum resource standards policy	T	I	C	Audit	Access to necessary specialist software specified in minimum resource standards policy
		Access to secure data storage facilities specified in minimum resource standards policy	T	I	C	Audit	Access to secure data storage facilities specified in minimum resource standards policy
		Reported access to computing facilities and services	P	O	S	Infrastructure Subscale PREQ18	Comparative
		Access to technical support specified in minimum resource standards policy	T	I	C	Audit	Access to technical support is specified in minimum resource standards policy
		Reported access to technical support	P	O	S	Infrastructure Subscale PREQ08	Comparative
	Financial support for fieldwork, international exposure, conference attendance etc. (DQ).	Financial support for fieldwork, conference attendance etc. specified in minimum resource standards policy	T	I	C	Audit	Financial support for fieldwork, conference attendance etc. is specified in minimum resource standards policy
		Appropriate financial support for research activities	P	O	S	Infrastructure Subscale PREQ27	Comparative
Supervision and examination	Quality in supervision, and of the examination process.						
	Appointment of a principal supervisor, assisted by a colleague or colleagues (such as an advisory team or supervisory panel) who may have different roles in the supervision process (DDoGS).	Supervision policy	T	I	C	Audit	Supervision policy is in place
		Reported availability of supervision	P	O	S	Supervision Subscale PREQ01	Comparative
		Supervisory panel tracking system	T	I	C	Audit	Supervisory panel tracking system in place
	Availability and responsiveness in supervision (including through principal and co-supervisor arrangements)(DQ).	Co-supervision policy	T	I	C	Audit	Co-supervision policy is in place
		External supervisory arrangements	T	I	C	Audit	Strategies in place to support external supervisory arrangements
	Quality of supervision (DQ).	Supervisory prerequisites policy	T	I	C	Audit	Supervisor prerequisites policy in place
		Supervisor register	T	I	C	Audit	Supervisor register in place
		Supervisor register publicly available	T	I	C	Audit	Supervisor register is publicly available
		Supervisor development program(s)	T	I	C	Audit	Supervisor development program(s) in place
		Supervision not put a risk by excessive volume and range of responsibilities	T	I	C	Audit	Appropriate workload recognition provisions in place
		Staff evaluation of supervisor development program	P	I	S	Staff evaluation survey	Comparative
		Supervision: feedback on progress reported as helpful	P	O	S	Supervision Subscale PREQ21	Comparative
		Supervision: student evaluation of guidance in topic selection and refinement	P	O	S	Supervision Subscale PREQ17	Comparative
		Supervision: student evaluation of guidance on literature search	P	O	S	Supervision Subscale PREQ24	Comparative
		Supervision: additional information relevant to topic	P	O	S	Supervision Subscale PREQ13	Comparative
		Supervision: efforts to understand difficulties faced	P	O	S	Supervision Subscale PREQ07	Comparative
	Thesis examination process (DQ).	Examination procedures	T	I	C	Audit	Examination procedures in place
		Transparent criteria and procedures for thesis examination	T	I	C	Audit	Criteria and procedures for thesis examination are transparent and made available to students
		Examination: Timeliness in thesis examination	P	O	S	Examination Subscale PREQ25	Comparative
		Examination: fairness of thesis examination process	P	O	S	Examination Subscale PREQ02	Comparative
		Examination: satisfaction with thesis examination process	P	O	S	Examination Subscale PREQ15	Comparative
		Examination outcome	P	O	S	(unclear how this could usefully be measured)	Comparative

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Appendix I: Dimensionality in Research Education - Potential Dimensions, Aspects, Characteristics and Measures

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Dimension	Aspect	Characteristic	Activity type*	Indicator Type*	Criterion type*	Measure	Criterion
Collegiality and intellectual climate	Candidates should have an open, collegial and productive learning environment (DDoGS), providing support for doing and learning about research (QAA).						
	Depth and breadth of the scholarly environment (DQ).	Quality of research undertaken in by academic staff	P	I	S	ERA	Comparative
		Scale of research undertaken by academic staff	P	I	S	ERA	Comparative
		Entry standards and criteria	P	I	S	Admissions data	Comparative
	Opportunities for social contact with other postgraduate students (PREQ).	Opportunities to engage with an independent association of postgraduates	T	I	C	Audit	Independent association of postgraduates in place
		Reported opportunities for social contact with other postgraduate students	P	O	S	Intellectual Climate Subscale PREQ05	Comparative
	Intellectual climate (PREQ).	Sense of being part of the academic department's community	P	O	S	Intellectual Climate Subscale PREQ09	Comparative
		Opportunities for engaging in broader research culture	P	O	S	Intellectual Climate Subscale PREQ16	Comparative
		Research ambience	P	O	S	Intellectual Climate Subscale PREQ23	Comparative
Skills and professional development	Opportunities for personal and professional development, including the development of skills and professional capabilities.						
	Support through the program for the development of broader skills, including generic or 'employability' skills (DQ).	Development of problem-solving skills	P	O	S	Skills Subscale PREQ06	Comparative
		Development of ability to present ideas	P	O	S	Skills Subscale PREQ10	Comparative
		Enhancement of analytic skills	P	O	S	Skills Subscale PREQ14	Comparative
		Development of independent planning abilities	P	O	S	Skills Subscale PREQ20	Comparative
		Confidence in tackling unfamiliar problems	P	O	S	Skills Subscale PREQ26	Comparative
	Development of academic and research skills (QAA).	Adherence to qualification standards	T	I	C	Audit	Qualification standards are adhered to
		Adherence to academic standards	P	O	C	Peer review of examination outcomes	Qualification standards are adhered to
		Research skills demonstrated in preparation of a dissertation or thesis	T	O	C	Thesis examination	Thesis passed by examiners
		Comparative academic outcomes commencement/post graduation	P	O	L	Admissions data / Longitudinal survey	Comparative
	Support through the program for the development of deep, subject specific knowledge (DQ)	Subject specific knowledge demonstrated through preparation of a dissertation or thesis	T	O	C	Thesis examination	Thesis passed by examiners
	A generic skills program tailored to the candidate's individual needs and/or the needs of their cohort group (DDoGS).	Good seminar program(s) provided for postgraduate students	P	O	S	Intellectual Climate Subscale PREQ22	Comparative
	Professional development opportunities.	External and industry co-supervision opportunities	T	I	C	Audit	Industry co-supervision opportunities provided
		External and industry engagement opportunities	P	O	S	Student survey	Comparative
		Employment destinations 5-7 years post graduation	P	O	S	Destination survey	Comparative
		Comparative employment outcomes commencement/post graduation	P	O	L	Admissions data / Longitudinal survey	Comparative
	International engagement opportunities.	Programs and funding for international research opportunities	T	I	C	Audit	Programs and funding for international research opportunities in place
		International research opportunities	P	O	S	Student survey	Comparative
		International engagement 5-7 years post graduation	P	O	S	Destination survey	Comparative
Policies, programs and strategies	Administrative and student support services and programs. Policies, programs and strategies to promote and assure quality and to manage risk.						
	Scholarships	Availability of research student scholarships	P	I	S	Ratio of value of total scholarships funded by the institution to their total RHD load	Comparative
	Induction, pre-induction and provision of important information and advice on an ongoing basis: Candidates should have access to a coordinated program of activity to integrate them into their university and faculty, school and/or department (DDoGS).	Quality and availability of pre-induction information	P	O	S	Student survey	Comparative
		Quality and availability of orientation and induction programs	P	O	S	Student survey	Comparative
		Quality and availability of ongoing information	P	O	S	Student survey	Comparative
		Candidate awareness of relevant IP policy prior to commencement	P	O	S	Student survey	Comparative
		Quality and availability of information about the academic and social environment	P	O	S	Student survey	Comparative
		Access to independent legal advice on IP matters (paid for by the university through a third party such as the postgraduate students' association) (DDoGS)	T	I	C	Audit	Students have access to free, independent legal advice on IP matters
		Code of practice outlining the rights and responsibilities of candidates, supervisors and the university (DDoGS)	T	I	C	Audit	Code of practice is in place and is made available to students
		Entitlements and responsibilities of students and supervisors defined and communicated clearly	T	I	C	Audit	Entitlements and responsibilities of students clearly defined and communicated
		clear understanding of the standard of work expected	P	O	S	Clear Goals Subscale PREQ04	Comparative
		clear understanding of the required standard for the thesis	P	O	S	Clear Goals Subscale PREQ11	Comparative

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Dimension	Aspect	Characteristic	Activity type*	Indicator Type*	Criterion type*	Measure	Criterion
Administrative, student support and QA		clear understanding of the requirements of thesis examination	P	O	S	Clear Goals Subscale PREQ19	Comparative
	Access to independent support & advice (DQ).	Postgraduate association able to offer independent advocacy and advice on a professional and confidential basis	T	I	C	Audit	Postgraduate association is able to offer independent advocacy and advice on a professional and confidential basis
	Appeal and dispute resolution processes.	Mechanisms to collect, review and respond to feedback	T	I	C	Audit	Mechanisms to collect, review and respond to feedback are in place
	Transparent policies and procedures.	Transparent admission criteria, procedures and processes	T	I	C	Audit	Admission criteria, procedures and processes are transparent and available to current and prospective students
		Transparent intellectual property policies and procedures	T	I	C	Audit	Transparent intellectual property policies and procedures are in place
	Transparent monitoring of the progress of each candidate via a structured process with significant milestones, and regular monitoring/reporting of progress throughout candidature, including prior to submission for examination (DDoGS).	Clearly defined mechanisms for monitoring and supporting student progress	T	I	C	Audit	Clearly defined mechanisms for monitoring and supporting student progress are in place
		Guidance to supervisors and students on monitoring progress and providing appropriate records	T	I	C	Audit	Guidance is made available to supervisors and students on monitoring progress and providing appropriate records
	Other outputs and outcomes	Overall satisfaction with the quality of the research higher degree experience	P	O	S	Overall satisfaction PREQ28	Comparative
		Completion rate	P	O	S	HEIMS	Comparative
		Attrition rate	P	O	S	HEIMS	Comparative
		Graduate contribution to knowledge through research outputs, including (but not limited to) theses, publications, exhibitions, grants and patents.	P	O	S	ERA?	Comparative

Nigel Palmer, University of Melbourne. Quality in Postgraduate Research (QPR) 2012.

References

ARC (2011). Excellence in Research for Australia 2010: National Report. Canberra, Australia: Australian Research Council (ARC), Commonwealth of Australia.

Australian Government (2011a). Advancing Quality in Higher Education Information Sheet: Mission Based Compacts. Canberra, Australia: Department of Education, Employment and Workplace Relations, Commonwealth of Australia.

Australian Government (2011b). Advancing Quality in Higher Education Information Sheet: Tertiary Education Quality and Standards Agency. Canberra, Australia: Department of Education, Employment and Workplace Relations, Commonwealth of Australia.

Australian Government (2011c). Advancing Quality in Higher Education Information Sheet: The My University website. Canberra, Australia: Department of Education, Employment and Workplace Relations, Commonwealth of Australia.

Booth, S., & Frappell, P. (2011). Evaluation Criteria and Evidence for a Self Review of Higher Degree Research, Australian Quality Forum 2011. Melbourne: Australian Universities Quality Agency.

CHE (2010). Identifying the Best: The CHE ExcellenceRanking 2010. Gütersloh, Germany: Centre for Higher Education Development.

DIISR (2011a). Defining Quality for Research Training in Australia: A Consultation Paper. Canberra, Australia: Department of Innovation Industry Science and Research, Commonwealth of Australia.

DIISR (2011b). Research skills for an innovative future: A research workforce strategy to cover the decade to 2020 and beyond: Department of Innovation Industry Science and Research, Commonwealth of Australia.

DIISR (2011c). Supporting Australia's research workforce: Snapshot of government research workforce programs – 2009/10. Canberra, Australia: Department of Innovation Industry Science and Research, Commonwealth of Australia.

GCA (2011). Postgraduate Research Experience 2010: A Report of the Postgraduate Research Experience Questionnaire. Melbourne, Australia: Graduate Careers Australia (GCA).

Group of Eight Deans of Graduate Studies (2011). Measuring Quality in Higher Degree by Research Training. Canberra, Australia: The Group of Eight.

Linke, R. D. (1992). Some principles for application of performance indicators in higher education. Higher Education Management, 4 (2), 194-203.

Luca, J. (2011). Best Practice Framework for Research Training The Council of Deans and Directors of Graduate Studies in Australia. Dunedin, New Zealand: The Council of Deans and Directors of Graduate Studies in Australia.

MCEETYA (2007). National Protocols for Higher Education Approval Processes. Melbourne, Australia: Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA),.

Other Grants Guidelines (Research), Higher Education Support Act (2003) (2010).

Palmer, N. (2010a). Minimum Resources for Postgraduate Study 2010. Melbourne, Australia: Council of Australian Postgraduate Associations.

Palmer, N. (2010b). The Research Education Experience in 2009. Canberra, ACT: Department of Innovation, Industry, Science and Research (DIISR).

QAA (2004). Code of Practice for the assurance of academic quality and standards in higher education: Section 1: Postgraduate research programmes. Gloucester, UK: The Quality Assurance Agency for Higher Education (QAA).

Senators the Hon Kim Carr and Chris Evans (2010). University Compacts To Reward High Performance (Media Release). Canberra, Australia: Department of Innovation, Industry, Science and Research.

TEQSA (2011). Draft Provider Standards – Consultation Draft. Melbourne, Australia: Tertiary Education Quality and Standards Agency (TEQSA).

Tertiary Education Quality and Standards Agency Act 2011, (cwth) (2011).

The Council of Deans and Directors of Graduate Studies in Australia (2008). Framework for Best Practice in Doctoral Research Education in Australia. Melbourne, Vic: Council of Australian Deans and Directors of Graduate Studies.

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Down to the last drop: squeezing maximum value out of a database of research student narratives

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Abstract

The student voice is a powerful tool, which used effectively and wisely, can form the basis of strategies and initiatives to improve the research training experience for our research higher degree candidates. Typically collected through student satisfaction surveys, these narratives contain valuable information on what it is to be a research higher degree student at one of our universities. The time and effort taken by respondents to convey their experiences needs to be validated by delivering them, in a meaningful and actionable format, to their intended audience – the people responsible for research training in our universities.

In this paper I will demonstrate how one Australian university has mined the database of the student narrative, squeezing maximum value out of the data to ensure that its research higher degree students have a quality experience during their candidature, and beyond. I will also show how the current reporting regime has flourished in an environment of mutual accountability, with results being used in a variety of forums at both faculty and institutional level.

It is essential that the custodians of the databank of student narratives ensure that this valuable resource is kept to the forefront of stakeholders eyes. Ever mindful of the importance of the student experience in decision making, the guardian of their voice should ensure that these narratives are made use of whenever opportunities arise.

Introduction

Poindexter (2006) argues that for a higher education institute to be successful, it must listen to the voices of the students and incorporate what they are saying about their experiences into their priorities. He further maintains that, if institutions do not effectively use this information, they risk failure in meeting student satisfaction and expectations. The student voice is a powerful instrument, which should be harnessed to provide us with information on their total university experience. The often forthright narratives available through qualitative data not only complement and confirm the quantitative data, but also provide us with a better understanding of the issues that are important to students (Palermo, 2004; Scott, 2006). The repeated pattern of themes occurring within the student narrative reflect shared experiences for each group of students (Richardson, 2003), present an important insight into both faculty and institutional practices and procedures, and input into quality enhancement and improvement processes, strategies and initiatives.

Typically collected through student satisfaction surveys, the student narrative contains valuable information on what it is to be a research higher degree student at our universities. Dissemination of this information to the people for whom it was intended, the staff responsible for research training, is an essential step in the evaluation cycle, and should be used to improve the student experience for both current and future students. In this paper I will demonstrate how the University of Sydney has mined the data received through the Student Research

Experience Questionnaire to its fullest potential, and how, in an environment of mutual accountability, this data has been disseminated to stakeholders through a variety of formats including faculty and institutional reports. I will also show how this dissemination does not stop at writing and distributing reports, but extends beyond to include presenting the student voice at any opportunity that arises in the university environment.

The Student Research Experience Questionnaire (SREQ)

Together with all Australian universities, Sydney collects data about the experiences of its recent research higher degree graduates through the Postgraduate Research Experience Questionnaire (PREQ). In addition to this externally instituted and designed survey instrument, the University uses its own student satisfaction survey, the SREQ, to evaluate the quality of currently enrolled research higher degree students' experiences while they are still at the University,. Instituted in 2002, the SREQ was distributed to all currently enrolled research higher degree students in the second semester of every year until 2010. Responses were evenly divided between online and paper based. In 2012 the SREQ will move to a biennial cycle and will be fully online. In 2010, a response rate of 72% was achieved – the highest response rate achieved since the beginning of the survey. Students are asked to respond to statements linked to the SREQ factors using a 5 point Likert Scale to indicate the extent to which they agree or disagree with each statement. In addition to the closed questions, students are asked to provide comments on their perception of their experiences of research training.

The complexity of any student feedback system, and the requirement to maintain validity and reliability of the data collected, necessitates the establishment of a central mechanism to coordinate and monitor survey content and conduct (Palermo, 2004), as well as to provide an unbiased reporting system. To this end, the Institute for Teaching and Learning is responsible for the analysis and reporting of the quantitative data, whilst the Graduate Studies Office is responsible for the analysis and reporting of the open response comments (qualitative feedback or written observations).

These comments are kept in a searchable database which currently consists of over 32 000 individual comments which range in length from short phrases of a few words to one and a half A4 pages of text. The number of comments received each year is growing – from 2508 in 2002 to 4587 in 2010, thus providing a complex and unique database of information about students' perceptions of their research higher degree experience. A measure of the importance that is placed on these comments, and the possible realisation by students that their opinions are valued, is found in the high percentage of students who are taking the time to provide constructive and worthwhile observations on their experiences – an average of 75-80% of all respondents. It is worth noting that consistently more respondents comment on areas of best practice than suggest improvements. Due to the fact that the SREQ surveys the whole cohort of research higher degree students each year, and consequently very similar respondents over a 3-4 year period, it provides a benchmark for the student experience, over the life of a research higher degree.

Disseminating the student voice

Palermo (2003) and Scott (2006) both argue that collecting students' comments in itself is not sufficient to provide information on what they are saying about their experiences, and more importantly, on how we are performing as a university. Their analysis into meaningful data at both a faculty and institutional level is vital to the dissemination of these comments to

interested parties. When analysis of the SREQ qualitative data began, it was realised that simply providing a list of student comments to each faculty would not provide them with adequate information on the research higher degree student experience. Few faculties have the time or the resources to thoroughly analyse and study the comments to ascertain their strengths, weaknesses and areas in need of improvement. Additionally, if the analysis were to be undertaken by a single academic staff member within the faculty, concerns may be raised about the neutrality of the reports. Therefore, a centralised system for analysing, evaluating and reporting student feedback was developed. Using a combined automated and manual analysis, together with an in-house taxonomy developed specifically for the purpose (Symons, 2007 and 2008), it allows each faculty to receive its own unbiased, customised report.

However the time and energy spent in the collection and analysis of this valuable information would be wasted if it was simply filed away and not disseminated to those who could use it at both faculty and institutional level. We believe that it is vitally important that the results of student surveys should be disseminated in a meaningful fashion to our stakeholders (Symons, 2008). To this end we have designed faculty and institutional reports that are based around the structure of the SREQ, and link the quantitative and qualitative data from both a time series and a single year perspective. The following reports based on the analysis of the SREQ results are provided to our stakeholders:

- Faculty reports
- Institutional reports
- Subject specific and on demand requests for information

All reports are available online to all stakeholders including senior management, academic and professional staff, students and the general public.

Faculty reports

Since 2002, each faculty at the University has been provided with a report on the most common aspects of the research higher degree student experience. A comparison is provided with previous years, and sample comments from the reporting year are included. Student confidentiality is maintained by excluding comments that may identify students, particularly in faculties with small student numbers. Evidence of improvements in the student experience, as exemplified by a reduction of adverse comments and/or an increase in positive comments, or the absence of concerns raised in previous years, are highlighted in the executive summary of the report. Reports are divided into five main sections: Quality of supervision, Quality of infrastructure, Research Climate, Graduate Attributes, and Overall satisfaction – providing direct correlation to a) the quantitative reporting framework, b) the taxonomy, and c) the key performance indicators for research training (Symons, 2012).

Each faculty SREQ report includes the following information:

- An executive summary highlighting key trends in the student experience for the faculty. This is aimed at providing Deans and Associate Deans with a high level overview of key issues to address.
- Arrangement by SREQ factors
- Integration of analysis of the outcomes of both quantitative and qualitative data from the SREQ.
- Comparative quantitative and qualitative data from the SREQ.

- Key issues within each category from the latest surveys, including: main focus and distribution of qualitative data. Illustrative sample comments from domestic and international students are included here.
- Statistical information on student enrolments and response rates to the SREQ.

Institutional reports

Institutional SREQ reports identifying strengths, weaknesses and areas for improvement at the wider university level have been made available since 2009. Reports on the research higher degree graduate experience, as received through the PREQ, have been available since 2010. The first version of these report replicated the structure, format and content of the faculty reports, but at an institutional level. With the new ambience of mutual accountability at the University, the move of SREQ reporting to the Graduate Studies Office, and the ownership of the reports by the Senior Executive Group (SEG) Research Training Committee, in 2011 the latest iteration of institutional reports provided faculty by faculty comparisons for the first time. The report has received a wider distribution than in previous years, and has been discussed in detail at a number of senior management committees. It is indeed encouraging to know that, through this report and the faculty reports, the quality of the research higher degree experience is being measured, and that faculties are now accountable for its improvement.

Both faculty and institutional reports are publicly available through the University website at http://sydney.edu.au/learning/evaluating/sreq_or.shtml.

Subject specific reports and "On demand" requests for information

Subject specific reports are usually provided in response to requests from stakeholders who require a more detailed analysis of the research higher degree student experience than that provided in the more general faculty and institutional reports. Examples include: library services, virtual colleges, learning spaces, supervision, funding, coursework, and annual progress reviews. In addition, if the Graduate Studies Office perceive a need for a subject specific report, for example in response to questions raised in committees or working groups, information packages consisting of a more detailed analysis of both qualitative and quantitative data will be provided. Similarly, if an enquiry for information on a specific aspect of the research higher degree student experience is received in the Office, then customised reports will be provided to the enquirer in a timely fashion.

Closing the loop

Just as important as ensuring that staff are alerted to student feedback, and that they address the issues that emerge promptly, is that students are shown directly that their feedback is being listened to by those who can implement suggested changes. This final step in 'closing the loop' of the quality enhancement cycle is critical (Scott, 2000). We need to complete the cycle as far as the students are concerned, and for members of the academic staff who are not privy to the reporting and committee structure within their own faculties.

The importance of 'closing the loop' cannot be overstated. If students do not see action being taken from the feedback they provide on their experiences, they become sceptical, and less likely to respond to future surveys. We also need to ensure that students know that their comments are being taken seriously, and that they are not writing them simply to have them

filed away on a dusty shelf in an office, never to see the light of day. With the diverse student body and the large number of faculties at the University of Sydney, it is imperative to use a range of methods to ensure that as many students as possible are made aware that their feedback is being heard, and acted upon (Watson, 2003).

In March 2011, the SEG Research Training Committee agreed to 'close the loop' in the quality improvement and evaluation cycle, by endorsing the wider dissemination of SREQ reports to senior management, students, and all staff involved in research training: associate deans, heads of schools, postgraduate coordinators and postgraduate administrators (Symons, 2011). This simple action validated the time and effort that students dedicate to completing the surveys and providing written observations, which they hope will go some way to improving not only their own experiences, but also those of future research higher degree students.

Mutual accountability

Mutual accountability is one of the core values of the University, viz:

> *Individual members of the University, and the academic communities of which they are a part, are accountable to one another for their contribution to the academic and financial health of the institution. This concept of mutual accountability shapes the University's commitment to, and the responsibilities of, individual staff and students. It also has implications for our approach to decision-making, and for the relationship of the various academic communities that constitute the University.*
>
> *University of Sydney, 2011 – 2015 Strategic Plan*

As previously mentioned, the current environment of mutual accountability at the University has allowed the inclusion of faculty comparative data in institutional reports, a practice which had met with resistance in previous years. Faculties are also being asked to respond to the key issues raised in their individual reports; provide information on how results were communicated to staff, students and administrative staff; and give evidence of factors which might have influenced the results e.g. increasing enrolments, new staff, building works. The results are very pleasing; with all faculties supplying detailed and considered responses, together with strategies and initiatives which will go towards improving the quality of the research higher degree student experience. There has been an overwhelming willingness on the part of stakeholders to share areas of best practice and identify opportunities for improvement.

> *The faculty also hopes that once the responses from faculties are received, a strategy is developed to share the concerns, ideas and best practice promoted by the faculties.*
>
> *Faculty of Agriculture, Food and Natural Resources: Response to SREQ report, 2011*

Faculties were also asked to suggest ways in which the usefulness of the reports might be improved. Interestingly, and contrary to expectations, proposed ideas centred on the wider interpretation of data, and the consequent increase in page numbers per report:

> *"The survey was a little disappointing in terms of interpretation of data. The tables were presented as though data could speak for themselves".*
>
> *Faculty of Arts: Response to SREQ report, 2011*

The value of the reports, in providing samples of students' comments is greatly appreciated, as they explain and expand on the quantitative results.

Further to the 'closing the loop' strategy outlined above, faculties were asked if they would make their responses to the SREQ reports available to all students and staff at the University. It is testament to the environment of mutual accountability that exists in the University that all 16 faculties agreed, and these reports are now available through the Institute for Teaching and Learning website at http://www.itl.usyd.edu.au/sreq/sreq_student.htm. In addition the Graduate Studies Office (GSO) collated all the information provided by faculties and published the resulting reports on the GSO website http://sydney.edu.au/graduate_studies_office/SREQ.shtml. These covered the main areas on which faculties were required to provide information:

- Overall response to the report.
- Strategies and initiatives to improve the student experience.
- Communicating strategies for disseminating the results to academic staff, students and administrative personnel.
- How the reports can be improved.

Informing strategic initiatives and policies

In late 2010, the Senior Executive Group Research Training Committee formed strategic working parties on Supervision and The Nature of the PhD, both areas high on the agendas of the DDOGS (2008) and the Dept of Innovation, Industry, Science and Research (DIISR, 2011). Preliminary information packages relating to the strategy under discussion were provided to members of the working groups. These packages included relevant survey item scores together with illustrative sample comments from the most recent SREQ. For example, the working group on supervision was supplied with information on all aspects of supervision: process, management of candidature, and supervisor-student relations; whilst the working group on the PhD was provided with information the quality of the degree, coursework and generic skills training. In this way, the student voice is included in, and informs, the strategic discussion process.

The University has identified a number of areas relating research training where reviews or changes to policies are required. These include supervision, skills development and training needs analysis, and the annual progress report system. All of these will be informed by data received through the SREQ and related student satisfaction surveys.

Correlation and validation of the student narrative

The application of data from subject specific surveys in improving the research higher degree student experience is a relatively new feature of the evaluation process at Sydney. Moreover, this data has been found to have correlation with and validation of the views expressed by respondents to the SREQ. During 2011, current supervisors were asked to provide information on the challenges and benefits of being a supervisor, and development activities which they considered were already in existence or should be considered for future provision. A number of respondents also commented on the qualities required for research higher degree students, and their need for skills development, data which correlated closely with that provided by respondents to the SREQ on what students required in relation to skills development and from their supervisors – an unsought validation of the importance of the student narrative. Student surveys of current and future learning space requirements across the university included the opinions of research higher degree as well as coursework students. Whilst the views of

coursework students related mostly to computer, power point and afterhours access, research higher degree students were concerned about the lack of individual desks and offices – again correlating and validating the observations of students who responded to the SREQ.

Shared values and concerns

Moves towards the construct of a virtual college for research higher degree students by the Student Services area were informed by the inclusion of comments on research climate taken from both the SREQ and the learning spaces review conducted in 2011 by Sydney eLearning and Learning Space. The presence of staff from the Graduate Studies Office at initial discussion on the virtual college, and their involvement in the learning space review made possible the use of the student narrative in informing this initiative. This virtual colleges project is designed to ascertain feasibility of developing a Virtual colleges model at the University, as a potential mechanism to link non-residential, or commuter students, to a cohort of fellow students and staff to enhance sense of belonging to the University, develop common study activities and to scaffold interfaculty/inter disciplinary dialogue and exchange.

Similarly, the development of a new pan-faculty research higher degree space at the University, managed by the Graduate Studies Office, has been informed by data from the infrastructure section of the SREQ and comments from research higher degree students in the learning space survey.

Conclusion

In conclusion, it is essential that the custodians of the databank of student narratives ensure that this valuable resource is used in the analysis, evaluating and reporting of the student experience to all stakeholders. The circle of stakeholders should be cast as wide as possible to include academics, professional staff and students, all of whom should be involved in 'closing the loop' to guarantee that the student voice is disseminated as widely as possible, and that they are not writing in vain. Custodians should:

- Be alert for areas where the student narrative can be used to improve the quality of their research training experience.
- Remember that the student narrative is an invaluable source of data on the quality of research higher degree training; including supervision, climate, infrastructure, skills development and overall satisfaction.
- Respond and be prepared to provide stakeholders with evidence to inform strategies and initiatives relating to research training and the research higher degree student experience
- Be the guardian of the student voice, and ensure that these narratives are made use of whenever the opportunity arises.
- If all of the above are followed, then students will be encouraged to provide observations on their experiences, through student satisfaction and related surveys, because they will have proof that they are being heard and their feedback is being acted upon.

References

Department of Innovation, Industry, Science and Innovation (2011). Research skills for an innovative future: a research workforce strategy to cover the decade to 2020 and beyond. Canberra, Australia: DIISR

Group of Eight (2008). Go8 higher degree by research training: a report on the outcomes of a planning workshop held on 6 March 2008 at the University of New South Wales. An initiative of the Deans and Directors of Graduate Studies of the Group of Eight Universities. Turner, ACT: The Group of Eight Ltd

Palermo, J. (2003). 20 years on – have student evaluations made a difference? Proceedings of the Australian Universities Quality Forum 2003 p 136-140

Palermo, J. (2004). Closing the loop on student evaluations. Paper presented at the 2004 AAIR Forum, Hobart, Australia. Retrieved from http://www.aair.org.au/pages/forum-2004

Poindexter, M (2006) Are colleges listening to students? Connection, New England's Journal of Higher Education 20:4, p19-20

Richardson, A. (2003). Qualitative analysis of graduate comment and the development of course domains. Paper presented at the Joint AARE/NZARE Conference at Auckland 29 November to 3 December 2003

Scott, G. (2000) Assuring quality and effective change management in international higher education. Retrieved from http://www.uws.edu.au/__data/assets/pdf_file/0003/7176/NAAFSA_Full_Paper_GS__04.pdf

Scott, G. (2006). Accessing the student voice: using CEQuery to identify what retains and promotes engagement in productive learning in Australian higher education. Canberra: DEST, 2006

Symons, R. (2007). Taxonomy evolution: the changing face of reporting the student experience at the University of Sydney. Paper presented at the 2007 Evaluation Forum, Brisbane, 27-28 November

Symons, R (2008). Analysing, evaluating and reporting on the student experience at the University of Sydney: responding to the changing demands of stakeholders Society for Research into Higher Education Conference, Liverpool, UK. 3-5 December.

Symons, R. (2011). Closing the loop: disseminating results and reports from the Student Research Experience Questionnaire (SREQ). Sydney, Australia: University of Sydney, Graduate Studies Office.

Symons, R (2012) Developing a framework for recording and reporting the narrative of the research higher degree student. Paper presented at the Quality of Postgraduate Research Conference, Adelaide, SA

University of Sydney (2011) 2011 – 2015 Strategic Plan. Sydney: University of Sydney.

Watson, S. (2003.) Closing the feedback loop: ensuring effective action from student feedback. Tertiary education and management 9:145-157

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Extended Abstracts

‘Writing has changed my life’: becoming a research writer

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Doctoral writing is a complex task in which students need support provided by a range of resources, namely advice books and doctoral education programs. While these resources can be useful in making the requirements of doctoral writing explicit, the activity of research writing also involves identity work as students align within disciplinary social practices (Kamler & Thomson 2008). Addressing this complexity in doctoral writing has become a key focus for doctoral education programs. A variety of writing programs, including the Writers’ circle movement led in Australia by Claire Aitchison (2010), have significantly changed the way in which writing is taught to doctoral students as students engage with the process of peer review of written drafts. This movement has included the establishment of Writers’ circles for doctoral students for whom English in as Additional Language (EAL). While increasingly researchers are capturing the ways in which these groups operate, but fewer have examined the impact of such groups on EAL doctoral students (for an exception, see Carlino 2012). The focus of this presentation is to elucidate the role and impact of EAL Writers’ circles principally from a narrative from a student perspective. The paper underscores the powerful identity work which can occur within and beyond such groups as students navigate the terrain of commencing as an apprentice researcher and continuing to the stage of being doctored.

The student, Nesrine, was a trained medical doctor when she emigrated from Egypt to Australia with her family in 1990. Despite having studied English since being a 12 year old and having studied her first degree in English, coming to Australia challenged her. Initially she undertook TAFE English for professional courses to have her medical certificate recognised, nevertheless she could not attain the license to practice medicine in Australia. Despite her knowledge of English, people tended to ignore her and would rather to her family ‘as if you will not be able to talk the same language’. Such experiences undermined here confidence and made her shy to speak and engage in English. Within the family too, overtime the children would not ask her for assistance with homework because they did not believe her English was good enough. Similarly, her husband would ask the children for assistance. Overtime, Nesrine said she felt ‘disabled to be part in the life I am living and not part of my sons’ and husband’s life anymore’. She did not think about a solution, as she did not even imagine there was one.

Once her three sons started university, Nesrine commenced a Bachelor of Laboratory Medicine. When studying she was hesitant to ask questions in lectures, practicals or tutorials so she did not sound silly and was reluctant to participate in conversations with peers. Even if she had a good idea or the correct answer, she would never have the courage to talk. Despite these obstacles, Nesrine graduated with Honours and was awarded a PhD scholarship.

At the commencement of the candidature, her supervisors advised her she needed assistance with her English. Reluctantly she attended a Writers’ circle, not expecting to learn much based on her previous experiences of learning English. Surprisingly, the experience became life changing for her. Not only was the facilitator, Monica, welcoming she reassured students with research writing, despite it being a hard process. She was with a group of fellow EAL students, starting a PhD degree feeling very nervous, confused and worried about writing their research proposals in English. However, in Nesrine’s words, ‘finally, and for the first time in years, I did not feel different or disabled, I am surrounded with very intelligent people who all have the same difficulty: English is not our first language’.

Through a writing activity in the writing group, she was able to write and did not want to stop. She felt her project and knew her project and wanted to tell the whole world about it. She started to feel happy with writing. Overtime, Nesrine said: 'Suddenly I fall in love with this language; I can feel it and can talk and speak my feeling. It is as if I learnt the ABC in research writing'. In the writing groups, Nesrine became increasingly confident and willing to support and encourage new peers in their writing too. With this growing sense of self as a research writer, she became more confident and believed in herself. She could talk with all fellow PhD candidates and not be embarrassed, could discuss with her supervisors arguing her points, ask questions and participate in normal everyday conversations, and is demonstrating in Year 1–4 Medical Laboratory Sciences.

In parallel, the family situation changed too. Her sons asked for assistance with university assignments and were impressed with their mother's suggestions. Her sons are proud of their mother who is trying to find a cure for cancer. Her husband now is asking her advice for job applications. Significantly, at the personal level, she recently gave a speech in English at her son's wedding. She and the mother-of-the-bride, an EAL woman with little confidence in speaking, prepared a script to be read on their behalf. However, with new found determination Nesrine found her voice and did not want others to talk on her behalf. Her life changed that moment as she could write and talk and even helped someone else do was she was always afraid to do. Now she is no longer embarrassed about writing and speaking, neither are her family embarrassed on her behalf.

This account of a transformation through the growing confidence in use of English, particularly for research writing, highlights how the emerging confidence as a research writer can influence the supervisory relationship, interactions with research peers and family members—in other words, recognising that 'writing has changed my life'. Of significance is the insight into how the impact of the writing group had positive repercussions on the student's sense of self and relationships outside the group. For Nesrine, 'writing has changed my life. It has given me my life back with people, colleagues and most importantly my family'. She is also becoming a successful researcher, as more recently she received review comments from a journal article acknowledging that her research has 'tremendous value'. This presentation has provided just one student's story. More doctoral student voices need to be heard to learn more about the powerful identity work which occurs within groups and how this in turn can influence the ways in which doctoral education in conceptualised and implemented.

References

Aitchison, C 2010, 'Learning together to publish: writing group pedagogies for doctoral publishing', in Aitchison, C, Kamler, B & Lee, A (eds), Publishing pedagogies for the doctorate and beyond, Routledge, London, pp. 83-100.

Carlino, P 2012, 'Chapter 12 Helping doctoral students in Education to face writing and emotional challenges in identity transition', in M Castelló, C Donahue (eds) 'University writing: selves and texts in academic societies', Studies in Writing, vol. 24, pp. 217–234. Kamler, B & Thomson, P 2008, 'The failure of dissertation advice books: toward alternative pedagogies for doctoral writing', Educational Researcher, vol. 37, no. 8, pp. 507–514.

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Tensions in Collaborative Research: A Critical Analysis

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This paper critically and reflexively deconstructs this early-career researcher's journey of struggle to examine ethnographic data generated within a collaborative PhD project (Luke & Gore, 1992; Carspecken, 1996; Hertz, 1997; Kincheloe & McLaren, 2007). I examine tensions experienced when engaging in collaborative research with participants (Cochran-Smith & Lytle, 1993) whose (diverse) research focus was regulated and negotiated by and within their own institutional 'fields' (Bourdieu, 1977)[1]. I reflect on the participants' habitus: their powerful learnt ways of being, knowing and doing in a classroom and my own (university) research activity (ibid). I share my transition from dominant stances on knowing, collaboration and research, to more critical, constructionist and postmodernist standpoints which understand research as inter-subjectively constructed social practice (Munroe, 1998). Drawing on participant data from a qualitative study undertaken in a Spanish classroom in a South Australian secondary school context, I explore connections between participant practices, interactions and writings.

Why have a dialogue about tensions?

There is a growing dialogue about tensions that frame collaborations of multiple types in research (Ward & Tikunoff, 1992; Smith, Sydall & Taylor, 2004; Christianakis 2010). In my review of school-based studies in the fields of languages teaching and motivation (prior to 2005), I encountered, as have others, largely generic descriptions of how to collaborate and researcher-identified difficulties experienced (Brown & Strega, 2005; Ritchie & Rigano, 2007). The one-sided accounts referred to a lack of resources and to the time-consuming process of reaching 'common' goals with multiple parties. Studies that involved students, teachers and researchers often detoured interpretive analyses of participant-researcher relations, especially in studies not labelled as collaborative, participatory or action research. Researcher 'reports' post-collaboration rarely made public their participants' critical reflections on 'their' experiences of collaboration. Reports of collaboration break-down were scarce. I suggest these 'mysteries' have obvious explanations, based on institutionalised practices in place today. I note these silences as barriers to the production of socially relevant praxis, as Philips suggests (2011).

How do institutional/cultural dynamics 'bind' PhD collaboration?

The organic tensions and contested issues that arose in collaborations which took place during 'my' critical ethnographic mixed methods case-study project; a PhD study designed for and unfortunately not with the participants it intended to serve, exposed a web of rich and complex relations. My perhaps naïve decision to pre-plan and prescribe in detail aspects of collaboration (via the official requests to produce a proposal, ethics applications and informed consent procedures which were approved) unintentionally inscribed particular positionings of participants' bodies. My design predetermined the social problems, concerns and aims 'for' participants, an effect of academic and institutional regulations. This generated a critical contradiction for a project pursuing an inductive dialogical approach and an emancipatory agenda.

Paulo Freire (in Hall 1992, p. 269) warned researchers of the oppressive potential of treating participants as the "passive objects" of study. He argued that participants be invited to be dialogically involved in all areas of research (and be free to resist participating) (ibid). Strega & Brown (2005) propose the sharing of ownership over the research and its products to engage in anti-oppressive and ethical collaborations. I question whether these 'utopian' lenses can be married without serious challenges to gatekeepers' expectations of PhD student researchers as individuals who advance knowledge and become experts

[1] *I use single quotes to promote the questioning of a term's multiple meanings.*

(Phillips & Pugh, 1987). I question whether the historic academic and scientific culture of the PhD, with its focus on knowledge advancement, is amenable to the multiplicities, pluralities and differences of educational communities or their members' evaluations of a PhD's contributions (Potter, 2000). Finally, I question whether theorised accounts acknowledge the non-unidirectional power struggles in circulation and that emerge unexpectedly in negotiations for making meaning and negotiating action with participants. From the idealised and sanitised researcher accounts, how do early-career researchers 'prepare' (to some extent) for ethical dilemmas, respond to challenging situations, come to understand hidden structures and the multiple vulnerabilities these create for everyone involved. This brief look at constraints on my project's participant-researcher collaborations, alerts us to differentials constructed not only by the official habitus. I could say more about the 'typical' informed consent process and whom it genuinely protects by being conducted at the commencement of researcher activity. My focus on relations and process only hints at an array of epistemic tensions played out in my study undertaken in cross-institutional fields (the university, school and classroom).

In what ways can institutional practices in PhDs support 'collaboration'?

PhD research practice can be more than an intellectual exercise and its reports can go beyond a mainstream approach to signpost technical and administrative tensions disguised under the heading limitations, by exploring critically 'all' participants' multiple and contested perspectives and practices throughout collaborations in the field. I suggest we broaden our conceptualisations of 'participant' to include all parties involved in shaping the ways PhD students conduct research as guided apprentices. If published research is to 'empower' early-career researchers, it needs to be transparent about the political meaning-making processes in use while being reflexive about power. A critical reflexivity in social research is critical to transformative learning and change.

References

Bourdieu, P. (1977) Cultural Reproduction and Social Reproduction. In: Karabel, J., & Halsey, A. H. (Eds.) Power and Ideology in Education. New York: Oxford University Press.

Brown, L., & Strega, S. (Eds). (2005) Research as Resistance: Critical, Indigenous and Anti-Oppressive Approaches. Toronto: Canadian Scholars' Press.

Carspecken, P. F. (1996) Critical Ethnography in Educational Research; A Theoretical and Practical Guide. New York and London: Routledge.

Cochran-Smith, M., & Lytle, S. L. (1993) Inside/outside: Teacher research and knowledge. New York: Teachers College Press.

Christianakis, M. (2010) "Collaborative Research and Teacher Education". Issues in Teacher Education. Vol 19 (2), pp. 109-125.

Freire, P., in Hall, B., Gillette, A., & Tandon, R. (1982). "Creating Knowledge: A monopoly?". Society for participatory research in Asia. New Delhi, pp. 29-37.

Hertz, R. (1997) Reflexivity and Voice. California: Sage.

Luke, C., & Gore, J. (1992) Feminisms and Critical Pedagogy. USA: Routledge.

McLaren, P., & Kincheloe, J. (Eds). (2007) Critical Pedagogy: Where are we now? New York: Peter Lang.

Munro, P. (1998) From Subject to Fiction: Women teacher's life history narratives and the cultural politics of resistance. Philadelphia: Open University Press.

Phillips, E., M. & Pugh, D, S. (1987) How to get a PhD: A handbook for students and their supervisors. England: Oxford University Press.

Phillips, L. J (2011) "Analysing the dialogic turn in the communication of research-based knowledge: An exploration of the tensions in collaborative research. Public Understanding of Science. Vol. 20 (1), pp. 80-100.

Potter, G., (1998) "Collaborative critical reflection and interpretation in qualitative research" Paper presented at the national conference of the Australian Association for Research in Education Adelaide, SA, November 28-December 3.

Ritchie, S. M. & Rigano, D. L. (2007) "Solidarity through collaborative research". International Journal of Qualitative Studies in Education. Vol 20 (2), pp. 129-150.

Smith, R., Syddall, L. & Taylor, R. (2005) "Leading from theory into practice: Fostering a collaborative research partnership with academic-practitioners". New Zealand Journal of Educational Leadership. Vol 20 (1) pp. 29-45.

Ward, B., & Tikunoff, W. (1982) "Collaborative Research" Paper presented at the National Invitational Conference, "Research on Teaching: Implications for Practice", Warrenton, VA, February 25-27. Washington, DC: National Institute of Education.

Supervisor qualities in the doctoral supervisory relationship: the tacit dimension

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Well-documented issues regarding the doctoral supervisory experience remain evident after three decades of empirical and conceptual research aimed at improvement in practice. More recent researchers, such as Walker, Golde, Jones, Bueschel & Hutchings (2008), Wisker (2005) and Wisker, Exley, Antoniou, & Ridley (2008), speculate that supervision fails to meet the desired expectations of and outcomes for candidates, for many reasons, including a lack of supervisory purpose, skills and a natural ability to work one-to-one with candidates. Where supervision fails to meet expectations, an effective intellectual and affective rapport cannot develop as it should. Walker et al. (2008, p. 99) in a longitudinal study observed that supervisory skills are not innate: that providing productive supervision should not be a matter of chemistry between people or luck, but rather "involves techniques that can be learned" and should be systematically built into the organizational culture through training and development.

A typical response at Australian universities appears to have been the proliferation of mandatory institutional training programs for doctoral supervisors and a widespread mandate within institutions for the appointment of supervisory teams. Typical training programs cover key areas of responsibility, such as institutional policies and protocols, supervisory roles and administrative requirements and responsibilities, and well as discussion about the supervisor-candidate relationship. These elements are widely acknowledged in the international literature as key to successful doctoral outcomes.

While researchers such as Kiley (2011) and Grant (2003) have foregrounded personal relationship skills in the complex, layered and productive power relatonship between supervisor and candidate, a review of recent literature on the supervisory relationship reveals that the primary focus is on 'what to do' in supervision. For example, in the ALTC Final Report (2010, p 95) on building supervisor practice, the researchers ask participants "What are the qualities of a good supervisor? i.e. what does a good supervisor need to know and what do they need to do?" In existential terms, for knowledge experts such as supervisors, the focus is on what they know and on their actions. Actions are where expertise can be demonstrated (Spinelli, 2005). However, we note that there is scant explicit attention given to the tacit dimension (Polyani, 1966) of 'how to be' in the supervisory relationship. We argue that the challenge for supervisors is to reconsider their expertise from the point of view of being: how their actions are experienced and interpreted by their candidates. Supervisory expertise is underpinned by supervisors' awareness of 'how am I being perceived by my candidate?'

In this paper, we suggest a new focus for research on supervisory relationships: that of interrogating the tacit qualities within the relationship such as, attentiveness, easefulness, empathy, appreciation, challenging intellectually, and continuous encouragement that effective supervisors intentionally and/or intuitively employ in productive relationships with their candidates. Parry (2007) points out that much of doctoral knowledge and learning is tacit (and often unconscious) and so too are these qualities of being in supervisory relationships. In addition to what happens explicitly in the supervisory relationship, there are unspoken or tacit cues embedded in people's behaviour that regulate the tenor of the relationship, as well as transmitting social and cognitive mores pivotal to knowledge-making within particular knowledge specialisms. Although the supervisor's tacit qualities are not verbally articulated, they can be perceived and felt. Further, individuals are well able to describe their experience of them. The values of the supervisor, which underpin their attitudes towards the candidate,

produce an 'internal climate' (Rogers, 1961) that is externally, but tacitly perceived by the candidate. This climate provides a critical space for the candidate that encourages their independent thinking, feeling and insight to take place, and as Henkel (2000) argues, for intellectual identity to develop.

Rogers (1961) describes four core conditions that need to be internally in place in the facilitator if an effective facilitating relationship is to develop: congruence is the ability to be exactly what he or she is, real, transparent and free of defences, present and without roles, posturing or facades; unconditional positive regard is to be non-judgmental and experience a warm, positive and accepting attitude towards what is in the client and regardless of what they think or feel about the client's behaviour, they never implicitly or explicitly threaten to take this attitude away; accurate empathy means to understand the client's world as seen from the inside, grasping the client's frame of reference, experience and feeling, what they mean, so that their remarks fit in with the client's mood and content, the tone of voice conveys the complete ability to share the client's feelings in order to develop the required relationship; finally, it is not enough that the above conditions exist in the facilitator, they must to some degree be successfully communicated to the client, they must be perceived by the client.

The facilitator who can consistently create these conditions needs to be a 'psychologically mature person'. In other words, the degree to which you can create a relationship that facilitates the learning and growth of others is a measure of the growth you have achieved in yourself. This is a disturbing thought but also a promising and challenging one. It would indicate that if you are interested in creating facilitating relationships then you have a fascinating life long journey ahead of you, of stretching and developing your potentialities in the direction of growth. (Rogers, 1961, p 56).

New ways of being for supervisors require changes in values and the development of inner attitudes or qualities that are conducive to effective supervisory relationships and new knowledge outcomes. We argue for recognition of certain attitudes and tacit qualities in effective supervisors, characterized by equality, ease, attention, encouragement, empathy, that are the conditions for mutually respectful relationships to develop. When these attitudes are consistently present then trust; reciprocity, co-creation and a sense of collegiality emerges. We show how supervisor qualities can enrich doctoral candidates' knowledge-making experiences and potentially affect doctoral outcomes.

Our view is that notions of supervisory expertise must be deconstructed in order for a productive inner climate to be built so that the values and attitudes deriving from apprenticeship pedagogy can be articulated, understood and also learned.

References

ALTC Final Report (2010). Building research supervision and training across Australian universities. ALTC.

Grant, B. (2003). Mapping the pleasures and risks of supervision. Discourse: studies in the cultural politics of education 24(2): 175-190.

Henkel, M. (2000) Academic identities and policy change in higher education. London: Jessica Kingsley.

Kiley, M. (2011). The Australian National University: Paper presented at the AERA annual conference, 8-12 April 2011, New Orleans, US.

Parry, S. (2007). Disciplines and doctorates. Springer.

Polyani. M. (1966) The tacit dimension. Doubleday & Company, Inc.

Rogers, C (1961). On becoming a person. Boston: Houghton Mifflin.

Spinelli, E. (2005). The Interpreted World: An introduction to phenomenological psychology. 2nd edition. London: Sage Publications.

Walker, G.E., Golde, C.M., Jones, L., Bueschel, A.C. & Hutchings, P. (2008). The formation of scholars: Rethinking doctoral education for the twenty-first century. The Carnegie Foundation for the advancement of teaching. San Francisco, CA: Jossey-Bass.

Wisker, G. (2005). The good supervisor: Supervising postgraduate and undergraduate research for doctoral theses and dissertations. Palgrave Macmillan.

Wisker, G., Exley, K., Antoniou, M. & Ridley, P. (2008). Working one-to-one with students: Supervising, coaching, mentoring, and personal tutoring. New York/UK: Routledge.

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Risky Business: managing creative practice postgraduates

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In Australia, as elsewhere, universities are being encouraged to grow their postgraduate research candidature base while at the same time there is increasing pressure on resources with which to manage the burgeoning groups. In this environment HDR supervision strategies are seen as increasingly important as research managers seek the best possible 'fit' for an applicant: the candidate who will provide a sound return on investment and demonstrate endurance in the pursuit of a timely completion.

As research managers know, the admissions process can be a risky business. The process may be tested further in the context of the new models of doctoral cohort supervision that are being discussed in the higher degree research management sector. The focus of this paper is an examination of the results of investigations of two models of postgraduate cohort supervision in the creative arts Master of Arts research program at QUT with a view to identifying attributes that may be useful for the formation of cohort models of supervision in the doctoral area.

Research in the creative arts sector is important because of the strong growth in postgraduate programs nationally and the highly diversified nature of the research undertaken. The 2009 ALTC project 'Future-Proofing the Creative Arts in Higher Education: Scoping for Quality in Creative Arts doctoral programs' led by Su Baker (VCA/ University of Melbourne) and Brad Buckley (the University of Sydney) pointed to the dramatic growth in the area of creative arts, with a tenfold increase in enrolments in the doctoral program alone from 1989-2007. By 2007 programs reached across 30 institutions in Australia.

The ALTC research identified the need for scrutiny of the admissions process and the results of a survey of supervisors from the QUT Creative Industries Faculty Master of Arts cohorts between 2004-2007, all of which were practice-led, supports the ALTC call for strong scrutiny. A study of cohorts in Youth Writing, Romance Writing, Playwrighting, Speculative Fiction Writing, Film and Television and Scriptwriting found that the cohorts displayed a mix of positive and negative attributes and that supervisors felt many of the negative aspects encountered could be minimized and managed in future cohorts with tighter controls around student eligibility and admission. The interview data revealed a need for a developed admissions process that did not rush supervision issues.

Bearing the 2004-2007 data in mind a different approach was taken with a 2010 plan in the Creative Industries Faculty for a practice-led interdisciplinary cohort focussed on radical art practices. Mindful of the admission issues, prospective candidates were asked to respond to specific entry criteria in relation to enrolling in an academic program that also required meeting expectations of challenging creative work in diverse locations – work that often took the candidates outside of the formal academic program. The candidates identified foremost as independent artists but they were keen to explore the intellectual challenge of an MA program. The aim was to provide a flow between cutting edge and collaborative creative work and scholarly delivery.

The resulting admission process was longer, more intensive, with a strong focus on the personal goals and lifestyles of the candidates and the development of further milestones and activities. In this paper I argue that the Creative Industries approach seems to connect with Lynn

McAlpine's ideas about the importance of developing the 'identity-trajectory' of a candidate. In a paper titled 'Identity-trajectories: doctoral journeys from past to present to future,' published this year, McAlpine argues that the admission process needs to consider the 'identity-trajectory' of the student, that is the way in which academic expectations are 'nested' within the personal and incorporate students' pasts as well as imagined futures.

This wider, relationship-focussed, admissions process might be fruitful in the doctoral context, especially if the cohort model is taken up more widely. In the 2010 QUT cohort experience, the longer conversation about intention and identity helped identify the level of independence of each applicant and indicated that a 'bespoke' approach to admission was necessary, particularly given the independence and collaboration expected of each candidate in the cohort. A similar set of ideas is identified in the paper "Pedagogies of Industry Partnership" by Barbara Adkins, Jennifer Summerville, Susan Danby and Judy Matthews in relation to industry partnerships. The analysis of the Master of Arts cohorts mentioned above in relation to disciplinary, interdisciplinary and industry expectations points to a way forward for re-considering the admission processes of creative arts cohorts in the doctoral arena.

References

Lynne McAlpine, "Identity-Trajectories: doctoral journeys from past to present to future" in Australian Universities Review, 54 (1) 2012 pp 38-46, p. 43.

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Ethical Reflexivity in Postgraduate Research Supervision: Exploring Online Support

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Aim

This project was designed to explore the relevance of online support for doctoral thesis supervisors regarding the most difficult ethical concerns for practice, such as pastoral care for physiological or emotional problems and severe timing, language and financial constraints. This was considered for both domestic and international candidates in Aotearoa New Zealand.

Background

Much research on supervision has focussed on pedagogical, achievement or learning support aspects of supervision. There has been less research attention given to complex emotional and motivational difficulties that affect candidates' progress, though there have been attempts to map the normative trajectory of emotions experienced through the research journey (Morrison-Saunders, Moore, Hughes & Newsome, 2010). The present research used a qualitative paradigm to expand on studies of supervisors' reflections on their own practice. Rather than focus on beginning supervisors (e.g., Manathunga, Peseta & McCormack, 2010), the current research explored senior supervisors' reflexive views-- across their supervision careers-- of ethically challenging situations such as severe personal and financial difficulties faced by postgraduate researchers.

Research question: In what ways could an online reflexive discussion forum assist thesis supervisors towards more insight about supervision as an ethical professional practice and towards problem-solving to support specific difficulties faced by many thesis students during their doctoral studies?

Methodology

While individual reflection is often seen as a goal of good professional practice, reflexivity requires open-ended exploration of supervisors' positionings (Cunliffe, 2004) across changes in their identities as academics in light of global trends, national policies and institutional constraints. Rather than reach conclusions about best practice, reflexive discussion aims to clarify principles and identify marginalised concerns often excluded from administrative oversight. Given constraints of time and geography for the participants, senior academic staff, an online forum discussion format was chosen for the method. While there are particular ethical issues that affect online research, the goal was to allow an ethic of respect (James & Busher, 2007) to guide the online research in both planning the research and in the forums themselves.

Methods

Participants: At least two senior academic staff from each of three New Zealand universities (N=8) chosen for having at least 5 years' supervision experience (actual experience was of over 100 years of supervision). Diversity of views included indigenous Maori and immigrant Australian, with the majority being born or raised in Aotearoa. Two members had extensive counselling and clinical supervision expertise.

Phase One: There was an initial one-day retreat between the authors and four participants representing all 3 participating universities. The group helped to construct ground rules, online protocols and initial ethical problems for the online forum. Each participant then recruited up to three others from their own institutions to join the online forum.

Phase Two: A closed online forum was created accessible to all through a university website (platform Moodle), initially for a two-month period. The online site was structured with introductory information where members could suggest threads for further discussion. The first author was the moderator for the site. Ethical procedures approved by Waikato University included consent for confidentiality in the use of texts of reconstructed past events abstracted from personal experience with details combined to remove identifying information about students or staff.

Initial Findings

Difficulties with the method included staff having limited time to join in the forum discussions. The asymmetrical nature of the discussion helped to smooth over gaps of time between contributions.

The transcriptions are currently being subjected to Foucauldian discursive analysis to explore themes such as contradictions between power, care and responsibility. The findings consider some of the more difficult matters affecting supervision such as emotional and mental health concerns as well as boundary issues in supervision that may be raised during a candidature. Online forums of this type have implications for supervision policies and practices in an era of huge expectations for doctoral education globally.

References

Cornforth, S. & Claiborne, L. Bird (2008). Supervision in educational contexts: Raising the stakes in a global world. Teaching in Higher Education, 13(6), 691-701.

Cunliffe, A.L. (2004). On becoming a critically reflexive practitioner. Journal of Management Education, 28(4), 407-426.

James, N. & Busher, H. (2007) Ethical issues in online educational research: Protecting privacy, establishing authenticity in email interviewing. International Journal of Research & Method in Education, 30(1), 101-113.

Manathunga, C., Peseta, T. & McCormick, C. (2010). Supervisor development through creative approaches to writing. International Journal for Academic Development, 15(1), 33-46.

Morrison-Saunders, A., Moore, S.A., Hughes, M. & Newsome, D. (2010). Coming to terms with research practice: Riding the emotional rollercoaster of doctoral research studies. In M. Walker & P. Thomson (Eds), The Routledge doctoral supervisor's companion: Supporting effective research in education and the social sciences (pp. 206-218). London: Routledge.

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Supporting Reflective Practitioners: The Graduate Certificate in Advanced Learning and Leadership (GCALL)

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Since 2009, the University of Melbourne has offered the Graduate Certificate in Advanced Learning and Leadership (GCALL). The GCALL is a for-award course designed and developed specifically for doctoral candidates to enhance their skills in leadership, communication, and interdisciplinary team-based problem solving. The program is a first in Australian universities, devised partly in response to post-university career destination surveys of doctoral graduates who voiced the lack of leadership training in graduate research degrees, and partly as the university's recognition of the contribution its doctoral graduates will make to the global future.

The GCALL is designed to be taken concurrent to students' existing research program. The GCALL is highly interdisciplinary in content and methodology, and engages PhD students as a specific cohort within the university, with unique characteristics, skills, and approaches to problem solving. The course consists of two subjects: Ethical Leadership is an introduction to the histories and philosophies of leadership that brings each into a sharp contemporary focus, while The Futures Project allows small project teams to develop interdisciplinary solutions to real world problems.

Developing and delivering a coursework program for PhD students that adds genuine value to their research program is not easy, and coursework itself is usually seen as antithetical to the experience of PhD research in the Australian university context. Nonetheless, we have already seen significant advantages to this model, when tailored specifically for the doctoral cohort, and that profound learning outcomes are not only possible, but probable.

As the 2011-2012 cohort is nearing the end of the course, now is a good time to evaluate where the program stands. This presentation aimed to take stock of the aims, pedagogy and motivating drivers of the GCALL.

Ethical Leadership

Ethical Leadership is the foundation subject of the GCALL. The subject is taught as a five-day residential intensive, in which students are given the opportunity to engage both with each other and with some of today's most formidable thinkers on the dynamics of leadership. The intensive is structured in two ways. First, a group of expert guest speakers and moderators who have significant leadership experience and can speak about the nature of leadership from their particular field of expertise are brought in from across a range of sectors. Secondly, students each facilitate seminars and workshops on a particular aspect of leadership using a selection of key texts. Topics include: disciplinary power and leadership, the appeal of sovereign power, leadership in opposition, wisdom, failure, the ethics of influence, and more. Students are required to prepare by engaging with a range of classical thinkers on the nature of leadership, such as Plato, Aristotle, Machiavelli, Foucault, and Martin Luther King, as well as more contemporary thinkers, such as Peter Singer, Marcia Langton, Geoffrey Robinson, and others.

Philosophical in tone, Ethical Leadership aims to get students, already working at the forefront of their discipline, to interrogate the idea that leadership can and should be an ethical undertaking, across all disciplinary areas.

The Futures Project

In The Futures Project, the GCALL cohort is broken into interdisciplinary syndicate teams of five to six students each. Each team is paired with a partner organisation (either an internal university research institute, or an external non-profit organisation) to develop a practical project in response to a particular issue that the organisation wants to know more about. At the beginning of the subject, student teams are each presented with a range of project briefs, and they nominate which project they want to develop over the semester. Problems tend to be complex, yet scalable, and all require an interdisciplinary response. Working to this brief, teams need to negotiate and collaborate among themselves, with support from staff, and present a 'project portfolio' at the end of the semester in which they demonstrate their findings from the project, along with an explanation of the team processes and strategies they employed to get there.

Practical in tone, The Futures Project aims to give students an opportunity on a small scale to put the ideas of Ethical Leadership into action, by giving them an experiential sense of how their individual research strengths can contribute to a diverse multi-disciplinary project team that is attacking a real-world problem, in which no team member is the 'expert'.

Pedagogic drivers and advantages of the GCALL

Rather than a 'leadership 101' program, the GCALL focuses on reflective practice of doctoral students as much as transferable skill development. As one previous student has said, the learning undertaken aims to 'maximise the intellectual resources of the group.' Current and previous students of the GCALL have commented that the design of the curriculum is not didactic, they do not have experts merely 'push' information at them. We consciously attempt a Socratic method of dialogue, whereby students reflect on and engage with the strengths and skills they already have as a result of doctoral study, even if they are not aware of them yet, as they teach and learn from each other.

One of the central emphases of the GCALL is empowerment. Fundamentally, we want students to be more closely in touch with their own strengths and qualities as emerging and early career researchers. Hence the stress we place on the importance of reflective practice as a key element of both the curriculum design and assessment. This can be a highly effective method for students to sharpen the intellectual and professional tools developed during doctoral research.

Often, PhD research is primarily concerned with the content of the research and the thesis, as it must be for the research itself to be a successful endeavour – a necessarily sustained enquiry into a complex area of human knowledge. We also need to engage students with the skills and attributes they develop whilst they are focused on that subject matter that can be applied elsewhere. One powerful way to do this is to assemble an interdisciplinary cohort of PhD students and encourage them to collaborate in meaningful ways. Almost immediately, the discussion of disciplinary specifics recedes, and what emerges instead is the way they think about problems, the way they understand society, governance, and the 'bigger picture' of where their scholarly enquiries fit in today, and can be strategically directed post-graduation.

There is an enormous value in this type of conversation pedagogically, in that it broadens their horizons and stretches them intellectually. More importantly, it also gives PhD students an insight into the attributes they have in common across disciplinary lines, and thus get an experiential sense of the doctoral attributes they are developing, with which universities say they should be graduating. Those same attributes are critical when, again, graduates establish their post-PhD careers. Finally, the course allows them to develop a powerful network of interdisciplinary peers. These are a self-selecting group of high achievers. There is great future value to a student in being able to draw on the expertise of their former GCALL colleagues working at the forefront of discipline areas very different to their own.

Challenges

As hinted above earlier, there are some significant challenges that accompany an offering like the GCALL. PhD students already carry heavy workloads and have very busy schedules. Many are reluctant to commit to a concurrent coursework program. Supervisors can be similarly wary. The onus is clearly on us to design a program that will be well integrated to their existing doctoral study without merely adding another burden.

We are about to complete our third GCALL cohort, and as yet, we do not have a set of robust, long term data that can point to improved employment or completion outcomes for PhD students who take the GCALL. Even if we did, it would be questionable whether this self-selecting cohort would have been more likely to achieve those outcomes regardless.

Nonetheless, the clear message from all of the evaluation and feedback data we receive following all the major teaching periods in the GCALL (including the standard Student Experience Survey, administered at all levels of university coursework) is that, rather than distract or disrupt their PhD progress, the GCALL in fact re-energizes and re-engages students, as they feel they have a better understanding of where a PhD can take them after graduation, and intellectually where their research 'fits in' with what their peers in other parts of the university are doing.

Finally, it would be desirable to know more about the expectations of the employers of our graduating PhD students, and gain a measurable sense of how what we emphasise in the GCALL can meet those expectations. One of the most difficult aspects of understanding graduate employment destinations is knowing just what it is that employers expect from PhD graduates, and the extent to which universities can influence those expectations.

Overall, however, what we do know from our own evaluation cycles is that the students who have undertaken and completed the GCALL have been immensely enthusiastic, empowered and inspired by the opportunity to think more broadly about themselves as emerging researchers, and the partnerships they can forge with their peers across the university. These students feel confident in their own skills and abilities, and are particularly confident in the knowledge that they are highly relevant outside of their specific thesis topic.

What have we learned so far?

We have learned that despite the 'siloisation' and vast array of research areas and disciplines that PhD students pursue, they have much in common when a group of them is assembled and given new challenges to address together. We have learned that interdisciplinarity and high academic achievement in a program like this is possible and likely, given a positive, constructive adult learning environment. We have learned that it is educationally desirable to gear the

assessment criteria to give students not only a better understanding of themselves as emerging researchers, but also to professional learning criteria, (the broader world of ‘work’.)

An intangible that we want to better understand is the empowering effect a program like this has on the students’ sense of their own abilities.

Overall, this presentation examined the ways in which we see this as a way to better ‘place’ out PhD researchers within a global research employment environment, as well as a mechanism for leadership development that engages PhD students as a specific cohort. For many of the students themselves, especially those approaching the end of their degrees, it has clarified in their minds their future career directions, whether this is within or beyond the academy.

Doctoral Graduates' Experiences of Publication during Candidature

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This paper presents data from a recent study entitled, Australian doctoral graduates' publication and community outcomes', and funded under the ARC Discovery Program. This project investigated the relationships between doctoral graduates in 1998, 2004 and 2006 and their publication and dissemination from their doctoral research and theses, and their doctoral-influenced contributions to their professional work and the community generally. It compared disciplines and features, such as, location and gender. The project had three main phases: 1) a bibliometric collection and analysis of samples by selected year of Australian PhD graduates' publications; 2) a survey of a subsample from each year; and 3) interviews with a further subset from 2).

The research used multi-level qualitative and qualitative methods to investigate the relationships between doctoral graduates' time since completion (two, four and ten years) and their doctoral outcomes—in terms of their publications and their professional and community contributions. The project drew on the Database of Australian Doctorates (DAD)—a coded data-base of over 85,000

Australian PhD theses developed from a prototype, (see Macauley, Evans, Pearson & Tregenza, 2005). This database was used to identify Australian doctoral graduates from 1998, 2004 and 2006 from five selected Broad Fields of Study including: Creative and Performing Arts, Education, Information Technology, Natural and Physical Sciences and Society and Culture. The web-based questionnaire was developed and implemented to seek the graduates' details of their publication outcomes and their doctoral-influenced contributions to their professional work and the community. Potential survey respondents were contacted individually by email and provided with details of the project and their individual publication records determined from the bibliometric and web research. This approach elicited a total of 585 responses across 1998, 2004 and 2006.

In this paper we focus on data collected from the second and third phases and, in particular, present and discuss the findings that come from the survey and interview questions that specifically relate to matters of publication. The survey data presented relates to publication experience after graduation, while the interview data relates to publication during candidature. The paper considers these findings in terms of the changes that have occurred within particular disciplines reflected across the graduation years and the challenges candidates face conveying their findings to academic and/or community audiences. Some of the interviewees are now PhD supervisors themselves and so their views and experiences of supervising candidates' publication practices are noted. The findings suggest a general increase in publication during candidature and within the PhD (thesis) which raises some matters for discussion about supervisor development in these respects.

The number of graduates' sampled in the survey are presented in Table 1 by selected Broad Field of Study (BFoS). In total, the Broad Fields of Study Natural and Physical Sciences (238), followed by Society and Culture (211), were represented by the highest number of graduates. Education had 62 survey respondents, Information Technology 42 and Creative Arts 32.

Table 1: Number of graduates sampled by selected BFoS

BFoS	1998	2004	2006	Total
Creative Arts	4	15	13	32
Education	20	23	19	62
Information Technology	6	17	19	42
Natural & Physical	75	78	85	238
Sciences Society & Culture	66	51	94	211
Total	**171**	**184**	**230**	**585**

From the survey data, we established the average number of publications since graduation (Table 2). Information Technology graduates averaged the highest number of publications per person across 1998, 2004 and 2006, followed closely by Society and Culture and Natural and Physical Sciences fields of study respectively. In total, the 1998 graduates averaged the most publications (177.9) compared with 86.29 for the 2004 graduates and 72.45 for those who graduated in 2006. This result is not un-expected as the greater passage of time since graduating suggests the greater time there has been for publishing opportunities.

Table 2: Average number of graduates' publications by selected BFoS

BFoS	1998	2004	2006
Creative Arts	21.25	15.73	17.84
Education	14.75	15.3	12.68
Information Technology	29	20.88	16.9
Natural & Physical Sciences	25.49	16.38	13.01
Society & Culture	27.41	18	12.02
Total	**117.9**	**86.29**	**72.45**

The survey also sought to establish the average number of publications graduates identified as being related to their PhD (Table 3) in addition to the influence of their PhD on publications produced (Table 4) since graduation. Overall, graduates indicated that most of their publications were generally related to their doctorate in some form and, accordingly, all graduates indicated that their PhD had some influence on the publications they produced. Graduates from Information Technology had both the highest average number of publications related to their PhD and the highest rating for their PhDs' influence on their publications. Of course, one would expect the influence to decline with the passage of time as subsequent research and scholarship usurped their PhDs' influence.

Table 3: Average number of graduates' publications related to their PhDs by selected BFoS

BFoS	1998	2004	2006
Creative Arts	21.25	13.86	17.23
Education	13.25	12.43	11.58
Information Technology	28.67	19.41	15.75
Natural & Physical Sciences	23.24	15.06	11.07
Society & Culture	25.45	17	11.15
Total	**22.96**	**15.58**	**11.89**

Table 4: Influence of graduates' PhDs on their publications by selected BFoS (Considerable =1; Small =0.5, None =0)

BFoS / Year	Influence of PhD 1998	2004	2006
Creative Arts	0.49	0.57	0.56
Education	0.54	0.59	0.53
Information Technology	0.56	0.5	0.81
Natural & Physical Sciences	0.43	0.64	0.64
Society & Culture	0.62	0.59	0.59
Total	**0.52**	**0.6**	**0.62**

Finally, through the survey we were able to determine whether the graduates' PhDs influenced the publications they produced varied according to their gender (Table 5). The survey data showed little, if any, variation between males and females with both indicating their doctorate influenced their publication between a small (0.51) and somewhat considerable (0.62) amount. As noted above, influence is expected to decline with the passage of time as subsequent research and scholarship usurps the PhDs' influence.

Table 5: Influence of graduate's PhD on publications produced by Gender (Considerable =1; Small =0.5, None =0)

Gender / Year	Influence of PhD 1998	2004	2006
Male	0.51	0.57	0.62
Female	0.52	0.66	0.62
Total	**0.52**	**0.61**	**0.62**

A subset of approximately sixty PhD graduates was interviewed regarding their experiences of publication during candidature. Through this qualitative aspect of the project a number of publishing related themes emerged. These were:

- Encouraged to publish during candidature
- Not encouraged to publish during candidature
- Self-motivated or initiated to publish during candidature

- Co-authored with supervisor
- Didn't co-author with supervisor

The interview responses generally reflected the survey data, however, it was clear that Natural and Physical Sciences graduates, generally, were encouraged to publish throughout their candidature. This appears to mirror the 'science' model of collaborative publishing with supervisors and other colleagues in large projects, such as post-doctoral researchers. It was also evident that, to obtain a post-doc position, people need to publish during candidature as this quote suggests:

> *"it was pretty evident that anything that I did there was going to be published so I guess the initial idea was from the supervisors but after that once you know the game then you know the game and you fairly soon realise that if you want a decent post doc you've got to publish"*
>
> *(Natural & Physical Sciences Graduate).*

For some candidates, with the support and mentoring of supervisors, there was a strategic aspect to publishing during candidature. Typical examples from different BFoS include:

> *"the peer review process takes time but it actually turned out to be valuable because it sort of honed the chapters so that three quarters of the thesis actually had been published before it actually became a thesis, it helped quite a lot"*
>
> *(Natural & Physical Sciences Graduate).*

> *"to publish basically each section as they went along so they end up at the end of their PhD with three papers that were submitted at least or under review and that certainly seemed to make more sense and be a bit better kind of an arrangement, it might have taken a little bit longer but at least you had it all examined, you kind of had it examined as you went along"*
>
> *(Society & Culture Graduate).*

Some supervisors did not encourage publishing during candidature. Some graduates indicated signs of regret about not having been encouraged to publish, for example, and Education graduate said, 'No I wasn't aware of the significance of publishing, nobody really mentioned it !'. Clearly, there were differences between BFoS concerning publication practices. Some candidates were not instilled with the value of publishing compared with their Natural and Physical Sciences counterparts. The following quote from a Society and Culture graduate indicates that things may be changing:

> *"when I was at [my university] all those years ago the main focus was on getting the PhD done and not that many of us actually published during our PhDs and we weren't instilled with the killer instinct about publishing that we now have and actually translate to our PhD students"*
>
> *(Society & Culture Graduate).*

In a number of cases it concerned their self-motivation or their lack of initiation into publishing values, as these two interviewees suggest:

> *"I was already employed as an academic during my PhD so I was very concerned about publishing because that's one of the requirements of an academic position so I think from memory when I submitted my thesis I'd published four or five things already"*
>
> *(Society & Culture Graduate).*

> *"I was always pretty focused on publishing; I actually had this maxim which is going to sound a little bit embarrassing which would be an exaggeration, but it was if I spent three weeks on it I was going to write a paper on it. I mean obviously I didn't churn out a paper every three weeks but I think that if I'm going to spend a considered amount of time going down a particular track then there's got to be some outcome"*
>
> *(Information Technology Graduate).*

There were also candidates who took advice from people other than their supervisors:

> *"They [supervisors] didn't pressure me in any way ! There was no pressure whatsoever from them to publish the pressure came from my husband who has also a PhD, but in Finance, and who finished two years before I did and knew because he was already on the market even before finishing, he knew that if I didn't publish I would not be competitive"*
>
> *(Creative & Performing Arts Graduate).*

Co-authoring with supervisors was another theme with mixed responses and one in which appropriate supervision and authorship practices were not always followed.

> *"No ! I wasn't supported by my supervisor, my supervisor said "No we won't support you here, if you're going to submit this you submit it under your own name" and the reason for that is because [they]were interested only in really top tier publications the fact that I knew nothing that I would write around [my thesis topic] would ever appear in a top tier publication that I'd be looking at tier two and three that my professors actually said to me "look we're not interested in our names being on the papers" and I said "fine I'll do it myself" and then it was actually once when I did get accepted in one of the journals which obviously they regarded as a bit better they said, "Okay fine we'll put our names on it now"*
>
> *(Information Technology Graduate).*

> *"Yes I have to say towards the end my supervisor actually said to me "maybe you'd better not include my name on it" because he wasn't getting around to actually reading the paper, so in terms of the [Vancouver Protocol] process which I wasn't aware of until I was an academic. So yeah I wasn't aware of that [Vancouver Protocol] process and obviously all the co-authors are meant to have read the paper and confirmed that they were happy with that"*
>
> *(Information Technology Graduate).*

In summary we draw the following conclusions.

- IT graduates averaged the most publications per person followed by Society and Culture and the Natural and Physical Sciences.
- Post doctorate publications tended to be related to their PhDs.
- Encouragement to publish during candidature was mixed with those in the Natural and Physical Sciences tending to see it as a typical thing to do, especially if seeking a post-doc appointment.
- Co-authoring with supervisors demonstrated considerable variation and, in some cases, no-adherence and ignorance of codes of research conduct was evident.

Reference

Macauley, P, Evans, T D, & Pearson, M 2005 Using digital data and bibliometrics for researching doctoral education. Higher Education Research & Development, 24, 2 pp. 189–199.

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Organising Three Minute Thesis

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Three Minute Thesis (3MT™) is an academic and professional skills development initiative that was first developed by The University of Queensland in 2008, and is now held in countries as far reaching as Canada and Hong Kong. In 3MT, research higher degree (RHD) students must communicate the significance of their research to a non-specialist audience in just three minutes, an exercise that develops skills they will need when pitching to government and industry. Rules and judging criteria for the competition can be found here (http://www.uq.edu.au/grad-school/three-minute-thesis).

The University of Queensland is a leading research-intensive Australian university with a strategic commitment to outstanding research training and research higher degree (RHD) supervision. UQ Graduate School plays a key role in delivering on this commitment through the "UQ Advantage", of which, Three Minute Thesis is an integral part.

UQ Graduate School has a focus on providing professional development opportunities to RHD candidates and Three Minute Thesis at UQ is, therefore, fundamentally a skills training exercise. In addition to this, 3MT fosters a multidisciplinary research community at UQ and encourages RHD candidates to look beyond their "laboratories" and learn from each other. Three Minute Thesis also plays an important role in elevating UQ's research profile in the wider community and builds on the University's reputation for excellence in research and research training.

When organising your own Three Minute Thesis look for ways you can incorporate the competition into your university's goals and values. Be consultative in your approach and include students as well as advisors in your consultation and planning to ensure their expectations and needs are being met. Students and advisors need to see the value in participation rather than just the prizes on offer.

To be able to track the year-to-year progress of 3MT at your university it is important that you set goals and measure them. Goals can be set around attendance, participation numbers, diversity of participants, and satisfaction of participants, among others, and performance on these metrics can be used to guide allocation of resources and help ensure the competition remains relevant.

When seeking to increase participation in 3MT a collaborative approach works best. Leverage your networks throughout the university to raise awareness of 3MT. Involve past participants in promoting 3MT among student groups and share examples of best practice within your organization. Utilise as many communication channels as possible to raise awareness of 3MT at your university; however ensuring the competition is aligned with your institution's strategic goals is vitally important to making it a part of the research training landscape and ensuring healthy participation rates.

The University of Queensland has made available a wide range of supporting documentation to support the planning of 3MT at other universities. These resources can be downloaded from here (http://www.uq.edu.au/grad-school/three-minute-thesis).

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Positioning Academic Identities for Rhizomatic Research Cultures: The Case for Diversity in Doctoral Writing Groups

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Rhizomatic research cultures

The current research climate in Australian universities is one in which projects are increasingly conceived as multidisciplinary, interdisciplinary, transdisciplinary, extradisciplinary, even 'wicked' (Brown, Harris & Russell 2010). A recent lead article in Campus Review (Bennett 2012) takes this as a critical shift in the academy that urgently requires attention. One effect of this increasingly interdisciplinary focus is that the traditional boundaries between disciplines seem to be blurring. Within this, the people working on these projects are also increasingly diverse, coming together from non-traditional pathways, from different disciplinary backgrounds, and from different cultural and linguistic backgrounds, so that distinctions between local and global also seem to be blurring. One way to understand these conditions might be through the rhizomatic knowledge structures described by Deleuze & Guattari (Deleuze & Guattari 1988): perhaps it would be useful to think about this research climate as a kind of rhizomatic academic network that is characterised by connection, heterogeneity and multiplicity.

Academic identities

As the current research climate changes, so too do the kinds of doctoral graduates we need to produce to negotiate that climate. What kind of academic identities are best suited to this research setting? On the one hand, PhD students must still develop deep knowledge of their topic and learn competency in "thinking like a ... [statistician, microbiologist, ethicist, etc.]" (Schön, 1987: 39); on the other, researchers are now expected to be adaptable, flexible, capable of smooth transitions across disciplinary boundaries as they collaborate on projects with colleagues. Academic identities can be performed (and recognised as such by others) in how one speaks, reads, writes, behaves, and thinks about research, teaching and administration (Petersen 2007; Brew, Boud & Namgung 2011); in how one establishes and defends knowledge claims, in what questions are considered worth asking and the answers worth having (Kamler & Thomson 2006; Barnacle & Mewburn 2010); and even in one's relations to inanimate objects, such as computers, books, library access cards, lab equipment, room keys (Barnacle & Mewburn 2010). What kind of academic identities, then, will doctoral candidates need in order to position themselves to operate effectively in rhizomatic research cultures?

Writing groups

In order to explore this question, I turned to writing groups, which have previously been shown to have some useful benefits in academic identity formation (Aitchison 2009; Caffarella & Barnett 2000; Lee & Boud 2003; Boud & Lee 2005; Kamler & Thomson 2008; Baker & Lattuca 2010). The focus in the current study is on three multidisciplinary, multicultural writing groups in Public Health, Bioscience, and in Humanities & Social Sciences, groups which are marked by the

diversity one might find in rhizomatic research cultures. Interviews were conducted with the writing groups as part of their regular meetings, and written comments were also provided by some participants.

Gender balance	Country of origin	Disciplinary background
Public Health 7 women, 1 man	Indonesia, Bangladesh, Germany, China, Norway, Australia	economics, ethics/law, epidemiology, statistics pharmacy, occupational health and safety, health policy development
Bioscience 8 women, 10 men	France, Germany, Sri Lanka, Bolivia, Mexico, UK, NZ, US, Australia	forensic biology, entomology, evolutionary biology
Humanities & Social Sciences 6 women	Australia, US, Syria, China	English, politics, education, art history, architecture

The stories of the participants in these writing groups demonstrate the value to research students of working collaboratively within a context of cultural and disciplinary diversity, and illuminate their transition into researcher identities.

Findings

Participants reported that they had gained a number of skills and access to resources through the cultural and disciplinary diversity of the writing groups that will be useful in negotiating rhizomatic research cultures. These include:

- networking for information not available in their immediate research group;
- thinking critically by providing feedback and peer review on work not directly focused on their own topic;
- communicating with a broader audience that is not only unfamiliar with the details of their project, but also unfamiliar with the language of that field;
- learning about academic fields beyond their immediate topic;
- discovering interconnections between their own work and that of others.

In the process, they demonstrate academic identities that are characterised by an openness to new and unfamiliar ideas. These researchers see themselves as networked, as linked in; they recognise the value of collaboration; and they are skilled at providing constructive feedback as they engage with work outside their own disciplinary knowledge. Yet they are also noticeably modest about their own achievements and regard themselves as always learning, rather than as experts. Alongside that, however, they are also confident that their opinions are worthwhile offering and that others can learn from them. Thus, they seem to be developing the skills and

behaviours required by the complex networks of individuals and disciplinary diversity of rhizomatic research cultures.

Keywords: writing groups; interdisciplinary; collaborative research communities; academic identities; rhizomatic research cultures.

References

Aitchison, C. (2009). Writing groups for doctoral education. Studies in Higher Education 34(8): 905–916.

Baker, V.L. & L.R. Lattuca (2010). Developmental networks and learning: Toward an interdisciplinary perspective on identity development during doctoral study. Studies in Higher Education 35(7): 807–827.

Barnacle, R. & I. Mewburn (2010). Learning networks and the journey of 'becoming doctor'. Studies in Higher Education 35(4): 433–444.

Bennett, J. (2012). Interdisciplinary research 'neglected'. Campus Review 10 April.

Boud, D., & A. Lee (2005). 'Peer learning' as pedagogic discourse for research education. Studies in Higher Education 30(5): 501–516.

Brew, A., D. Boud & S.U. Namgung (2011). Influences on the formation of academics: The role of the doctorate and structured development opportunities. Studies in Continuing Education 33(1): 51–66.

Brown, V.A., J.A. Harris & J.Y. Russell (Eds) (2010). Tackling wicked problems through the transdisciplinary imagination. Earthscan.

Caffarella, R.S., and B.G. Barnett (2000). Teaching doctoral students to become scholarly writers: The importance of giving and receiving critiques. Studies in Higher Education 25(1): 39–52.

Devos, A. (2004). The project of self, the project of others: Mentoring, women and the fashioning of the academic subject. Studies in Continuing Education 26(1): 67–80.

Deleuze, G. & F. Guattari (1988). A thousand plateaus: Capitalism and schizophrenia. Trans. B. Massumi. 1980; London: Athlone Press.

Green, B. (2005) Unfinished business: subjectivity and supervision, Higher Education Research & Development, 24(2): 151–163.

Kamler, B. & P. Thomson (2006). Helping doctoral students write: Pedagogies for supervision. New York and London: Routledge.

Lee, A. & Boud, D. (2003) Writing groups, change and academic identity: research development as local practice, Studies in Higher Education, 28(2): 187–200.

Petersen, E.B. (2007) Negotiating academicity: Postgraduate research supervision as category boundary work. Studies in Higher Education 32(4): 475–487.

Schon. D.A. (1987) Education the reflective practitioner: Toward a new design for teaching and learning in the professions. San Francisco: Jossey-Bass.

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Voice as a threshold concept in doctoral writing

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Introduction

Originally developed as a factor in teaching and learning in undergraduate education (Meyer & Land, 2003; Land et al., 2005; Cousin, 2006), the notion of threshold concepts has more recently begun to be applied to doctoral education (see, for example, Trafford and Leshem, 2009; Kiley, 2009; Kiley & Wisker, 2009; Dowling et al., forthcoming). Threshold concepts, broadly speaking, are held to be those that are essential to the mastery of a subject; it is claimed that threshold concepts share a set of characteristics, including that they are 'transformative', 'liminal' and 'troublesome' (Cousin 2006).

For the vast majority of doctoral candidates, the writing of the thesis poses serious challenges; often it is not only the longest and most complex piece of writing they have attempted, but also the work by which their right to assume full membership of the academic community will be assessed. Central to addressing such challenges is the capacity to write in academic voices appropriate to the discipline(s) they are working in. The path to mastery of voice, however, is not necessarily a smooth one, but is rather typically full of hesitation, confusion and anxiety. In this paper, then, we aim to explore what happens if we view the struggle to master voice in research writing through the lens of threshold concept theory.

The notion of 'voice' in academic writing

The concept of voice is well established in the study of rhetoric as the persona that readers construct as sitting behind the text (Bowden 1999, Matsuda & Tardy 2007). The construction of such a persona, however, would appear to have a more specific purpose in academic writing than in literature more generally. We suggest that a principal function of voice in academic writing is in fact to situate the research under discussion within the broader context of the discipline. In this respect the preferred voice in academic writing is necessarily built on an overall understanding/vision of the discipline (or that part of it that constitutes the universe of the research under discussion), and – with varying degrees of certainty, varying degrees of modesty, varying degrees of solidarity with the reader, and varying degrees of questioning of established disciplinary wisdom – is locating the research under discussion within that vision, exploring its contribution, assessing its impact. Lores-Sanz (2011: 173) puts this more simply when she talks about scientific writing as characterized by 'an authorial voice which projects an image of the authors themselves and of their relation to their arguments, community, and readers'.

Is Voice a Threshold Concept?

Threshold concepts are troublesome, holding learners in a liminal space until a transformation is achieved (Meyer and Land 2003). For those attempting to come to terms with the notion of voice in doctoral writing, the questions can run along the lines of: How can I write in a voice of authority when I'm so new to the discipline? My academic writing is grammatically correct, it follows the required structure and the information is accurate, so what's wrong with it? Or it might be occasioned by a level of anxiety that would seem to be out of proportion to what is at stake in the particular task, as Dowling et al. (forthcoming) point out.

We suggest that the particular type of troublesome that comes into play with voice is linked to what Meyer and Land (2003), after Polanyi (1958), refer to as 'tacit knowledge'. In our case, the implicit nature of such tacit knowledge means that voice is rarely discussed by supervisors with their students because it is simply assumed that not only does everyone know the range of

personae they can adopt in doctoral writing, but that they also understand how to represent this in the thesis.

As the doctoral identity starts to take shape, however, the writer enters into a position from which it is possible to adopt the required voice(s). In this, then, the threshold concept is transformative; the growing perception of oneself as being able to think like a biologist, statistician, anthropologist, etc., of being able to take up the researcher/doctoral identity rather than the student identity, leads to the capacity to adopt the accompanying voice of that identity.

What is the value in thinking about voice as a threshold concept?

Part of raising students' awareness and understanding of voice is to highlight the relationships between author, text and reader. As undergraduates, students have usually been in the habit of writing only to their lecturer/tutor as the assessor of their work (Grobman 2009). A critical difference in doctoral work is the necessity of taking up a role or persona whereby one writes to the discipline at large, entering into a dialogue with one's peers in the creation of knowledge in the field (Wisker 2005). If students can begin to think more carefully about the relationships of themselves and their work to their audiences, they are better placed to consider the personae they create in texts and the consequent modulations of voice that requires.

Two strategies we have found to be valuable in this respect are doctoral writing groups and the thesis by publication format. One of the key insights from our research into doctoral writing groups relates to how the process of presenting one's writing to peers focuses attention on how that work will be received by its audience. Instead of regarding their writing as some kind of 'self-expression', the emphasis shifts to thinking about how and what is to be communicated – that is, instead of being an isolated act performed for oneself, writing is conceived of as a social performance of dynamic communication.

Unlike the traditional format for doctoral theses, the thesis by publication draws attention to one's wider readership. By its very nature, the notion of publication highlights the concept of disseminating the findings of research. The process of submitting work to journals and receiving reviewers' comments on those papers also provides experiences in discovering how one's work will be read and interpreted by the disciplinary community. This in turn heightens the importance of adopting personae that have something worth saying to that community in voices that the community will be interested in hearing from.

References

Bowden, D. (1999). The mythology of voice. *Portsmouth, NH: Boynton/Cook.*

Cousin, G. (2006) An introduction to threshold concepts, Planet: 17, 4-5.

Dowling, R., Gorman-Murray, A., Power, E. & Luzia, K. (forthcoming). Critical reflections on Doctoral Research and Supervision in Human Geography: the 'PhD by Publication'.

Grobman, L. (2009). The Student Scholar: (Re)Negotiating Authorship and Authority. College Composition and Communication, 61:1, *W178-W196.*

Kiley, M. (2009). Identifying threshold concepts and proposing strategies to support doctoral candidates. Innovations in Education and Teaching International, 46:3, *293-304.*

Kiley, M. & Wisker, G. (2009). Threshold concepts in research education and evidence of threshold crossing. Higher Education & Research Development, 28:4, *431-441.*

Land, R., Cousin, G., Meyer, J.H.F. and Davies, P. (2005). Threshold concepts and troublesome knowledge (3): implications for course design and evaluation. In C. Rust (ed.), Improving Student Learning - diversity and inclusivity, Proceedings of the 12th Improving Student Learning Conference*. Oxford: Oxford Centre for Staff and Learning Development (OCSLD), 53-64*

Lores-Sanz, R. (2011). The construction of the author's voice in academic writing: the interplay of cultural and disciplinary factors. Text & Talk: An Interdisciplinary Journal of Language, Discourse & Communication Studies, 31:2, 173-194.

Matsuda, P.K., & Tardy, C. (2007). Voice in academic writing: The rhetorical construction of author identity in blind manuscript review. English for Specific Purposes, 26, *235-249.*

Meyer, J.H.F. & Land, R. (2003). Threshold concepts and troublesome knowledge: Linkages to ways of thinking and practicing within disciplines *(Occasional Report No. 4). Swindon, UK: TLRP/ESRC.*

Polanyi, M. (1958, 1998). Personal Knowledge. Towards a Post Critical Philosophy. London: Routledge.

Trafford, V, & Leshem, S. (2009). Doctorateness as a threshold concept. Innovations in Education and Teaching International, 46:3, *305-316.*

Wisker, G. (2005). The good supervisor: Supervising postgraduate and undergraduate research for doctoral theses and dissertations*. Basingstoke, UK: Palgrave Macmillan.*

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Entrepreneurship and Employability: a Comparison of Doctoral Students' Perceptions in China and the UK

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This presentation considered the difference in the perceptions of HDR students from China and the UK regarding entrepreneurship and employability. We discussed the background to the project, research that was carried out and the resulting findings and recommendations.

Why employability and entrepreneurship?

Entrepreneurship and employability are two very topical areas in research education in the UK and Europe. Governments increasingly speak of the 'Knowledge Economy' and expect universities, research and researchers to revitalise their nations' economies. Science, Technology, Engineering and Mathematics (STEM) are considered especially important disciplines for this.

Our University, Imperial College London is STEM dominated and pitches itself as an entrepreneurial institution with very successful graduates entering all fields of work. However, from our work in the Postgraduate Development Unit, we know that the views amongst academics and students towards employability and entrepreneurship are not always positive. We won funding through the British Council's PMI2 initiative to carry out some research and develop a collaborative workshop with Tsinghua University, China.

What we did

We carried out focus groups at Tsinghua and Imperial and held interviews with students, academics, staff and employers to design a questionnaire. This was piloted, adapted and run. After analysis of the survey, follow up interviews were carried out to gain a more in depth understanding. Here we present a brief summary of some of our findings, considering only responses from Chinese Tsinghua students and UK Imperial students.

Employability

We considered which factors from their PhDs students see as key contributors to their employability and how students would like to change the PhD to improve their employability.

Key findings: Employability

Students from both universities considered their research and technical skills important to their employability. UK students found project management and independent working important while Chinese students valued their experience of team working. Chinese students appeared to want to change the nature of their compulsory placements to make them more relevant, while significantly fewer UK students mentioned placements. Some complacency and negativity was

noted in the UK students' responses towards employability with more UK students stating that they would like to change 'nothing' about their PhDs to make them more employable:

- 'you are intrinsically what you are and how you sell yourself can be modified – and that's all employability is'
- 'it's a horrible management buzz word'.

Entrepreneurship

We considered which elements of the PhD experience students felt had developed their entrepreneurial ability and which had increased the probability of their being involved in entrepreneurial activity. Doctoral views on entrepreneurship and entrepreneurial intentions appear different for the British and the Chinese students.

Key findings: Entrepreneurship

More Chinese students reported that their research and technical skills and team work gained via their PhDs had developed their entrepreneurial ability. While significantly more UK students reported project management and 'nothing'. Again highly significantly, more Chinese students reported that their research and technical skills and also their involvement with entrepreneurs had increased their probability of being involved in entrepreneurial activity. While the most frequently cited factor for the UK students was 'nothing' (highly significantly different from the Chinese students).

Interpreting the differences: Contributing factors

The students' definitions of terms differed considerably particularly concerning entrepreneurship. This then appears to affect their career intentions and perceived barriers to entrepreneurship.

The different PhD structure and style, socio-economic factors and cultural differences probably contribute to these differences

Definitions

The definitions from UK students of entrepreneurship centred on six themes including: new idea/innovation, setting up a business, and making money. While the Chinese definitions also covered these points, theirs indicated a much broader understanding, including: people management, doing something for the greater good and working with people. These were all raised significantly more often by Chinese students than by UK students. This shows that there is a different understanding of the word and also an image problem for entrepreneurship amongst the UK students. For example, it is not considered positive to talk about money, e.g.: 'coming up with something new purely to make money. For me it has negative connotations'.

Barriers

The barriers to entrepreneurship noted by the students also differed significantly. This is likely to stem from the different definitions given. UK students cited intrinsic barriers such as: ‘against my values/not money driven’ or ‘lack of interest’. Chinese student barriers seemed more extrinsic including: ‘lack of funds’ or ‘lack of contacts’.

PhD structure and style

At Tsinghua University (unlike at Imperial) there is structured taught content during PhD students’ first year, this includes more team-working. Students also work more closely for their professor with perhaps less autonomy, so students may feel less of a sense of management or ownership of their project. The Chinese students are also required to carry out a compulsory placement. Some students involved in the study would have preferred placements to be more closely relevant to their project and/or aspirations and to have had a choice of placements.

Socio-economic factors

While in the UK research councils and government have steadily been reducing funding for higher education and families are under growing economic pressure, China is undergoing rapid economic development and there is major investment in education from both the State and families. The demand greatly exceeds supply in the graduate job market and Chinese students are open to try a range of roles in order to repay their families for their education.

Culture

The culture in China has long been considered ’collectivist’ while the UK is thought of as ’individualist’ (Autio et al., Hofstede et al.). This may contribute to the Chinese students’ higher awareness of the benefits of team work and similarly of their definition of entrepreneurship as including working with people and people management. Nisbett also refers to the Chinese as more tolerant of dual meanings, so they may more readily accept two apparently competing truths. For example, while the UK students see making money in a negative light and perhaps incompatible with doing something for the ‘greater good’ or academic life, the Chinese students’ view is more likely to allow both outcomes to co-exist without tension.

Student future plans

Student career plans appeared similar in the short term, with both Chinese and UK students preferring their first destination employment to be a university post. The Chinese second choice was to go into the state owned industry while the UK students preferred the private sector. In the longer term there was a bigger difference. More than three quarters of the Chinese students stated that they expect that their future activities would include entrepreneurship compared to only just over a quarter of the UK students. We know however that both students and academics from Imperial do go on to become entrepreneurs. Perhaps initially ‘reluctant’, they find that through entrepreneurial ventures they are able to work on projects and extend their knowledge in their areas of interest.

Conclusion and recommendations

It appears that there is a mismatch between policy rhetoric and reality. The terminology of current policy on 'employability' and 'entrepreneurship' does not attract STEM HDRs in the UK. For the state this is likely to contribute to frustration in the realisation of a 'Knowledge Economy'. For the individual it reduces the breadth of career options available.

There needs to be more and earlier open discussion of employability and entrepreneurship and UK HDRs should be encouraged to think more broadly about their positions regarding these topics. Role models from a range of backgrounds could assist with delivery of doctoral programmes and training. More publicity could be given to alternative career options including social entrepreneurship. Understanding of how academics become involved in entrepreneurial ventures and how entrepreneurship can make a positive difference to researchers' work (including reducing isolation) should be promoted. In the UK there seems to be a need to challenge and change the culture given a testing graduate employment market and an environment of government spending cuts.

References

Autio. E., Pathak. S. and Wennberg. K., Culture's Consequences for Entrepreneurial Behaviours. 4th Global Entrepreneurship Monitor Research Conference, September, 2010

Hofstede G., G.J. Hofstede, M. Minkov, Cultures and Organizations: Software of the Mind. 3rd Edition, McGraw-Hill. USA, 2010

Nisbett R.E., The Geography of Thought, Nicholas Brealey. USA, 2005

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Research Training/Education without borders

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Abstract

The Australian Government introduced a research training agenda as part of the Kemp (1999) Higher Education initiatives in the *New Knowledge and New Opportunities* policy which followed the West (1998) report into Higher Education in Australia. The policy required Australian universities to provide research training for their students, including professional development for research supervisors and students outside the conventional supervision arrangements.

In the intervening years, providing adequate support for students and supervisors engaged in research degree work has become increasingly complex. There has been a growing demand from overseas students and a corresponding drop in local enrolments; a change in student's preparedness for research degree study; continuing casualisation of the academic workforce and high workloads. Academics under pressure to publish and get funding also have to cope with an 'audit regime' culture which demands transparency and accountability. This can create perverse incentives, which affect the quality of research student experience.

As research educators we explored the potentials for blogging and social media for providing additional support. The possibilities for extended and collaborative writing and the ability to invite comments from readers is a good way of eliciting participants' tacit knowledge (Williams and Jacobs, 2004).

Inger established The Thesis Whisperer in 2010 (http://thethesiswhisperer.wordpress.com/). Blogging seemed to be a natural extension of the PhD student workshops she ran for RMIT. To capture the interactive nature of her workshops the blog is 'newspaper style', which encourages students and other experts to contribute as 'citizen journalists'. It has become popular around the world with a subscription base of over 2000 and over 300,000 lifetime visitors.

In 2011 she invited Geof to write for the blog, and in the course of being registered as an author for The Thesis Whisperer, Geof established The (Research) Supervisor's Friend (http://supervisorsfriend.wordpress.com), a blog for research supervisors. The (Research) Supervisor's friend is still in its early days and in contrast to the Thesis Whisperer has a single author. The traffic analysis shows a much lower, but regular, usage of the site and conversations have indicated access to a world wide network of research supervisors. At the beginning the blog addressed four ways of looking at research supervision:

- Research supervision as pedagogy
- Research supervision as relationship
- Research supervision as project management
- Research supervision as contributions to knowledge

Later a fifth strand was added about advancing research supervision practice, and in 2012 a new strand related to analytical tools for ascertaining a research student's progress in the first six months of candidature.

We call this practice 'supervision without borders' and argue it is in contrast to the conventional approach to online research education support that perpetuates a 'walled garden' approach through the use of enterprise systems such as Blackboard and Moodle. Our work in this space suggests that there are untapped potentials for research educators to work with students and supervisors across multiple locations and institutions.

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Measuring Postgraduate Research Output: The Case for Change

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In this paper, we present an argument for the creation of measures of postgraduate research output. We contend that the creation of valid, reliable, and appropriate measures for postgraduate research is desirable for two reasons:

> *(1) It will contribute substantially to our understanding of the contribution of postgraduate research to the national research economy; and*
> *(2) It will provide key evidence to inform the development of higher education policy.*

It is important to state from the outset that we are not proposing to measure the overall or ultimate value or social worth of postgraduate research in terms of its ability to deliver research outputs. We are as interested in examining postgraduate research for its role in developing human capital (and in social production and reproduction), as we are in counting theses or refereed journal articles—as difficult as these social and socioeconomic dimensions can be to quantify.

Postgraduate research activity, and particularly research by doctoral students, is widely seen as integral to the research mission and research productivity of higher education institutions. Clark, for example, has described the structure for doctoral education in the United Kingdom as emphasizing "the close interlinkage of research and research training in milieux of research excellence".[14] Research has shown that postgraduate students are critical agents in the reproduction of institutional and disciplinary research cultures: beyond researcher training schemes, it is the practice of disciplinary research by postgraduates that, arguably, most powerfully initiates students into academic 'tribes' and informs postgraduates' developing sense of academic identity.[15]

Like postdoctoral researchers, postgraduate researchers are part of the 'engine room' of research production within institutions. Postgraduates are not tied to the same institutional accountability or research productivity measures that apply to full-time academic staff, and hence may enjoy greater freedom to explore innovative and 'risky' research domains and methods, thus extending the boundaries of knowledge.[16] In short, postgraduate research activity contributes substantively to the national research effort and to research innovation.

Yet despite the clear and undisputed importance of the practice of postgraduate research, the products of this research labour force, in the form of postgraduate theses, are not currently incorporated into assessments of institutional or national research output. The implication that we draw from this is that it is timely to look more closely at describing, and perhaps attempting to quantify, these troublesome outputs. If we are unable to do so—if the products of postgraduate research are effectively invisible—then this leads to specific problems.

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14 Qtd. in: Delamont, Sara and Atkinson, Paul (1997), "Critical mass and doctoral research: Reflections on the Harris Report", Studies in Higher Education, 22 (3), 319-3, p.319.

15 Becher, T., and Trowler, P. (2001), Academic Tribes and Territories: Intellectual Enquiry and the Culture of Disciplines, Buckingham: The Society for Research into Higher Education & Open University Press.

16 Park, Chris (2005), "New Variant PhD: The changing nature of the doctorate in the UK", Journal of Higher Education Policy and Management, 27 (2), 189–207, pp.190-191.

There are two important ways in which postgraduate research and its corresponding research outputs can presently be said to be invisible, or quasi-visible. First, they are literally hard to find. Theses tend to exist in very small numbers of hard copies kept in institutional special collections. If they are digitised, they are often relegated to institutional repositories that (despite the effort and expense in this area during the 1990s and early 2000s) are unfortunately often hard to search and hard to access. In short, much unpublished postgraduate research exists as a form of "grey literature", similar to internal reports by institutional working groups. Second, in terms of resourcing and transparency of costing, postgraduate research output tend to fall between two stools.[17] Should the costs of postgraduate research be counted in teaching or research budgets? They tend to be split between the two.

The recently-launched "MyUniversity" website[18] presents a further case study of the invisibility of postgraduate research and indeed of the contribution of postgraduates to the research labour force, national research innovation and the knowledge economy. The as-yet unrealised promise of the website is that it will deliver information in order to create transparency and inform choice. Cynically, it may be read as yet another instance of the way in which the language of the market and emphasis on the economic power of the consumer in increasingly dominating public discourse on higher education. More optimistically, we might see the creation of this website as an opportunity to make the nature and content of postgraduate research more accessible: for example, in terms of exposing geographical research clusters and centres of disciplinary and interdisciplinary expertise.

Realising the full value of the national investment in postgraduate research will require the creation of mechanisms to ensure that postgraduate dissertations achieve greater visibility and accessibility. Theses can be documented and made available (for example, as was piloted through the Australasian Digital Theses program[19]); and student publications reported through the Excellence in Research for Australia (ERA) initiative.[20] Student completions are currently recorded, and student progression and retention may be better tracked in the near future through the Commonwealth Higher Education Student Support Number (CHESSN). Finally, that leaves what we may term the "incommensurable", but nonetheless essential, dimensions of postgraduate research: including human capital development and the development of academic identities. Adequate means to measure these incommensurable dimensions are yet to be developed.

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17 See: Cram, L. (2011), Individual Submission to the Base Funding Review of Higher Education. Copy available at: http://www.deewr.gov.au/HigherEducation/Policy/BaseReview/Submissions/AtoF/Documents/Cram_Lawrence.pdf [Access date: 10-05-12]

18 MyUniversity. Website: http://myuniversity.gov.au/ [Access date: 10-05-12].

19 Australasian Digital Theses program. Website: http://www.caul.edu.au/caul-programs/australasian-digital-theses [Access date: 10-05-12].

20 Excellence in Research Australia. Website: http://www.arc.gov.au/era/ [Access date: 10-05-12].

Creating and Cultivating a Research Student Community

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By its very nature, the Higher Degrees by Research (HDR) is an arduous and lonely journey. Having a community of like-minded "strugglers" helps research students enormously by giving them a sense of community and a space to share and learn from their positive and negative experiences. By bringing HDR students together, the University, Faculty and individual departments can benefit a great deal too. It can save a huge amount of administrative work when research students share each other's knowledge and experience of administrative processes related to their candidature and department. A thriving student community ensures that the academic-tricks-of-the-PhD-trade are transferred from one student to other by using less academic hours. An engaged and happy student community helps with recruitment more than any amount of marketing might. For example, one happy PhD student encouraged many of his colleagues and students from Bangladesh to apply over the last five years. Fourteen of these applicants are now currently pursuing their PhD in our Faculty of Education, either on Monash or AusAid scholarships. Commonly, it is harder to attract HDR students to campus based events; however, the Faculty is increasingly successful in attracting a high number of our HDR students to its events and seminars. One of the main reasons behind this success is MERC (Monash Research Education Community). Established in 1992, MERC is an active network of HDR students and staff.

What is now called the Monash Education Research Community, MERC has its origins in a group of Education Faculty PhD students in 1992. The faculty had forty-five students commence that year, and some of them were housed in a small number of cramped, shared offices. The only computers available to them were kept in a small room, and while waiting for their turn they would chat about their projects. The situation where research students chatted about their work created a sense of community that many realised had previously been lacking.

In June of 1992, the first student-run seminar was given. A PhD student gave the seminar, and another arranged the administrative details (booking the rooms, sending invites, collecting RSVPs etc). Following this, a small group of students and research degree support staff held a meeting to discuss arranging additional seminars. They decided that students had a major part to play in the research work of the faculty, but had no real voice as a group, no formal input into matters of concern to them, and no formal role in the orientation of new research students. At that meeting they agreed to form a collective of researchers to rectify what they saw as a shortfall in the faculty.

The collective decided that they would meet regularly and would arrange such things as seminars for research students and functions where students could meet and discuss their projects; and that they would also present their views (as a group) to whatever Faculty forums were appropriate. They met twice a month and gave students an opportunity to present seminars during these meetings. The idea was not only to give students an opportunity to talk about their research project and rehearse conference presentations, but also to give them a chance to meet and chat about their research with their fellow research students. Importantly, they opened up involvement in the group to all Faculty research students. There were, and still are, no membership fees or entry requirements.

Currently the Faculty of Education has 463 students (186 Full time and 277 Part time) enrolled in either a PhD, Doctor of Education, Master of Education by Research or Master of Psychology/PhD program. These students are enrolled across four campuses, as far as 140km away from the main campus at Clayton. MERC represents these students through a committee which includes:

- Two convenors on each of the Clayton and Peninsula campuses;
- Two Executive positions;
- Two Academic and Two Social co-ordinators.

Some of the core philosophy of the MERC is to:

- Facilitate interaction between staff and students and amongst students;
- Support the study experience of students, particularly through provision of ongoing orientation, and facilitate the Faculty's response to the needs of the students as these arise;
- Provide a forum for ongoing discussion of researcher-generated questions related to specific aspects of research processes;
- Encourage involvement by individuals in a supportive community when otherwise engrossed in independent research.

Some of their recent activities, projects and successes are;

- Holding a monthly meeting at both the Clayton and Peninsula campuses;
- Representation on a number of formal Faculty committees such as Research Committee, Research Degrees Committee, Access and Equity Committee, OHS Committee and Faculty Board;
- Arranging social events such as family BBQs, film nights and multicultural events;
- Arranging a series of academic seminars and workshops for research students;
- Organisation of an annual MERC Conference that attracts more than one hundred HDR students;
- Organising the Global Education Day which has inspired two book projects.

In 2009, after a successful Global Education day a number of PhD students decided to continue the theme, and undertook a project to write an academic book that encompasses the diversity, challenges and changes of education research in the Asia Pacific region. Fifteen PhD students, most of who were from the region, submitted papers towards this book. The papers were assessed and approved by their supervisors and an external reviewer. The book will be published by Monash University Press later this year.

The success of this project has inspired another book project titled "Asia as Method in Education Studies". This project will be another peer reviewed academic book and is to be published in early 2013. Twenty-one students have co-written chapters, and even presented these at the Australian Association for Research in Education (AARE) conference in November last year. Without their experiences at the Global Education Day, these books would never have originated.

From our experience of working very closely with and for MERC for last six years, we conclude that the following are the some of the provisions that has helped developing MERC in one of the most active HDR student networks within Monash University.

- By providing as much administrative support as the Faculty can, and by making finance, budget and purchasing less bureaucratic for MERC volunteers to maneuver;
- By providing a good hand-over as well as ample of motivation, guidance and freedom to the new MERC representatives each year;
- By promoting MERC events via bulk email, sms and snail mail facilities;
- By giving MERC representatives' positions on important Faculty committees;
- By appreciating and capitalising on the energy that international students bring with them; and their need to connect and create a student community;
- Finally and most importantly, by respecting MERC representatives' autonomy and trusting their capabilities to lead the community.

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Insights into successful supervisory practice

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Introduction

Imagine if those of us who wanted to be successful research supervisors were able to seek advice from 28 very experienced supervisors who were also highly regarded in their respective universities? What might that advice be?

Research design

The research reported in this paper arises from interviews with such supervisors across 12 Australian and New Zealand universities and who worked within a range of disciplines from Theology, to Creative Writing, Economics, Engineering and Biomedical Sciences. The supervisors interviewed in the STEM fields had graduated an average of 45 each with an average of 13 candidates supervised at any one time. The HASS supervisors had graduated on average 42 candidates each and supervised on average 14 at any one time (Table 1).

Table 1: Outline of Interviewees by gender and discipline cluster

Discipline cluster	N=	Av. graduated	Av. supervised at one time
STEM	11 (2 females)	45	13
HASS	17 (6 females)	42	14

Interviewees were identified through contact with respective Deans of Graduate Studies. The interviewees were known to the Dean as having:

- Completed most candidates in funded time
- Positive examiners' reports for their candidates
- Positive comments from candidates
- Many requests from potential students
- A reputation in the School for being a 'good' supervisor.

Findings

During the interviews participants was asked to indicate one piece of advice they would provide to a colleague starting out research supervision.

To a person, the main finding from the interviews was that these experienced supervisors have learned that every student is an individual:

> *The biggest thing I've learned is that they are all totally different. That's very challenging because I have to adapt the way I do it every single time. It's a bit like being a parent and thinking after you've had one child you know about child rearing and you have another one and you know you don't. With supervision I still don't know. There are patterns but they're still very different. (S3)*

Additional themes from the analysis included

- Organisation: structure and systems
- Encouraging ownership and responsibility

- Selection
- Collegiality, including developing peer networks

Organisational

Unsurprisingly, organisational issues were among the most frequently discussed and included:

- Being more 'hands-on'
- Assisting with overall structure of the thesis
- Developing timelines with candidates
- Assisting with writing

In virtually every case the interviewee reported becoming more 'supervisory' / 'hands-on' after 'losing' a candidate i.e. a candidate having gone 'off-track' without the supervisor realising. In conjunction with being more hands-on, supervisors reported that they had developed a range of structures to assist candidates, for example:

> *One of the things I find very helpful, and I think it helps students quite a lot too, is that I help students design their argument, the structure of their thesis right from the beginning (H16)*

> *I think for me where I've ended up at the moment the thing that I find most helpful is to try and keep the plan of the overall thesis live so...that they are always trying to see the big picture as well as the bit they're working on (H15)*

Another organizational issue related to timelines as a means of assisting candidate to keep on track:

> *I set up systems for them so that they have to give consideration to their PhD…It forces them to consciously spend time on their research. I don't let them flounder in the wind, I've tried that too, but it doesn't work but if I set them various set things then they do it. (H10)*

These experienced supervisors had learned that they needed to also provide structure and timelines for their candidates with regard to writing.

> *What my trick is, I get them publishing the moment they come through the door…so basically I'm always getting them to write something the whole PhD is centred around writing papers and me sitting down and correcting them and going through that process many times with them…You get them writing from day one. It is all about writing. (S2)*

Encouraging ownership and responsibility

Interviewees were very keen to ensure that their candidates had a sense of ownership of their project, and one supervisor shared his strategy for this.

> *What I do when a student first emails me and says can you supervise me here's my transcript and I take a look at it and go… 'Mmmm'. They will then say what projects have you got that I can come in and work on. My secret is that I don't tell them. I say to them…I want you to tell me what is your dream project that you would walk over hot coals for. If you could have anything you want what would you want? That's the secret. (S2)*

Selection

The interviewees suggested that one important piece of advice to pass onto less experienced colleagues was to take great care when selecting students, as one said:

> *Initially [I took] anybody who met entry criteria we would take them on and I regret a couple of them because even though they finished it took an inordinate amount of time and effort. (S8)*

Supervisors suggested that there should be considerable discussion with a potential candidate and if possible a few meetings as well as ensuring that they have seen examples of writing.

> *In agreeing to supervise a student it is essential to read something that the student has written, a substantial piece of work that the student has written, not for the quality of the English but for the quality of the ideas and the analytical skills that the student shows in writing. (H12)*

Collegiality

Collegiality included two sub-themes. One was treating candidates as colleagues for example:

> *The golden rule is treat your student the way you would like to be treated if you were the student. If you are not sure about something put yourself into the shoes of the student and think from their point of view how would you like to be treated. (H11)*

The other sub-theme related to establishing peer groups and support among candidates.

> *I do try and get the students to help each other [and] group meetings take care of a lot of the practising of talks because they do it as a group and that saves quite a bit of time. (S3)*

> *I think it [critical mass] has been a conscious strategy that I've tried to follow and engender amongst other people because I think unless there's some degree of it being some sort of group enterprise and we're all in it together then I think it would just fall apart. (S4)*

A very explicit example of both having candidates as colleagues as well as encouraging peer interactions was demonstrated by most interviewees when they reported that they kept in touch with the majority of their students long after graduation and it was not un-common for them to put new candidates in touch with previous graduates knowing that they would get help the 'new-comers'.

Conclusion

So what can we learn from these experienced supervisors who have learned from experience? They reported that they need to:

- Treat every supervisory relationship as unique
- Be very organised and maintain a fairly 'hands-on' approach to supervision
- Encourage candidates to take responsibility for their own project
- Select carefully
- Work with candidate peer groups
- Have a collegial relationship with candidates.

Postgraduate Students' Award Choices and University Practices: Room for Alignment?

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Introduction

The data reported in this paper indicate that there has been a substantial increase in enrolments in Coursework Masters programs in Australia, with a growing number of applicants seeking PhD entry with qualifications from these Coursework Masters experiences. This increase has been mirrored by a decrease in the number entering with First Class Honours, and a substantial decrease in enrolments in Research Masters. For example, from 2003-2009 there was a 36% increase in C/w Masters enrolments—domestic and international (14% decrease in Research Masters and 26% increase in doctoral enrolments) Domestic-only enrolment has increased about 84% from 2000-2010 (DEEWR, 2011). A trend in the Coursework Masters enrolment is the significant increase since 2004 of female students whereas male enrolments decreased

In terms of age of Coursework Masters students the data suggest that those in the 20-29 age are likely to be international students and those in the 30-39 age group are likely to be domestic students.

Doctoral education data Additional data suggest that there is both an increase in the age of entrants into a doctorate (the average age at commencement being 33), and an increase in the percentage of candidates undertaking their doctoral study part-time; the latter is a trend that commenced some years ago, and which appears logical in light of the increasing age of doctoral candidates. The percentage undertaking their study part-time has is now 40per cent of the total, a growth of 10 per cent in 2010. Furthermore First class Honours degree (an additional year of research training and research project work at the undergraduate level) which has traditionally been the entry award to a PhD has declined in popularity particularly in some disciplines

From the study undertaken by Edwards, Bexley & Richardson (2011) In the year prior to commencing a doctorate 56% of respondents had been employed (45% FT 9.5% PT/Casual), almost 21% had been undertaking Honours and 16% C/w postgraduate study

Given these trends, the study examines the extent to which a Coursework Masters provides an effective, supportable entry to a PhD research program. The results of semi-structured interviews with convenors of coursework masters programs that have substantial numbers of graduates going onto doctoral study, candidates who entered their doctorate with a coursework masters, and supervisors of such candidates will be reported toward an answer.

Research design

In addition to a broad survey of the Australian Deans and Directors of Graduate Studies, semi-structured Interviews were held across four different types of Australian universities interviews with:

- Thirty-five PhD candidates who had entered their doctorate with a Coursework Masters
- Twenty-one supervisors of PhD candidates who had entered with c/w Masters, but not the supervisors for the above candidates
- Eighteen conveners of c/w Masters programs where graduates are known to go onto a PhD
- Four deans of Graduate Studies

Findings

The candidates who were interviewed were generally positive about their Coursework Masters as preparation for PhD study. Supervisors, however, were less positive with their concern mainly relating to the lack of research methods that the candidates had mastered.

Supervisors and Convenors appreciated that Coursework Masters awards were an increasing pathway to PhD although it was sill the exception rather than rule.

The interviews identified an increasing diversity (across universities and disciplines) of:

- Program types
- Candidate selection, and
- Candidate and supervisor support.

With regard to program types there was a notable move in universities to increased flexibility for postgraduate students in terms of entry and choice of course. Some of the strategies include:

- Combining existing degree programs (e.g. joint Masters/PhD) and designing new programs (e.g. four year PhD)
- Accredited exit points (e.g. Graduate Diplomas)
- Coursework Masters that allows choice part way through e.g. more or less research intensive in the second half

With regard to selection, given that First Class Honours is still the standard for scholarship allocation and Second class Honours for entry to the PhD (or their equivalent) some of the programs involved in the study explained how they deemed Coursework Masters equivalence as a substantial Coursework Masters research project e.g. 15,000 words at HD level and with overall good grades. Applicants with these qualifications were deemed H1 equivalent.

For international Masters generally the universities involved considered that they hd a sufficient research component for entry. On the matter of international students it was notable that a two-year Masters is attractive to international students as it contributes to applying for Permanent Residency (PR).

Candidate and supervisor support was an issue of particular interest. Most of the universities involved in the study, and those questioned indicated that there was only a minority who allowed access for Coursework Masters students to the same support services available to HDRs . With regards to supervisors, most universities did not require 'qualified' supervisors for Coursework Masters compared with their requirements for doctoral supervisors.

Future directions

This study has opened up a number of issues and implications for Australian universities including:

- The provision of flexible pathways and articulation/alignment
- Selection
- Curriculum at the Coursework Masters and doctoral levels
- Pedagogy and supervisor development as well as Coursework masters Convener development to enable them to adequately advise potential research candidates
- Exit strategies, especially with the new Australian Qualifications Framework, and
- Administration of programs that offer greater flexibility.

References

Australian Council for Educational Research (2011). Research Briefing: Australasian Survey of Student Engagement, Volume 9, April 2011.

Department of Education Science and Training (2011). Consultation paper: The allocation and funding of Commonwealth Supported places. Canberra: DEEWR.

Department of Education, Employment and Workplace Relations (2010) Higher Education Statistics Collections http://www.deewr.gov.au/highereducation/publications/hestatistics/publications/Pages/Home.aspx

Edwards, D., Bexley, E., & Richardson, S. (2011). Regenerating the academic workforce: The careers, intentions and motivations of higher degree research students in Australia, Findings of the National Research Student Survey (NRSS). Melbourne, Australia: Australian Council for Educational Research and the Centre for the Study of Higher Education for the Department of Education, Employment and Workplace Relations.

Supervisors' approaches to supervision and how these relate to conceptions of research

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The nature of the problem

How is research supervision related to the nature of the research in question? Studies into the research - teaching nexus have shown how the nature of a research discipline relates to the teaching of that discipline. In this pilot case study we analyze how supervisors' approaches to supervision relate to their conceptions of research. In order to capture a more complete picture we analyze practice through observation of supervision and, through interviews, the meaning the supervisors made of it.

Theoretical Framework

This work lies within the research-teaching nexus arena of doctoral supervision, and is based on Chevallard's anthropological theory of didactics and his concept of praxeology (Chevallard 2007), developed further by Madsen and Winsløw (2009) into a coherent model for analyzing linkages between teaching and research within a discipline (see Figure 1). Chevallard's concept of praxeology has four elements: At the praxis level: The tasks we do and the methods or techniques we use in the doing; and at the logos level: the technology or discourse that the method is embedded in, and the theory, which the technology is embedded in. Madsen and Winsløw (2009) merge the technology with the theory, to formulate the questions: Why? as the explanation for our doing. This makes the praxeology very operational for interview purposes.

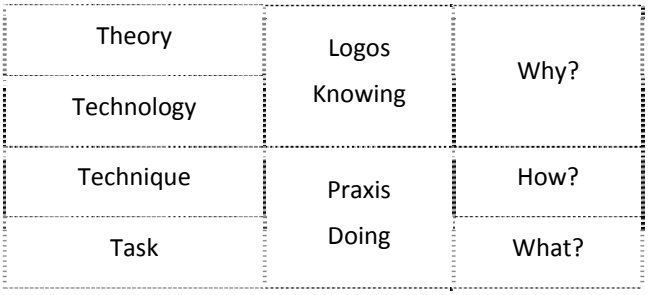

Figure 1. The praxeology as the body of knowledge (Chevallard, 2007), adapted for the purpose of interviewing researchers (Madsen and Winsløw, 2009).

When taking the praxeology into the realms of the research-supervision nexus, there is a need to elaborate on the praxeology of supervision to clarify what the different levels may entail. Pearson and Kayrooz (2004) present an elaborate framework of constructs that make up supervision practice. Each construct is divided into a number of tasks and activities, and these can be attributed to tasks or techniques in Chevallard's praxeology. The framework is not developed to uncover justifications for supervisory approaches – the Why in Chevallard's framework. Also, the framework does not in itself lead to any overall approaches to supervision. Here Dysthe's three models of supervision and her discernment between dialogical and monological supervision (Dysthe, 2002) give a coherent framework to connect the techniques with an overall approach to supervision.

Methods

The case was a supervision session which concerned methodologies to be employed in a study concerned with 'Storm water management' and included the PhD student, her principal supervisor and two co-supervisors. The first author was present as an observer and the session was audio-recorded to provide for a verbatim transcript. The transcript was first coded according to the framework of anthropological theory of didactics to analyze how the supervisors and the PhD student talked about research. Then it was coded and analyzed with regard to the supervision in play, using Pearson and Kayrooz' five constructs (2004). Two of the supervisors were interviewed, individually, after the transcript of the supervision session had been analyzed. The third supervisor had moved to another institution and country, and was not interviewed.

Analysis and Results

The three supervisors and the PhD student discussed the research project, which concerned a design process in landscape architecture. None of the three supervisors were an expert on the whole project, since it was interdisciplinary in nature and supervisors came from different disciplines. They first discussed what the object of research was, and they agreed on 'how the physical element for storm water management was changed in the planning process'. Then they discussed alternative research methodologies, the role of the researcher (the PhD student) as an observer or participant in the planning process, and the whole set-up of the project. A lot of the discussion actually took place between the supervisors who had different roles and opinions, but contributions by the PhD student were of decisive importance for the outcomes. The justifications they used in the discussion were concerned with the implications of the different methodologies, and what they viewed as scientifically sound and publishable in refereed journals. In the discussion the supervisors challenged themselves, each other and the PhD student through references to justifications, i.e. theory in praxeology terms:

> *Why - What are the scientific implications of the methodologies*
> *How - What is the role of the researcher: Participant or observer*
> *What - How the physical element is changed during the planning process*

The transcript was then analyzed using Pearson and Kayrooz'(2004) constructs. Since this framework is not developed to capture justifications or explanations for supervisory practices, the supervisors' activities under each construct were categorized into how and what in Chevallard's praxeology and used for coding and analyzing the transcript with the following outcome:

How -	**Facilitating**
	Listens with attention, Respects the knowledge and expertise
	Mentoring
	Approachable, responsive and affirming
	Reflective practice
	Open to different research approaches, Open to critical discussion on research practice
What -	**Expert coaching**
	Challenge intellectually, Help plan and refine project, Encourages develop own ideas
	Facilitating
	Promotes good interaction among students and staff
	Mentoring
	Encourages publishing, Refers to relevant professional assistance
	Reflective practice
	Encourages open/critical discussion on research practices

The supervision was mainly concerned with helping plan and refine the project (what they supervised in), and how they supervised can be characterized as dialogical in Dysthe's terms (2002), including aspects like respecting the expertise of the PhD student and being open to different research approaches.

The first author then interviewed supervisors about their conceptions of research and their approaches to supervision. One of the supervisors described landscape architecture as concerned with designing objects and landscapes with a practical imperative and aesthetical attractiveness, and as an inherited iterative and interdisciplinary process. To this supervisor, this is the explanation for the supervisory approach: When the research process is interdisciplinary, supervision necessarily has to be dialogical in his view, see arrow in Table 1 below. Another supervisor described interdisciplinary supervision as a dialogue with the aim to find a focus that the PhD student wishes to pursue.

Table 1. Summary of results and analysis, based on anthropological theory of didactics (Chevallard 2007, and Madsen and Winsløw, 2009).

	Research		Supervision
Why	Practical imperative Aesthetically attractive Sound and publishable research	→	Interdisciplinary research process
How	Interdisciplinary research Researcher as participant or observer in the planning process		Dialogical Respects expertise Open to other research approaches
What	How the physical element is changed in the planning process		Help plan and refine the project

Discussion of results

Managing multiple supervisors can be problematic, especially when supervisors do not agree with each other, and not all PhD students may be capable of handling this insecurity (Grant and Pearson, 2007). The analysis of the present case shows how three supervisors in an interdisciplinary PhD project include the PhD student in an academic discussion about research methodologies. The interdisciplinary nature of the project seemed to urge the supervisors to go into a dialogue about the research as none of them were an expert on the whole project, thus in this case interdisciplinary research promotes dialogical supervision. This opens the question whether there is a general tendency that interdisciplinary research promotes dialogical supervision, not as a determining factor for supervision, but it might be one among other factors.

References

Chevallard, Y. (2007). Readjusting didactics to a changing epistemology. European Educational Research Journal, 6(2), 131-134.

Dysthe, O. (2002) Professors as mediators of academic text cultures: An interview study with advisors and master's degree students in three disciplines in a Norwegian university. Written Communication, 19 (4), 493-544.

Grant, B. and M. Pearson (2007) Approaches to supervision in Australia and Aotearoa New Zealand. In: Denholm, C. and T. Evans (eds.) Supervising Doctorates Downunder: Keys to effective supervision in Australia and New Zealand. ACER Press, Australian Council for Educational Research.

Madsen, L. M. and C. Winsløw (2009) Relations between teaching and research in physical geography and mathematics at research-intensive universities. International Journal of Science and Mathematics Education 7: 741-763.

Pearson, M. and Kayrooz, C. (2004) Enabling critical reflection on research supervisory practice. International Journal for Academic Development, 9 (1), pp 99-116.

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Transforming Creative Writing Postgraduate and Supervisor Identities: Ways of Becoming Professional

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In the twenty-first century, most postgraduates in Australia do more than simply research. They might teach or be employed as research assistants or administrators. These jobs prepare students to make the transition to the workforce, even if those students entered graduate study without a clear idea of their post-completion goals. The sometimes rarefied atmosphere of the doctoral environment in the past, where students were either insulated from the challenge of 'what do I do when I complete,' or led to believe that a permanent academic position beckoned, has given way to an acknowledgment that a range of opportunities present themselves. In other words, the tasks postgraduates might perform and, indeed, the challenge of which opportunities to take up, speaks to the multiple identities of twenty-first students on their road to becoming professionals in their field. The active engagement of postgraduates in their discipline-specific as well as pedagogical education is one of the hallmarks of this change.

The other side of this question asks how closely supervisors are involved in these aspects of the postgraduate experience. How do they understand their role in creating opportunities and advising about performance? Are supervisors, in fact, required to perform multiple roles, or only if they conceive of themselves as mentors too? What is the difference between a supervisor and a mentor? Both might act as employers, for example, engaging students to teach in subjects they coordinate. Both might help, therefore, to induct their student cohort into a discipline's professional life, to 'socialise' (Hall & Burns 2009; Austin 2002) them so that they understand what being a professional signifies and what career options might suit them. Socialisation is defined by Austin as having multiple aspects, which the postgraduate undergoes all at once: '…socialisation to the role of graduate student, socialisation to the academic life and the profession, and socialisation to the specific discipline or field' (Austin 2002: 96.)

This paper defines supervisor and mentor specifically and looks at how one proliferates the identities a staff member might adopt and the benefits a student might gain from them. The mentorship role is especially important in emerging subject areas where the concept of research itself and appropriate methodologies are developing; both supervisor and student might be working as 'reflective practitioners' (Schön 1987), each helping the other to refine and theorise practice. This is particularly true of the flourishing but still relatively young discipline of creative writing (Brien 2004, Dibble and van Loon 2004, Woods 2007, Harper and Kroll 2008 et al). In fact, supervision in the creative arts has provoked robust debate in the past decade or so as it tries to formulate a workable student-supervisor dynamic (Perry 2000; Dibble and Van Loon 2004; Baranay 2008; O'Mahony 2008) and understand the concept of 'best practice' for itself (see Williamson, Brien and Webb 2008; in particular Brien and Williamson, eds, Supervising the Creative Arts Research Higher Degree 2009).

It is true that some supervisors have always performed a variety of roles without self-conscious reflection on their practice, but aspects of the postgraduate experience have been increasingly professionalised for all stakeholders. Postgraduates' access to opportunities such as grants, jobs and fellowships (while enrolled or after graduation) will be conditioned by their publications, conference presentations, teaching experience and even supervisor or laboratory reputation. Correspondingly, an academic's chances of promotion will be affected by their supervisory performance, demonstrated by completion numbers, teaching excellence awards and postgraduate success in terms of publications, grants and awards. For busy academics trying to

juggle multiple career demands, self-reflexive supervision can also provide another research area – the pedagogy of supervision. In its second half this paper explores the nature of these complex relationships focused on the creative writing doctoral experience and considers how they impact on the student overall. Hall and Burns (2009: 49), for example, explore how identity theory provides a workable way of approaching this relationship.

In a field such as creative writing, defining knowledge, and defining the requisite skills to acquire it, is an ongoing challenge, given that the discipline is still debating the nature of creative research and the possible shapes a doctorate might take. To illustrate these ideas, this paper presents a case study of one postgraduate-mentor relationship within the discipline of creative writing, a relationship founded on what Walker et al term 'a stance of mutual respect... respect for ideas' (2008: 102).

Creative writers in academia – students as well as staff members – have at a minimum two major ways of being in the world – academic and writer. In the discipline of creative writing, where even the definition of research is fluid, the opportunities that mentors provide are almost as critical in developing viable career paths as the research itself. Establishing a disciplinary identity, therefore, maintaining a writing career, and teaching and administering, demonstrates the multiple roles that writer-academics, as well as postgraduates who teach, must adopt. In fact, doctoral programs in writing have been key in helping supervisors and their students to map out disciplinary boundaries, define creative research, clarify their own theoretical positions, interrogate the nature of the degree and its examination standards, and seek out best practice at all levels of teaching. This active engagement in the development of a dynamic discipline by both supervisor and student offers opportunities to shape degrees and research profiles in a way that has not been usual in already established areas.

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Exploring Language Use in Feedback Practices

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This paper reports on a research project that explores written feedback practices in Higher Degree Research (HDR) student education. Feedback lies at the heart of the HDR student's experience, and an understanding of the impact of language used in feedback seems desirable to support the student's learning experience. We refer to feedback as the information that supervisors provide to allow the student to close the gap between current performance (actual level) and the desired performance (reference level) (Kumar & Stracke, 2011; Parr & Timperley, 2010; Ramaprasad, 1983). This study explores HDR students' perceptions of the effectiveness of their supervisors' feedback: in other words: does the language used by supervisors provide the student with the information needed to close the perceived gap?

Feedback practices have been noted as a relatively under-researched area (Wang & Li, 2009). Previous studies on feedback practices at the doctoral level have been criticised for relying on personal opinions, interview and questionnaire date and a lack of scrutiny with regard to pedagogic practices (Li & Seale, 2007). The existence of a research gap with regards to responses/feedback on thesis drafts prompted Bitchener et al. (2011) to conduct a multi-method study to identify best practices in feedback practices. They reported that students value "written feedback on the specifics of their writing" (p. 40) and wanted both positive and critical comments. They also found direct feedback to be useful.

Our previous studies (Kumar & Stracke, 2007; Stracke & Kumar, 2010) provided some insights into the functions of language used in written feedback. Language serves a range of functions – we greet, we express surprise, we lie, we command, we regret, etc. In our research, we looked at the specific functions of feedback provided in the HDR context. Our sources of data were written comments by supervisors and examiners. Our findings, grounded in a data-driven analysis point to three types of feedback based on their speech/language functions: referential feedback (when the supervisor provides editorial, organization and content information), directive (when the supervisor tries to get the candidate to do something by means of suggestions, questions and instructions) and expressive (when the supervisor expresses praise, criticism and opinion). These functions are summarized in our pragmatic model of feedback (Kumar & Stracke, 2007).

In this paper, we apply our model to interview data with four mature HDR students to further understand the effect of feedback. We present the students' perceptions of written feedback they received from their supervisors on drafts of submitted versions of their PhD thesis. Our sources of data for this study are supervisors' written feedback on drafts of thesis, and oral interviews with the participants. We analysed the language related episodes in the interviews within our pragmatic model of feedback to further understand the effectiveness of the feedback addressed to the students.

Our findings reveal that the HDR students in this study appreciate all three types of feedback. Students find referential feedback – e.g. editorial information like when the supervisor writes, "Actually past tense is best,"—useful and apply the information provided to improve their writing. However, our data indicates that students are very much aware of the limitations of

referential feedback and prefer feedback that challenges them at a deeper level. Directive feedback—when supervisors ask questions or invite the student to explain a certain aspect of their writing—seems to be more effective in this respect. Students report that such feedback motivates them to go further and guides them, thus helping them to actively close the gap between their current and the desired level of performance. Students also clearly see value in their supervisors' expressive feedback, when, for instance, the supervisor openly criticises the student's work or offers his/her opinion on a certain matter. Such feedback is perceived as particularly helpful as students realize the gap between the supervisor's expectations and his/her own level of performance. The expressive nature of this type of feedback contributes to a peer-to peer type of dialogical interaction between the student and the supervisor in which both of them are equally involved and move towards the attainment of the learning goal, thus reducing the gap between current and desired performance.

Our study confirms that HDR students receive the three types of feedback developed in our pragmatic model of feedback that serve the referential, directive and/or expressive functions of speech. Even though students' reactions vary depending on the amount of and/or type of feedback received, it is clearly evident from this study that feedback that provides information on how to close the gap between current and desired performance is considered as useful to attain learning goals. This study shows that expressive and directive feedback worked best as it allowed the four participants to develop ideas how to close the perceived gap. Such feedback allowed for dialogue and interaction, thus supporting a peer-to-peer like relationship with, as one of the HDR students put it, the supervisor's "fine mind applying himself to [the candidate's] work".

This study increases our understanding of language use in feedback. Our interdisciplinary pragmatic approach clearly points to the usefulness and advantages of "systematically studying the impact of language use on the effectiveness of feedback" (Brinko, 1993, p. 588). This study benefits supervisors (and examiners) by providing them with a higher level of language awareness that will contribute to the co-construction of learning goals and the desired trajectory move towards attainment of learning outcomes.

References:

Bitchener, J., Basturkmen, H., East, M. & Meyer, H. (2011). Research report: best practice in supervisor feedback to thesis students. Wellington: Ako Aotearoa.

Brinko, K.T. (1993) The practice of giving feedback to improve teaching: What is effective? Journal of Higher Education, 64, 574 – 593.

Kumar, V., & Stracke, E. (2007) An analysis of written feedback on a PhD thesis. Teaching in Higher Education 12 ,4, 461–70.

Kumar, V., & Stracke, E. (2011). Examiners' reports on theses: Feedback or assessment? Journal of English for Academic Purposes, 10, 4, 211–222.

Li, S.,& Seale, C. (2007). Managing criticism in Ph.D. supervision: a qualitative case study, Studies in Higher Education, 32, 4, 511–526.

Parr, J.M., & Timperley, H.S. (2010).). Feedback to writing, assessment for teaching and learning and student progress. Assessing Writing, 15,2, 68–85.

Ramaprasad, A. (1983). On the definition of feedback. Behavioural Science, 28,1, 4–13.

Stracke, E. & Kumar, V. (2010). Feedback and self-regulated learning. Insights from supervisors' and PhD examiners' reports. Reflective Practice: International and Multidisciplinary Perspectives, 11, 1, 17–30.

Wang, T. & Li, L. (2009) International research students' experiences of feedback, in The Student Experience, Proceedings of the 32nd HERDSA Annual Conference, Darwin, 6-9 July 2009: pp. 444-452. Milperra, NSW: Higher Education Research and Development Society of Australasia.

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Quality and doctoral education: What's the problem?

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The quality of doctoral education is increasingly on the agenda of governments, universities and student representative bodies and in the future will be delivered in an environment characterised by selective funding for research, increased oversight of all aspects of the research degree system both at national and institutional levels, increased competition for good students, research staff and academic supervisors, and an increased use by stakeholders (including students) of indicators and associated league tables to make judgements about the quality of research education provision. In Australia, this has been the subject of a recent DISSR (2011) consultation paper which builds on an earlier series of policy statements in the area. The notion of 'doctoral quality' is, however, neither simple nor agreed and this paper seeks to unpack the notion within the context of the changing environment described above. The paper draws on UK experience regarding the quality of doctoral education from 1996 through to the present day taking account of the development of the national codes in this area.

The Higher Education Quality Council's 1996 Guidelines had relatively modest objectives being intended to cover 'both procedural and pedagogical matters while not being intended 'to be either comprehensive or prescriptive'. (p. v) The guidelines comprised 10 principles, each of which was followed by 'Policy considerations' and 'practical implications'. Within a short space of time, the HEQC, had been replaced by the Quality Assurance Agency and the first national Code of Practice regarding the delivery of research degrees published (1999). In 2004, that section of the code was revised with the new document outlining 27 'precepts and accompanying explanations. The precepts express key matters of principle that the higher education community has identified as important for the assurance of quality and academic standards.' (p. 1) Its introduction was followed by a desk-based audit based on self-assessment documents prepared by institutions.

In 2012 a new code is in the process of development which addresses the two dimensions of quality separately, Academic Standards (that is the thresholds for awards) and Academic quality and enhancement (that is the opportunities provided by an institution to enable students achieve what is required for an award). 2004's 'precepts' are replaced with 22 'indicators' which are 'the broadly shared view of all those responsible for research degrees about the systems, policies and procedures that are conducive to an excellent experience for research students and that support awarding providers in maintaining academic standards...(they also) reflect the requirements of the funding bodies, and will be used by them when monitoring providers' performance in this area.' '

In Australia, there 'are no nationally accepted Performance Indicators for measuring the quality of Australian research doctorates...'. The paper, however, examines the factors the country has implicitly identified as representing quality in doctoral education before identifying some of the issues and problems associated with the identification and measurement of this elusive and contested concept.

- DDoGS (2011). Best Practice Guidelines
- DIISR (2011). Defining Quality for Research training in Australia: A consultation paper.
- HEQC. (1996) (Higher Education Quality Council). Academic Standards in the Approval, Review and Changing of Degrees. London.
- QAA (Quality Assurance Agency for Higher Education) (2004). Code of practice for the assurance of academic quality and standards in higher education - Section 1: Postgraduate research programmes, Gloucester, UK.
- QAA (Quality Assurance Agency for Higher Education) (2010). Consultation on changes to the Academic Infrastructure December 2010.

Doctoral Systems: steps toward a systematic framework for analysis

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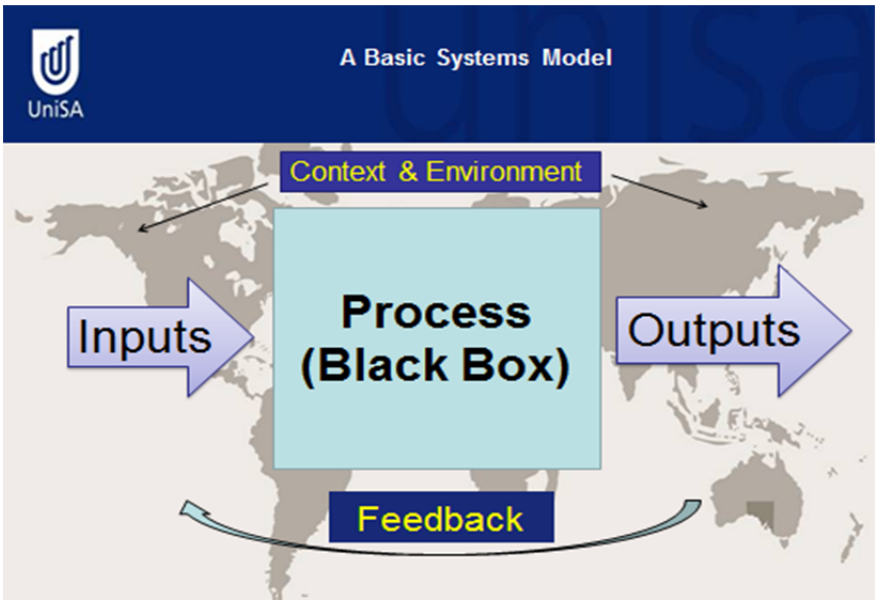
As doctoral education becomes increasingly globalised, there is a need for more comparative study of the area, but a lack of robust frameworks of analysis through which to do this. The majority of studies focus on the micro-level or the single organisation and the few global or national overviews we possess are largely descriptive in nature. This paper advocates a systems approach to the study of doctoral education, arguing that its adoption would encourage a greater degree of integration in the field and that our understanding would be enhanced by a model which relates the macro, meso and micro levels of analysis in a more systematic way. The paper posits a system model of doctoral education in which a series of inputs are transformed into outputs by means of a process and in which there is a relationship between the demands on the system (deriving from the broader environment within which the process is situated) and its outputs.



A systems approach to doctoral education can take account of the wide range of elements of analysis including the individual doctoral student and their experience, and the organisational units of department and university, as well as national/international systems. A systems model facilitates the identification and unpacking of key inputs, outputs and transformative processes across the range of analytical levels, will help to identify across countries factors held in common and also differences to enable more systematic cross-country comparison, and will assist the development of a comparative scholarship of doctoral education.

In view of the history of systems theory, it is important to emphasise that the paper does not propose: a general systems theory of everything; a mechanical, healthy/body functioning, a 'natural adaptation' or an eco-system metaphor, the notion of a self-righting autopoiesic entity, the presence of behaviourist responses or the idea that all social phenomena are functional for society that is, a teleological model.

The paper argues for the idea of a global doctoral system, before setting out the basis components of the doctoral system exploring them initially in the context of three issues which represent various systems levels: the development of the doctorate; power and the doctorate; and, the student experience.

The Engaged PhD: An institutional response to global and national developments

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Recent developments in domestic public policy and the increasing globalisation of doctoral education are encouraging Australian universities to re-examine the way they deliver research training. In the future, Australian doctoral education is likely to be delivered in an environment characterised by selective funding for research, increased oversight of all aspects of the research degree system both at national and also at institutional levels, increased competition for good students, research staff and academic supervisors, and an increased use by stakeholders (including students) of indicators and associated league tables to make judgements about the quality of research education provision. An increasing emphasis will be placed on the quality of the research student's experience. External reference points include (but are not limited to) the newly established **Tertiary Education Quality and Standards Agency (TEQSA)**, the developing Excellence in Research for **Australia (ERA)** process, the ongoing reforms to the Australian Qualifications Framework (AQF), the recently published Australian Research Workforce Strategy (2011) and the regular Postgraduate Research Experience Questionnaire (PREQ) surveys. Outwith Australia, Bologna is taking more importance beyond Europe borders. The University of South Australia (UniSA) has chosen to respond to this changing environment by developing the concept of the 'Engaged PhD'. This paper explores its rationale and outlines the organisational implications for successful implementation in the context of the developing and the view that the research student should play an active role in shaping their own experience. Key elements and issues addressed in the paper are:

Key Element of Engaged PhD	Implementation Challenge
Implementation challenges	Cultural changes and staff development Buy-in from those engaged in doctoral education Changes to Induction & Orientation Training for others associated with the Engaged PhD academic staff involved in direct supervision of research students staff involved in supporting research students staff involved in marketing and recruitment of research students staff involved in the administration of research degrees.

Early definition of purpose and development needs (Research and Professional Development (RPD) Analysis	Agreement over form of a Research and Professional Development (RPD) Analysis
Formal coursework (particularly for professional development students but available for others)	Persuading supervisors and students that engaging with support is a normal part of doctoral education rather than a remedial activity
Academic support for research and research writing	Enhanced Research Education support programs
Complementary training and support (access to academic and general staff development programs across University) Additional employment-related support Career-related placement opportunities Opportunities to work and study abroad Post-submission internships	Provide development opportunities and training for doctoral students in tertiary teaching and learning and in research degree supervision Providing appropriate professional placements
Resources and administration	Length of Engaged PhD program, Funding, Regulations Coordination and administration (including doctoral-level placements)

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Shut up and Write! Facilitating informal learning in doctoral candidature

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Doctoral candidates spend at least 2/3 of their degree outside of structured classroom instruction; most of their learning and writing takes place in their own time. Providing research degree candidates with writing help during their degree study is difficult. Candidates come into their degree with widely varying needs and levels of experience. Course work might seem to offer a way to create parity, but, according to the Australian Qualification Framework, mandated coursework can only occupy ⅓ of the degree time. Providing writing assistance within a less structured, voluntary workshop format is an approach which has been trialled with promising results (Boud, Cohen & Sampson, 2001; Stracke, 2010; Devenish et al, 2009). While semi structured approaches, such as writing circles and peer to peer support groups, have been developed and studied in some detail, little attention has been paid to the potential for leveraging informal learning opportunities which exist within research degree study.

'Shut Up and Write!' sessions, beginning to become popular around the world due to the amplifying effects of social media, are a rare opportunity to study informal doctoral learning in action. Shut Up and Write! is a concept which, as far as we can ascertain, was invented within the creative writing community who inhabit the 'cafe scene' in San Francisco.

The concept of Shut Up and Write! Is disarmingly simple: writers merely converge at a specific time and place, begin by chatting and then write together for a specified period of time. The format of the meetings is simple, as the SF Bay area website (http://www.meetup.com/shutupandwriteSFO/) states:

"The facilitator will lead introductions and then the group will write for an hour. There will then be 15-30 minutes of social time to get to know each other and possibly discuss personal writing successes such as getting published or overcoming writing resistance in some small way. No critiquing, exercises, lectures, ego, competition or feeling guilty."

Shut Up and Write! differs from other collective writing practices, such as writing circles, in that individuals do not engage in any other structured activity; they do not necessarily show each other the outcomes of their writing and there is no formative or summative assessment. Shut Up and Write! temporarily transforms writing from a solitary practice to a social one, which takes place in a public space that is not strictly 'educational' - like a cafe or lounge space, either on or off campus. Because it has no formal structure beyond what is implied in the name - that participants agree to be silent for a period of time and do their work - the experience of Shut Up and Write! is different each time it is enacted.

This paper reports on the experience of running such sessions at two different Australian institutions through three narrative accounts. The paper focuses on the unexpected benefits which emerged from this practice. Since this is a performative pedagogy: time, place, people all matter to how the sessions are conducted and what learnings emerge. In the narrative accounts we examined participants reported they learned:

- Writing / productivity techniques
- Technical 'tricks' - esp new cloud / social software
- Aspects of the 'hidden curriculum' of the PhD (Ward, forthcoming)
- 'Mundane' dimensions of academic practice (conferences, committees, peer reviewing, dealing with cantankerous colleagues etc)

The narrative accounts complicate the notion that facilitating spontaneous and technologically enriched learning always requires an investment in physical infrastructure - or, at least, classroom infrastructure. The wide scale adoption of wireless technology and development of cloud technology and social media enables the ‘classroom’ to be a practice which is enacted anywhere that bodies can be seated to write.

The experiences we have reported on in this paper suggest there is untapped potential within activities like ‘Shut up and Write!’ to promote informal learning and peer to peer bonding within the research degree experience. These robust informal learning practices, once instigated and promoted, can be a sustainable way of providing an alternative support network for some candidates. As we noted in our stories, Shut up and Write! style activities are not for everyone. A certain number of people who come never return as they do not find the environment conducive to productive work. A further development of this work is underway in both institutions as we trial the key feature - of working quietly together in focused bursts - within more traditional classroom environments.

References

Boud, D., Cohen, R., & Sampson, J. (2001). Peer learning in higher education: Learning from & with each other. Architecture. Kogan Page.

Boud, D., & Lee, A. (2006). What counts as practice in doctorial education. 7th Quality in Postgraduate Research Conferences: Knowledge creation in testing times, Adelaide, Australia.

Kamler, B., & Thomson, P. (2006). Helping doctoral students write: Pedagogies for supervision. New York: Routledge.

Larcombe, W., McCosker, A., & O'Loughlin, K. (2007) Supporting education PhD and DEd students to become confident academic writers: An evaluation of thesis writers' circles. Journal of University Teaching & Learning Practice, 4(1), 2007.

Wenger, E. (1998) Communities of practice. Learning as a social system. Systems Thinker.

Mewburn, I. (2011) Troubling talk: Assembling the PhD candidate. Studies in Continuing Education, 33 (3), pp. 321-332.

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‘These are issues that shouldn’t be raised in black and white’: the culture of progress reporting and the doctorate

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This paper reports on findings from a study undertaken at a large Australian middle-band university into student and staff understandings of the role and efficacy of periodic progress reports during higher degree candidature.

Under the influence of pervasive ‘knowledge economy’ discourses, many governments align the production of research with the promise of future knowledge-driven economic growth (Australian Business Foundation 1997; Organisation for Economic Co-operation and Development 1996, United Kingdom Department of Trade and Industry 1998). National imperatives to produce more research and more researchers have transformed long-standing problems and inefficiencies within research cultures – such as high attrition from doctoral programs – from discrete (even hidden) institutional knowledge into matters of national public concern (Marginson and Considine 2000). The Australian experience of government intervention in systems of research training has corollaries in the UK, New Zealand and many other national higher education systems during the last decade. Commenting on this phenomenon, Strathern (2000) notes that the academy has responded to external pressures for accountability by the development of a ubiquitous ‘audit culture’. This paper does not decry the existence of audit cultures in postgraduate research, but offers a critical examination of some of its practices; in particular the gaps between auditors’ aspirations and student and staff practices.

Progress reporting is designed to monitor and provide feedback to higher degree by research candidates on their progress in their research degrees, but the major findings of this study show there is widespread confusion and lack of clarity as to the purpose and ultimate audience of these reports, which leads to less than effective reporting by all parties. There is little existing literature on the role, purpose and effectiveness of progress reporting within PhD candidature, although there is a significant body of research regarding the conduct of the supervisor/student relationship more broadly (Cotterall 2011, Kelly 2009, Kiley and Wisker 2009, Lee and Williams 1999; Lee, Johnson and Green 2000, Petersen 2007 among many others). This literature overwhelmingly ignores the ‘little tools of knowledge’ (Becker and Clark 2001) such as progress reports. A notable exception is Cuthbert and Spencer (2001) and a further paper by Cuthbert (2004). Cuthbert and Spencer (2001) describe the parlous situation in one faculty within a G08 where ‘filing cabinets bulged’ with satisfactory progress reports while the performance of the cohort with respect to completion and attrition indicated problems which were not being reported on. Cuthbert and Spencer (2001) examine progress reports from students located in a large Australian faculty of humanities and social sciences who withdrew from candidature without completing their research. The researchers attempted to measure the degree to which problems, which might have led to withdrawal or non-completion, were flagged in the available document trail, using discourse analysis as a tool. They found that ‘telling the truth is hard and the longer the truth goes untold the harder it becomes to “come clean”’ (Cuthbert and Spencer 2001, 4).

This study was conducted in a large higher education provider (enrolling over 70,000 students) based in metropolitan Melbourne, with two suburban campuses and two overseas campuses. The study was guided by three key questions: why does the present system work so badly as a mechanism for reporting and improving progress? How is it understood and used by key stakeholders: students and supervisors? And, how can it be improved, or reconceived, before automation to avoid the risk of the costly upgrading of an ineffective mode of reporting? We gathered data through focus groups and one on one interviews with key stakeholders including, students, supervisors and key administrative staff. Since it was preferable for participants to have

some experience of the progress reporting system, only students at least two years into their candidature were selected from those who responded to the advertisement. In all, twenty students took part in the study; twelve in humanities, business or design disciplines and eight in the laboratory-based sciences/technologies or nursing. Fifteen students took part in the three focus groups and five students were interviewed separately. Sixteen supervisors took part in the interviews; one supervisor subsequently withdrew consent, levaving us with a sample size of fifteen. After talking to students and supervisors it was decided to include administrators; only five could be interviewed, but these participants provided another interesting and valuable perspective on the reporting process.

A key finding in this study, with implications for both policy makers and research managers, is the influence of 'social learning' practices which may run counter to institutional imperatives and inhibit the frank reporting of progress and problems in candidature. We conclude that no ready or transparent nexus may be assumed between progress reporting, the effective monitoring and enabling of candidates' progress in their research programs (including addressing problems being faced by candidates) and progress itself. Our findings call into question the usefulness of the annual or bi-annual progress report as currently utilised in many Australian universities. These findings may be generalisable beyond the Australian higher education system to universities in other countries which rely on similar progress reporting processes. Arising from this research is the recommendation that progress reporting needs to be re-oriented from its role within the administrative apparatus of graduate research management and embedded in the pedagogy and curriculum of research training.

References

Australian Business Foundation. 1997. The high road or the low road: alternatives for Australia's future, Sydney: Australian Business Foundation.

Baird, J. 2010. Accountability relationships in Australian Postgraduate research education, Quality in postgraduate research conference: educating researchers for the 21st century, Adelaide, Australia.

Becker, P., and W. Clark (eds.). 2000. Little tools of knowledge: historical essays on academic and bureaucratic practices, Ann Arbor: University of Michigan Press.

Cotterall, S. 2011. Doctoral students writing: where's the pedagogy? Teaching in Higher Education 16, no. 4: 413-425.

Cuthbert, D., and C. Spencer. 2001.White Lies, Damned Lies and Annual Progress Reports of HDR Candidates and their Supervisors. Australian Association of Institutional Researchers (AAIR) Forum 2001: Proceedings: University of Central Queensland. http://www.aair.org.au/jir/html/Papers2001.htm (accessed on 5.12.2011).

Cuthbert, D. 2004. Quality Assurance in Research Training: A View from the Humanities and Social Sciences, Proceedings of the Australian Universities Quality Forum.

Department of Innovation, Industry, Science and Research (DIISR). 2011. Defining Quality for research training in Australia, Melbourne: Department of Innovation, Industry, Science and Research.

Department of Education, Training and Youth Affairs (DETYA). 2001. Factors associated with the completion of research higher degrees, Report No. 37, Sydney: Department of Education, Training and Youth Affairs.

Excellence in Research Australia. 2011. Website. http://www.arc.gov.au/era/era_2010/era_2010.htm (accessed on 5.12.2011).

Golde, C. 2005. The Role of the Department and Discipline in Doctoral Student Attrition: Lessons from Four Departments, The Journal of Higher Education 76, no. 6: 669-700.

Kiley, M and G. Wisker. 2009. Threshold concepts in research education and evidence of threshold crossing, Higher Education Research and Development 28, no. 4: 431- 441.

Lee, A and L. Johnson, B. Green. 2000. The PhD and the Autonomous Self: Gender, rationality and postgraduate pedagogy, Studies in Higher Education 25, no. 2:135-147.

Lee, A. and C. Williams. 1999. Forged in fire: narratives of trauma in PhD supervision pedagogy, Southern Review 32: 6–26.

Lovitts, B. E. 2001. Leaving the ivory tower: The causes and consequences of departure from doctoral study (1st ed.). New York: Rowman and Littlefield Publishers, Inc.

Marginson S., and M. Considine. 2000. The enterprise University: power, governance and reinvention in Australia, Cambridge UK: Cambridge University Press.

Organisation for Economic Co-operation and Development (OECD) 1996. The knowledge-based economy, Paris: Organisation for Economic Co-operation and Development.

Petersen, E. 2007. Negotiating academicity: postgraduate research supervision as category boundary work, Studies in Higher Education 32, no. 4: 475-487.

Strathern, M. (ed.). 2000. Audit cultures: anthropological studies in accountability, ethics and the academy, London: Routledge.

United Kingdom Department of Trade and Industry (DTI). 1998. Our competitive future: building the knowledge driven economy. London: Department of Trade and Industry.

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Australian Employers' Expectations and Perceptions of PhD Graduates in the Workplace

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The reasons students undertake doctoral education are as nuanced and diverse as the students themselves, as are the outcomes that they expect a doctorate to provide. While primary purposes of the doctorate remain the training of the next generation of researchers and the creation of new knowledge, graduates often expect the PhD to benefit their career and employment outcomes. Employers also have expectations for the outcomes of doctoral training and criticisms have included that graduates are too narrowly specialised and lacking in 'transferable' skills.

The Australian Cooperative Research Centre (or CRC) Program brings together industry, government, and universities across the broad science, technology, environmental, and medical fields to collaborate in applied, end-user driven research. The program has repeatedly claimed to produce graduates who are 'industry ready', although no demographic information on graduates or quantitative information on their outcomes had been collected. This study (Manathunga, Pitt, Cox, Boreham, Mellick, & Lant 2011) sought to redress this and to canvass the perspectives of employers of Australian PhD graduates.

CRC graduates approximately 5-12 years post-graduation were targeted, along with a sample of PhD graduates from the same timeframe and matched disciplines from three research-intensive universities in Australian capital cities. Graduates were invited to complete an online survey and were requested to include their employing organisation, along with a contact who could be invited to complete the employer survey. Responses were obtained from 327 CRC and 741 non-CRC graduates, as well as 280 employers (separate divisions within organisations were counted as separate employers), 75% of who were from universities, 19% from the public- and 6% from the private-sector.

There was a significant ($\chi 2=11.34$, $p=0.001$) gender breakdown, with females comprising only 35% of the CRC group, compared with 47% in the non-CRC group. Graduates' employment destinations at the time of survey were also significantly different ($\chi 2=35.1$, $p=0.000$). This supports the claim that the CRC program increases PhD student's exposure to work outside of academia, with 58% of non-CRC participants working in academia, compared with only 41% of CRC participants.

Over 90% of graduates in both groups reported that interest in doing research and interest in the discipline area had been important/very important in deciding to undertake a PhD, followed by personal satisfaction, intellectual and academic development, and interest in the thesis topic. Thus, whilst the top five reasons retrospectively ranked by graduates in both groups were highly intrinsic, career considerations (such as, to improve career prospects, to develop a range of specialist skills, and needing the credential for their career/work) were also rated as being important/very important by 50-70% of graduates in both groups. Graduates again rated personal interest as being important/very important in choosing their PhD topic (CRC = 89%, non-CRC = 93%), followed by funding availability for CRC graduates (79%) and professional relevance for non-CRC graduates (69%). Additionally, over 80% of participants in both groups agreed that the skills learnt during their PhD had prepared them for employment after graduation.

Results suggest that employers from different sectors view the skill sets required of graduates with varying importance. Effective communication skills were, however, reported by the largest proportion of employers in each sector as being within 'the five most important attributes/skills for recent PhD graduates employed in their organisation' (Private = 73%, Public = 51%, University = 56%). Employers were also asked why their organisation employs PhD graduates and these open-ended responses revealed several themes. One of the most prevalent being that PhD graduates were employed to conduct research – often interspersed with elaboration that the organisation requires people with high-level research skills. Also common from university employers was that they hire PhD graduates because 'it's a university' and that a PhD is the necessary entry-level, or minimum, qualification for employment in universities. Teaching, although still mentioned frequently, was a less common theme and was often listed behind research.

Employers also reported that they do not want to hire PhD graduates whose focus is overly specialised, or who are lacking industry focus, teamwork, or communication skills. Interestingly, a lack of teaching skills was only

mentioned by a handful of employers as a reason that they would reconsider hiring a PhD graduate. It was, however, mentioned by a few employers at the end of the survey, for example, a ' PhD per se is not good preparation for the teaching requirements of higher education however there is generally a maturity of thought and analytical ability that is beneficial from PhD training' (#456, an Associate Dean Academic and Head of Department). These open-ended responses suggest a conflict within the perceptions of employers – that the PhD is simultaneously viewed as a minimum entry requirement, yet also viewed as imbuing recipients with the skills necessary for work.

The quantitative data also reflected this tension. The extent to which employers expect recent PhD graduates in their organisation to possess various attributes/skills was examined and compared to the level they reported observing these same skills and attributes in graduates. This revealed that employers' expectations were consistently not being met. Interestingly, this mismatch was also true for university-sector employers, indicating that they did not seem to view PhD graduates as being 'work ready' for academia.

Employers were also asked to what extent they would anticipate an employee who obtains a leadership role in their organisation to have various backgrounds/experiences. Of the eight backgrounds examined, having had experience working in industry was highly rated by a greater proportion of private-sector respondents (50%) than those from the public- (23%) or university-sectors (14%; Fisher's exact= 0.004). In contrast, having worked as part of a research team before was highly rated by a greater proportion of university respondents (49%) than private- (21%) and public-sector (25%) employers (Fisher's exact= 0.004). Of interest is that only approximately 35% of university- and public-sector employers reported that they did 'not at all' expect that an individual who obtains a leadership role in their organisation was likely to be male, compared with 57% of private-sector employers.

Given the proportion of PhD graduates who find employment outside academia and that graduates have intrinsic and career prospects in mind when deciding to start a PhD, it is prudent and responsible that we provide doctoral students with opportunities to have their PhD meet these needs. Employers also have expectations about doctoral graduates, and the types of attributes and skills that they expect graduates to be able to demonstrate. The employers in this study highlight the varying combinations of skill sets valued across sectors and mismatches between employers' expectations of the extent to which recent graduates will possess various skills or attributes and their actual demonstration. This indicates that employers (including university employers) need to engage in greater dialogue to reach a shared understanding about the purposes (and extent) of the PhD.

This is not to say that doctoral training should become about employability, but graduates should be alerted to ways they can develop the skill sets valued by potential employers. Additionally, opportunities for increasing graduates' exposure to industry during the PhD may serve to open broader employment opportunities. The study serves to prompt further consideration of the concept of graduate attributes and skills at the doctoral level and of the different purposes that the doctorate can realise for graduates and employers. The discussion of these purposes (and both graduates' and employers' expectations and perceptions regarding the possession and demonstration of various graduate attributes and skills) enables consideration of the extent to which a doctorate should not be viewed as the end of training, but as a precursor to ongoing learning.

References

Manathunga, C., Pitt, R., Cox, L., Boreham, P., Mellick, G., & Lant, P. (2011). Evaluating industry-based doctoral research programs: perspectives and outcomes of Australian Cooperative Research Centre graduates. Studies in Higher Education, DOI:10.1080/03075079.2011.554607

This work draws on data collected for an Australian Research Council Linkage Project on Research and Innovation Leaders for Industry (LP0775106). Collaborators on the project were Catherine Manathunga, Rachael Pitt, Paul Boreham, Paul Lant, George Mellick, and Christa Critchley (retired). Research assistants were Laura Cox, Jacqueline Davis, Jegar Pitchforth and Rex King. Partner Organisations were the Australian Research Council, Rio Tinto, CSR Sugar, Queensland Department of Employment, Economic Development and Innovation, and the Cooperative Research Centre for Sugar Industry Innovation through Biotechnology, with Meat & Livestock Australia Ltd. The online surveys for the project were administered by I-view.

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Capacity-Capability of Supervision Relations: Potentialities for Positioning and Repositioning Postgraduate Students in Transforming Research Contexts

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Research education is crucial to the sustenance and development of localising[21] knowledges from which a globalising knowledge economy continues to transpire in transforming research contexts. In the 'new era of research', many governments are strategically channelling funding toward research capacity and capability building. For example, in New Zealand the government allocates funding to universities through the Performance Based Research Fund (PBRF). From its outset in 2002, 25 percent of the PBRF to each university has based on masters and PhD thesis completions - exemplifying the government's focus on research training (an aspect of research capacity and capability building) through postgraduate research. The Building Research Capability in the Social Sciences (BRCSS) network (2004-2009) had the aim of exactly what its name implies—to build research capacity and capability. The award of postgraduate scholarships was one mechanism through which the network endeavoured to build research capacity and capability.

In response, various threads of conversation around the capacity and capability building potentialities of research education are evident in existing higher education literatures and in the strategic goals and research student profiles of universities. In this round table discussion I presented examples of where 'capacity building' or 'capability building' appear within contemporary New Zealand and Australian university policies and plans. Attendees then shared examples of where 'capacity building', 'capability building' or similar messages appeared within their university contexts. It became apparent that such phrases are generally employed with no associated definitions or suggestions as to how to actually build capacity or capability.

So, I raised the question: what might it practically mean to build research capacity and capability in the supervisor-student-knowledge relation? I explained that in proposing the research capacity and capability building potentialities of postgraduate geography supervision practices in New Zealand I had assumed that capacity and capability are necessarily differentiated. My work was premised on a capacity-capability continuum, on which capacity and capability are situated at opposing ends, and the generation of research capability is contingent on capacity building. Participants then discussed and debated the concepts of capacity and capability and the relationship between these both in general and specifically in the context of the supervision relation.

Next, I presented definitions of capacity and capability in the higher education context provided by Le Heron et al. (2011). For Le Heron et al., "capacity[22] is defined as both pointing to 'what is available and what can be grasped, given available understandings' and capability as moving into an 'in-the-making' mode ', an ability to see 'translating' as ongoing and never completed work,

[21] *The terms 'localising' and 'globalising' are used instead of the terms 'localised' and 'globalised' to express the understanding that these are ongoing processes.*

[22] *Bold emphasis added.*

and 'recognising and making the most of known aptitudes'." (p. 1404). These geographers "understand 'capability building' as enactment or enhancing our potential to become – the co constitutive performance of change and making ready for it. Knowing differently is central and [they] highlight the institutions, dispositions, and substantive understandings for knowing differently." (pp. 1403-1404).

Then, we considered, how might such capacity and capability building potentialities be maximised to position and reposition graduates for academic and non-academic careers in the 'new era of research'? Here I proposed a framework for research capacity-capability building in the context of supervision relations, drawing on the multiple positionalities of supervisors and students. The framework moves from capacity to capability building from the individual to the group, promoting the generative potentialities of co-learning and co-production, to eventuate in the individual researcher 'becoming'. The framework's applicability to different situations was considered and critiqued.

Reference

Le Heron, E., Le Heron, R., & Lewis, N. (2011). Performing research capability building in New Zealand's social sciences: capacity-capability insights from exploring the work of BRCSS's sustainability theme, 2004-09. Environment and Planning A, 43(6), 1400-1420.

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What's happening to Creativity in Science and Engineering Doctoral Research?

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Introduction

This paper outlines why creativity is important for doctoral researchers and briefly explores two currently dominant discourses of creativity which may be influencing researchers. It continues by reporting findings on science, technology, engineering and mathematics (STEM) discipline researchers' views on creativity, its role in their work and which environmental factors might facilitate more creative working. Finally it offers recommendations to those working to support STEM researchers in the development of their creative potential.

The importance of creativity for researchers

Creativity is often considered to be a core element of doctoral research, since candidates are expected to make an original contribution to their discipline. It is also frequently identified as a distinguishing feature of outstanding or 'publishable' research. Those researchers who wish to forge academic careers therefore need to establish a record of novel work.

Discourses of creativity in STEM research environments

Two discourses of creativity are influential in the current STEM research environment. By discourse here, we mean more than the mere use of language. Rather a discourse tends to set the boundaries of discussion and to be both normative (i.e. defines what is acceptable) and productive (i.e. contributes to development of opinions) (Kendall & Wickham). Discourses tend to reflect the interests of those with influence such as government and employers.

The positive discourse of Creativity as Capital

This discourse relates to the 'knowledge economy' and sees higher education framed in primarily economic terms. Techno-scientific innovation and university-industry partnerships are viewed as key drivers of the knowledge economy. STEM PhD graduates are regarded as key contributors and creativity is identified by policy makers as a key capacitating asset (LERU).

The negative discourse of Creativity and the Impact Agenda

This discourse may be regarded as a natural consequence of 'performativity' (Lyotard) becoming widespread in higher education. It prioritises a certain type of numerical evidence concerned with efficiency and productivity (Standish). It contributes to a risk-averse 'cult of mediocrity' in STEM research (Angel Medina) and regards creativity as a liability.

STEM researchers' views

A qualitative investigation found a broad range of views of creativity. Some of these were highly restrictive, defining creativity merely as a kind of resourcefulness. Researchers' tended to fall into two broad categories with regard to the role of creativity in their work. In the first, creativity was seen as central to scientific endeavour and as career advancing. In the second, it was viewed as peripheral to science and creative work was seen as less valuable or serous and possibly even wasteful (Walsh et al.).

Three environmental factors emerged which were considered to play a role in facilitating creativity for doctoral researchers: a positive research culture, balancing support and freedom; constructive communication: and safeguarding sufficient time and space for creative work.

Three implications for developers

Firstly, developers need to keep in mind that some researchers have a negative view of creativity, and that the level of this negativity may be increasing due to the negative discourse mentioned earlier which encourages low risk projects with predictable impact. Secondly, development workshops need to acknowledge the complexity of creativity and avoid too narrow a focus on 'creativity skills' such as brainstorming. Evidence suggests that some STEM researchers see these techniques as unscientific, too commercial and superficial. It may be helpful to consider more fully the creative process and how it complements research activities, making reference to creative academic role models and acknowledging the unpredictable and non-linear nature of scientific advances. Thirdly, the important role of the environment should be emphasised and development offered to support researchers in order to better influence it. This could include offering training in communication, assertiveness and negotiation skills which at first glance have nothing to do with creativity.

Conclusion

This paper argues that a more holistic approach to the development of creativity amongst STEM researchers is needed. Elements of the contemporary discourse of creativity in higher education, such as the influence of 'performativity' and the demands of prospective research funders for predictable impact need to be acknowledged and challenged. The term 'creativity' needs to be reclaimed as a positive for all researchers and positioned as an essential aspect of successful STEM research. In addition, development activities need to avoid a seemingly superficial over-emphasis on skills and to focus more on achieving environmental improvements which can assist researchers in reaching their creative potential.

Note: This project was part funded by Vitae, a UK based organisation supporting the development of early career researchers. Creativity Good Practice Guides, are available from:

www.imperial.ac.uk/graduateschool/studentexperience/creative

References

Angel Medina, M. 2006. The pursuit of creativity in biology. Bioessays 28: 1151-52.

Kendall, G and Wickham, G. 1999. Using Foucault's Methods. London: SAGE

LERU (League of European Research Universities). 2010. Doctoral degrees beyond 2010: Training talented researchers for society.

Lyotard, J. 1984. The Postmodern Condition: A Report on Knowledge. Manchester: Manchester University Press.

Standish, P. 2011. Transparency, Accountability, and the Public Role of Higher Education. Paper at SRHE Seminar: Higher Education as a Public Good, New College Oxford, 4 July 2011.

Walsh, E, K Anders, S Hancock & L Elvidge. 2011. Reclaiming creativity in the era of impact: exploring ideas about creative research in science and engineering, Studies in higher education. Online 25 October 11.

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The final transition: a curriculum view of PhD examination in Australia

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This paper, which is related to my PhD work, looks at examination, the process that completes the experience of doing a PhD in Australia and transforms the candidate's identity from student to autonomous researcher. As oral defences and vivas are rare, examination of the thesis is an extremely high stakes assessment: it will determine the outcome of the years spent planning and executing a project, organising and writing material, and generally beginning to learn what it means to do research.

Using a curriculum structure (see Figure 1), it is possible to illustrate how various forces, some of which are invisible to the participants, both act on and are created by people in PhD practice. My aim is to reveal the micro-political factors in the local context and the power relations operating in the lived experience of the PhD, and in this paper examination is considered within this framework

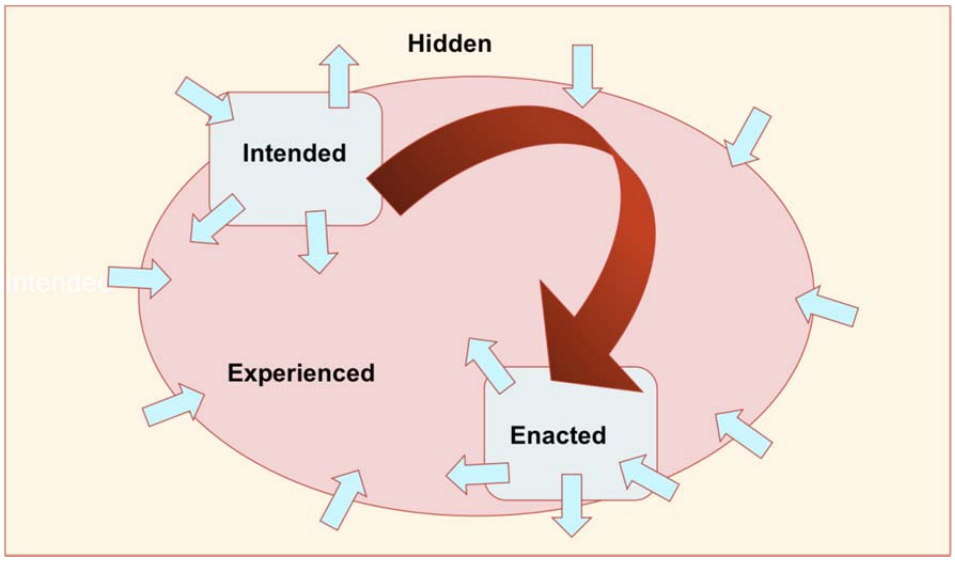

Figure 1: A conceptual framework for curriculum

Modern curriculum planning tells us that an assessment (which is usually described by documentation and is thus 'intended', needs to be linked to course material to test that students have met (or exceeded) expressed learning outcomes, and that expectations for students are clearly described. However, no such clear link between expectation and outcome exists for PhD examination (Gilbert, 2009).

The hidden curriculum (the cultural context in which the examination takes place) exerts an influence on students, supervisor, faculty and institution, whether any individual realises it or not. As long ago as 1984, Nightingale reported the comment of an examiner on what makes a

good thesis as "I know one when I see one"—a comment which could be interpreted benignly as reflecting tacit professional knowledge, or less benignly as part of "an elite process of mystification" (Morley, 2004). Johnston (1997) concluded that examination is "enshrouded in mystery and even sometimes secrecy…based on assumptions which are largely untested and on understandings which are not necessarily open for discussion." (p. 94) Specifically, the hidden curriculum of PhD examination includes issues such as what originality really means (Tinkler & Jackson, 2004), institutional beliefs about what a PhD is and what it means to do one, as well as disciplinary norms for conceptualising the PhD.

The intended curriculum is what the examination is 'supposed' to be – what it is said to be by the published papers and policies of the institution and the Faculty or school where the student is enrolled, and what is said by various theorists and writers in publications. Examples of lack of clarity in the documentation of Universities include, for example, what it means to do a thesis by publication (rules may vary even between AOUs in the same institution) and issues of writing and thesis examination in the Fine Arts (Paltridge et al, 2011). In another example, both the word 'viva', and the concept of oral presentations generally seem to be commonly used in Aus for both pre- and post-submission presentations, often without clear pedagogical framing or relationship to the thesis examination.

The enacted curriculum covers what is known about how examination actually works in Australia. In the past 10 years an ARC grant to researchers at the University of Newcastle (NSW) has produced more than 10 papers in peer-reviewed journals, as well as seminars and workshops on many University campuses and conference papers. Their ideas have been developed by analysis of more than 2100 examiners' reports of more than 800 students at 26 institutions across every discipline, and they have reached three general conclusions:

- new knowledge in a thesis is not always celebrated by the examiners
- many examiners are more comfortable with 'marking' rather than 'examining'
- confusion exists between what is being examined: the candidate or the thesis.

The enacted curriculum of examination also includes the role of supervisor, which is generally agreed to be:

- To ensure the thesis is as it good as it can be before it is submitted
- To advise on suitable examiners
- To advocate for and counsel the student about amendments or revisions asked for by examiners

However, supervisors are not often trained for these roles, and they may not always be aware of the institutional and disciplinary forces that operate in the process of examination.

The final key point about the enacted curriculum is that the secrecy of the process in Australia (examiners are usually forbidden from communicating with each other, and it is possible for examiners to remain anonymous in some jurisdictions) means that it's hard for academics (who are of course also supervisors of their own students) to learn how effectively they are examining. Preparation for academics in the conducting of thesis examination ranges from non-existent to quotidian to idiosyncratic, and the absence of a viva limits their opportunity for reflection on their practice in a community of scholarship.

So, do students experience a 'rational', well-managed approach to PhD examination? Given the factors outlines above, it isn't surprising that the data I have collected in my PhD project indicates that students are subject to conflicting advice, confused understanding, muddled administrative processes and a general lack of clarity about how their work will be assessed. The

strong focus on the supervisory relationship does not always serve students well when it comes to examination in Australia, nor does the lack of a viva.

PhD examination in Australia is not well conceptualised at any level other than in the literature, and consequently seems rather random in relation to the PhD process. Unacknowledged forces disrupt the discourse of the rational that characterises description of the process in University documentation. Examination is most easily dealt with by institutions as a management issue — but my research would suggest that even that is often not well done.

References

Bourke, S., & Holbrook, A. (2011). Examining PhD and research masters theses. Assessment and evaluation in Higher Education. doi: 10.1080/02602938.2011.638738

Gilbert, R. (2009). The doctorate as curriculum: a perspective on goals and outcomes of doctoral education. In D. Boud & A. Lee (Eds.), Changing practices of doctoral education (pp. 54-68). Oxford: Routledge.

Holbrook, A., & Bourke, S. (2004). An investigation of PhD examination outcome in Australia using a mixed method approach. Australian Journal of Educational & Developmental Psychology, 4, 153-169.

Holbrook, A., Bourke, S., Lovat, T., & Dally, K. (2004). Investigating PhD thesis examination reports. International Journal of Educational Research, 41, 98-120.

Johnston, S. (1997). Examining the examiners: An analysis of examiners' reports on doctoral theses. Studies in Higher Education, 22, 333-347.

Kiley, M., & Mullins, G. (2004). Examining the examiners: How inexperienced examiners approach the assessment of research theses. International Journal of Educational Research, 41, 121-135.

Lovat, T., Holbrook, A., & Bourke, S. (2008). Ways of knowing in doctoral examination: How well is the doctoral regime? Educational Research Review, 3(1), 66-76.

Morley, L. (2004). Interrogating doctoral assessment. International Journal of Educational Research, 41, 91-97.

Mullins, G., & Kiley, M. (2002). 'It's a PhD, not a Nobel Prize': how experienced examiners assess research theses. Studies in Higher Education, 27(4), 369-386.

Nightingale, P. (1984). Examination of research theses. Higher education research and development, 3(2), 137-150.

Paltridge, B., Starsfield, S., Ravelli, L. Nicholson, S. (2011) Doctoral writing in the visual and performing arts: Issues and debates. International Journal of Art and Design Education, 30(2), 242-255

Pearson, M. (1999). The Changing Environment for Doctoral Education in Australia: implications for quality management, improvement and innovation Higher education research and development, 18(3), 269-287.

Tinkler, P., & Jackson, C. (2004). The Doctoral Examination Process. Maidenhead: Open University Press.

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Supervision courses as cross-disciplinary culture knowledge experiences

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In a study conducted in a Swedish Academic context, written examinations and written answers to questions about scientific knowledge about supervision were analysed. In the analysis four themes were identified. All these themes are described as field of tension. The first theme has to do with lab work versus ability to write. The second is about working in teams versus to study alone. The third considers the research question, asking whether the PhD student formulates that on their own or whether it is already formulated by a project? The fourth theme concerns any benefits or clashes with being a clinical practitioner at the same time as the research is continuing, or instead being a full time PhD student.

Research question

What kind of cross disciplinary cultural differences are noticeable in courses for supervisors?

Background

Knowledge about supervision is most often gained from studies in the field of social sciences. However, researchers who are confronted by this kind of knowledge most often do so in courses about supervision and might often be from scientific fields, such as medicine. We see disciplinary differences as cultures and define the challenges of different ways of constructing knowledge inflected by disciplinary differences as cross- cultural knowledge challenges. In those courses, supervisors are confronted with how learning and knowledge are expressed. Neither is supervision described in a way which they recognise as adequate to their experience. Being a good researcher in the field of medicine, is often being good at working in a lab rather than problematising given knowledge and constructing new knowledge .

Several themes emerged in the literature

1) Cultures of knowledge construction,
2) Faculty disciplinary differences

Culture Knowledge/differences in supervision:

Most research into cultural differences in supervision focuses on culture in terms of origin, ethnicity, religion—cultural diversity is a feature of postgraduate student expansion, and knowledge sharing and growth are fuelled by the welcoming, and empowering of culturally different perspectives and voices.

- Different learning backgrounds, styles, approaches

- Culturally effected constructions of knowledge – indigenous, culturally different
- Culture shock adjustment, change
- Tertiary literacy - language and expression issues

There are also personal learning differences

2) Faculty disciplinary differences

- Different disciplines construct and articulate knowledge differently (Becher, Trowler)

Supervision is (consequently?) constructed and enacted differently in different discipline areas

In supervision programmes this can lead to tribal misunderstandings and stances, silos, what is needed is cross fertilisation, creative problematizing, ways in which cross disciplinary learning about supervision can function to enable research learning, sharing and developing good practice. Hermeneutical understanding (Paul Ricoeur) helps to analyse and explain the data and to identify fields of tension in the data. The main fields of tensions which our respondents highlight are 1) lab—individual ability to read, analyse, write, 2) team—study alone and 3) formulate own question—take part in established project. These are explored further below from participant responses.

1) lab – individual ability to read, analyse, write

"During an average day in the lab a hard working student will make about 30-40 attempts and depending on the cell type get about 0-4 usable measurements. Depending on the experimental details there will be stretches of several weeks without producing any usable data at all." (5)

This participant points to the necessity of not making any mistakes in the experimental design and further there are many attempts and very few which might be useful in the end. Perhaps this can be translated to the field of social science where field-notes are taken weeks after weeks and still the data is hard to use in the thesis. (5)

2) Team – study alone

This field of tension demonstrates the different ways of working in research where in the sciences and some social science projects, research is moor often conducted in a team, whilst in the humanities it is more often conducted by a lone researcher. Sciences and some social sciences—teamwork, identify own niche community, joint supervision, project orientated Humanities more often isolation, individual project and engagement—dyadic or triadic relationship - supervisor(s) and postgraduate researcher

"We work in smaller or larger teams, on tight schedules, especially in competitive areas, which are also influenced by expectations from giant agencies. There is little space for formulation a research question or confront theories from the student's side. The student is expected to

preform experiment in the laboratories. Consequently, students are employed full time and doctoral positions are often seen as a form of employment to pursue interesting projects and not a journey of learning. There is a constant need for performing the good experiments, from which results can be built into a publication" (12).

3) Formulate own question: take part in established project

In her paper participant (2) comment on the quality of the lab results and she compared them with arts and humanities where "the quality of the text is an important "lab result".

The differences between those who came from different faculties ie the faculty of science or medicine, where the lab was in focus, and those who came from social sciences, humanities or art with reading, analysis and writing in focus, emerged to be the main topic discussed and referred to as differences between (disciplinary) cultures. We argue that further research might explore whether Cross disciplinary supervision development programmes offer a rich opportunity to consider how knowledge construction takes place, and to benefit from the variety of approaches and constructions.

References

Becher,Tony and Trowler,Paul. (2003). Academic Tribes and Territories' . Buckingham: Open University

Ricoeur , Paul (1984) Time and Narrative Chicago: University of Chicago press.

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Examiner practices and culturally inflected doctoral theses

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Abstract

Increase in postgraduate student numbers worldwide represents an opportunity and necessity for nurturing and recognising the diversity of culturally inflected research topics, methodologies and expression. However, tensions exist in the definitions, encouragement and recognition of congruity and diversity in the thesis, and in balances of power in the supervisor, student and examiner relationships involved in doctoral achievement. We consider such tensions and opportunities using small scale qualitative research with experienced examiners, exploring ways in which examiners perceive they respond to culturally inflected doctoral work and take culturally aware approaches to enabling and rewarding the quality of culturally inflected doctoral theses.

Introduction

The role of the doctoral examiner is crucial as a gate keeper, a quality controller for research outcomes generated by doctoral students. Sensitisation to, recognition of and the continued assurance of quality in the culturally inflected work of culturally diverse postgraduates are also crucial, so that rich, valuable perspectives and knowledge can be created, licensed and shared. The current global growth in numbers of postgraduates takes place in the context of tensions of interpretation of the role of research knowledge creation, and sharing. In this economic equation, international PhD students represent a significant income source for cash-strapped economies and universities grounded in Western, Northern systems.

Research into supervisor-student interactions indicates that gender, culture, learning background and other differences play a large part in any research relationship. Specifically, it identifies hidden power relations comparable to a master-slave relationship (Grant, 2008; Manathunga, 2007) and potential cultural imperialism. Grant and McKinley (2010) make a case for respect for indigenous knowledge construction in research student supervision interactions.

Research into the beliefs, practices and judgment of examiners has not yet fully drawn from this work on power, or the effect of cultural differences. However, examiners are powerful gate-keepers controlling whatever students offers as new. Examiner criteria and practices have been the subject of several studies and the evidencing of doctoral achievement has to date largely focused on examiners' 'ways of knowing' that criteria have been met and how examiners recognise and comment on doctoral level achievement (Kiley, 2009; Kiley & Mullins, 2004).

We wished to discover challenges related to cultural difference which might present in the examining process, good practice examiners suggest which avoid cultural hierarchy, or cultural imperialism, recognising and rewarding as appropriate the culturally contextualised and inflected voice of the students, their research designs, approaches and knowledge construction. We developed a two phase research design. First we rescrutinised data from two related projects: 20 interviews conducted with UK supervisors and examiners during the National Teaching Fellowship project 'Doctoral learning journeys' (2007-2010) and 10 interviews using the same schedule of questions with international examiners ('parallel' project 1998-2011) (Wisker, 2011). Following this rescrutinising of data phase two focused on new knowledge. In mid 2011, building on the range of comments from the rescrutinised data, we

constructed and distributed an interview schedule by email or conducted face –to-face interviews with examiners from Australia, New Zealand, Canada and the UK who we knew had examined international and indigenous PhD students whose cultural learning background differed from their own.

Examiner awareness, appreciation and recognition for culturally inflected topics, research methodologies, expression and forms of knowledge construction can produce a 'field of power', an enabling space of recognition and mutual benefit where otherwise, 'mutual exclusion' often operates, (Bourdieu 1996, p. 232). With insight and enabling practices we could see 'flow' between different culturally inflected research populations influencing widespread change (Appadurai 1996, p. 27) which can facilitate recognition of silenced voices of indigenous, international and immigrated researchers and their topics, expressions, methodology and methods.

Examiners say:

> *'Be open to a topic that might not seem important to you but might be to someone else from a different culture'*
>
> *'Different academic traditions will often privilege different kinds of theory. The examiner, while taking note of the relevant canon of theoretical perspectives, may nonetheless be ready to acknowledge approaches which may lie outside his/her experience.'*

The research should prove useful to indicate and share effective practice in cross cultural examination.

Note: The fullest version of this essay has been accepted for HERD 2012

References

Appadurai, A. (1996) 'Modernity at large: Cultural dimensions of globalisation' (Minneapolis: University of Minnesota Press), p. 27.

Bourdieu P. (1996) The State Nobility (Cambridge: Polity), p. 232.

Grant, B. M., (2008) 'Agonistic struggle master-slave dialogues in humanities supervision', Arts and Humanities in Higher Education, 7(1), 9-27.

Grant, B., McKinley, L., Manathunga, C., Knowles, S., Singh, M., Wisker, G. and Robinson, G. (2010), Symposium on cross cultural supervision, Quality in Postgraduate Research Conference, 2010.

Kiley, M. (2009) '"You don't want a smart Alec": Selecting examiners to assess doctoral dissertations', Studies in Higher Education, Volume: 34, Issue: 8, 889-903.

Kiley, M. and Mullins, G. (2004) Examining the examiners: How inexperienced examiners approach the assessment of research theses, International Journal of Educational Research, 42, 2 121-135

Kiley, M., and Wisker, G. (2009) 'Threshold concepts in research education and evidence of threshold crossing', Higher Education Research and Development, 28(4), 431-441.

Kiley, M., and Wisker, G. (2010) 'Learning to be a researcher: The concepts and crossings', in J. H. F. Meyer, R. Land and C. Baillie (eds.), Threshold Concepts and Transformational Learning (Rotterdam: Sense), pp. 399-414

Kiley, M., Wisker, G. and Aiston, S. (2006) 'Learning Leaps supporting postgraduate student learning', paper from the Quality in Postgraduate research conference, Adelaide, 2006.

Manathunga, C. (2007) 'Intercultural postgraduate supervision: Ethnographic journeys of identity and power' in D. Palfreyman and D. L. McBride (eds.) Learning and Teaching across Cultures in Higher Education (Basingstoke, Palgrave Macmillan), pp. 93, 95.

Wisker, G. (2010) 'The good enough doctorate: Doctoral learning journeys', Acta Academica Supplementum, 1, pp. 223-242, at: http://www.ufs.ac.za/journals_ActaAcademica.

Wisker, G. (2012) The Good Supervisor (Basingstoke: Palgrave Macmillan).

Wisker, G., Robinson, G. and Jones, J. (2011) 'The culturally inflected voice: Negotiation and recognition without dumbing down', in Vijay Kumar Mallan & Alison Lee (eds) Connecting the Local, Regional and Global in Doctoral Education

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Picking up the Pieces: Supervisors and PhD 'orphans'

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Abstract
Changes in supervisory arrangements are a perhaps surprisingly common occurrence. Our research considers how students and supervisors cope with change in supervisory relationships where a supervisor takes on the supervision of a student previously supervised by another during this research project, or has to hand over a student to another supervisor 's care. In our earlier research on doctoral 'orphans', students who have lost their supervisors, students indicated some sense of stress and difficulty, at least initially . Sometimes such changes can be very stressful for everyone, and sometimes they provide new opportunities. We interviewed a number of highly experienced supervisors from a variety of international contexts who have worked with doctoral 'orphan' students. Our research identifies supervisors' anxiety at leaving students behind when they are not allowed to take the supervision with them on changing jobs or retiring. They talk of the importance of finding a second supervisor in advance, holding structured meetings with students to enable them to take control of the research process earlier, and staying in touch if they can to continue the relationship, even in a friendly manner, if not allowed to formally supervise. They also discuss how difficult it is to come to terms with students deciding that they would like to transfer to another supervisor, also considered a loss at times.

The supervisors we interviewed identify a number of issues they have dealt with and strategies they have used to enable successful supervision.

Background and Introduction
'All of the students whom I took on had experienced unsatisfactory supervision: in some cases, this had been appalling, and they had been left almost to their own devices, with little help at all.'

The presumed norm of functional supportive 'dyad' of supervisor and student (Lee, 2011; Wisker, 2012; Delamont et al) is somewhat troubled by the revelation of power relations, the 'master slave' relationships of power (Manathunga, 2005; Grant 2003) which upsets this notion. Losing or gaining 'adopting' students can reveal problems in the relationship, but can also be part of the normal process over time.

Previous work (Wisker and Robinson 2012) indicates problems of doctoral 'orphans' from the student perspective. We discovered student anxiety, stress, and the challenge of engaging with new thoughts, new directions and possibly large scale changes to the project when students lost their supervisors, either because supervisors effectively withdrew contact or because they changed jobs, or retired. Those we interviewed were successful in making this transition and coping with the new troublesome knowledge and experiences. Developing resilience and ownership of their project helped them with this transition.

Work on postgraduates'' wellbeing and emotional resilience (Morris and Wisker, 2011) informs this earlier study and our current study on supervisors who lose or gain doctoral students, defined (as they were by one of our respondents in the earlier study) as 'orphans'.

This current work focuses on the supervisor point of view. It considers how students and supervisors cope with change in supervisory relationships where a supervisor takes on the supervision of a student previously supervised by another during this research project, or has to hand over a student to another supervisor's care.

In our earlier research on doctoral 'orphans', students who have lost their supervisors, students indicated some sense of stress and difficulty, at least initially during these changes of supervision responsibility . Sometimes such changes can be very stressful for everyone, and sometimes they provide new opportunities. We interviewed a number of highly experienced supervisors from a variety of international contexts who have worked with doctoral 'orphan' students. Those we interviewed identify a number of issues they have dealt with and strategies they have used to enable successful supervision.

Our research identifies –Gain/adoption

- Concern about research development to date and possibility of change
- Is this work too far on, too different, too problematic for them to be able to make a difference? Help steer it to success?
- Sensitivity about the person, their confusion and disappointment, wellbeing and need for nurturing.

Our research identifies - loss

- Supervisors' anxiety at leaving students behind when they are not allowed to take the supervision with them on changing jobs or retiring.
- How difficult it is to come to terms with students deciding that they would like to transfer to another supervisor, also considered a loss at times.
- Good practice: the importance of finding a second supervisor in advance, holding structured meetings with students to enable them to take control of the research process earlier, and staying in touch if they can to continue the relationship, even in a friendly manner, if not allowed to formally supervise.

Themes emerging

- Stage of student's work matters whether gain or loss of 'orphan'
- Gaining students—new relationships, duties of care, establishing boundaries and working relations
- Losing students - guilt, preparation and duties of care
- Ways of managing gain and loss

One point which emerged was that the experience of losing or gaining 'orphan' students differs at different points of doctoral research development whether early on, midterm, at the end, when they had submitted already or post viva .

'I was happy to take on these students although there was a clear need to understand the guidance they had already received from the previous supervisor.'

When gaining students there are issues of new relationships, duties of care, establishing boundaries and working relations, and when losing students what supervises note is guilt, preparation for that loss or hand over to another supervisor, and duties of care. In each situation what emerged was supervisors' awareness of ways of managing gain and loss. Some of our findings could be useful for those beginning to supervise or working with postgraduates who began their studies with another supervisor, or who need to hand over supervision to another supervisor for a variety of reasons.

References

Delamont, S., Atkinson, P. and Parry, O. (1997) Supervising the PhD: A Guide to Success (Buckingham: Open University Press), pp. 1, 8-9, 57, 97.

Grant, B (2003) 'Mapping the pleasures and risks of supervision discourse', Studies in the Cultural Politics of Education, Volume 24, Issue 2, 176, 189.

Lee, A (2011) Successful Research Supervision Advising students doing research London : Routledge)

Manathunga, C. (2005) 'The development of research supervision: Turning the light on a private space', International Journal for Academic Development, 10: 1, 17-30, 207.

Wisker, G and Morris, C., (2011) Troublesome Encounters: Strategies for managing the wellbeing of Education Postgraduate students during their learning processes https://www.google.com/#hl=en&sclient=psy-ab&q=higher+education+academy+subject+centre+education&oq=higher+education+academy+education&aq=2bK&aqi=g-K2g-bK

Wisker ,G ., Robinson , G (2012) 'Doctoral "orphans": nurturing and supporting the success of postgraduates who have lost their supervisors' (HERD forthcoming)

Wisker,G (2012) The Good Supervisor (2nd edition) Basingstoke , Palgrave Macmillan.

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Internationalising Writers' Circles for Doctoral Students: From Dream to Reality

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Writers' Circles (WC) for doctoral students have been shown to be powerful change agents for developing competence and expertise in research writing (Aitchison 2010). They also influence students' confidence and self-perceptions as writers and scholars. This paper focuses on the experience of one international research student with English as an Additional Language (EAL) in WCs, Mariana Yusoff. This narration shows WCs provided not only a personal growth experience as a research writer but also as a professional development experience and resulted in the transfer of WCs to a new institutional and cultural setting. This dialogic narrative presents an interwoven story of Mariana (the student) and Monica (the Writers' Circle facilitator) highlighting three stages, namely Writers' Circles@UniSA, introducing the concept at Universiti Teknikal Malaysia Melaka (UTeM), and establishing a Writers' Circle Support Group@UTeM.

From the commencement of her research candidature, Mariana attended the Writers' Circles@UniSA regularly. Monica's WCs are only offered for EAL students and aim to enable research students to become competent research writers in English whilst also developing positive dispositions towards research writing. The activities integrated into WCs include: 15 minutes blocks of writing; peer review to clarify and communicate meanings; the discussion of rationales for a range of possible language choices; discussion related to becoming a research writer, and cultural dimensions of writing. Since many International students are already university lecturers, these sessions have the capacity to train potential supervisors who may support research writing in their home countries.

Mariana was a lecturer teaching Technical Communication in UTeM prior to her candidature. She joined the Writers' Circle because 'I had a fear of writing, especially writing academic English, on how to pick the right choice of words and how to put words on paper with "proper" English'. Mariana participated actively in these sessions and began to enjoy the way in which Monica led the WCs. She appreciated how the facilitator simplified the writing process and allowed students to guide one another in the writing process. Mariana reflected: 'This was where I started to utilize and share the knowledge with other PhD students; indirectly it had boosted my confidence in writing.' She also valued the 'safe, conducive environment—not being humiliated or attacked due to the "inability" to write and the opportunity to "just write" anything that came across our mind—be it in English or our native language—as the art of putting the thoughts on papers first. Due to the environment and the acceptance of the group members, she managed to overcome the aforementioned fears.

Mariana had also been designated as part of Monica's 'Aussie family', a UniSA scheme to link international students with staff members as 'family') and being part of the family had provided opportunities to socialise and dream about the future. One such dream was to introduce the concept of Writers' Circles to UTeM.

The opportunity to introduce this concept to UTeM came once Mariana had returned to Malaysia in September 2009. In December 2009 Monica was visiting UTem and Mariana asked her to run a 2-day Academic Writing workshop for UTeM staff at the Centre for Languages and Human Development. The workshop used the 'best' of the Writers' Circles although Mariana was somewhat sceptical about involving high levels of interactivity as she felt that staff might not feel comfortable speaking freely about their writing in the company of their peers. Nevertheless, Monica persuaded her to incorporate interactive elements. The workshop focus was to be talking and writing about their writing. The 'free' writing was powerful as participants commented they suddenly 'like to write'. The initial discussions about their own research writing with a peer provided opportunities to clarify, listen and learn and establish a 'safe' and engaged environment for ongoing activities. Contrary to expectations, the participants were

quite open in giving responses and feedback that the facilitators needed to stop discussions as the participants were so engrossed in their conversations about their research and theses. This response was something unexpected as on most occasions participants would recoil from sharing their thesis. At the end of Day 1, participants' feedback included: 'I like the approach, thank you!', 'I enjoy the workshops and getting new information and knowledge to start writing and keep writing!' and 'I hope we would enjoy tomorrow's workshop like today'. They wanted more workshops like this one. Given this feedback, and knowing some participants were still completing their PhDs, Mariana and Monica decided to introduce peer review for the afternoon of the second day, with Mariana taking half of the group and Monica the other half. This experience provided Mariana with credibility with her peers for facilitating Writers' Circles and several participants asked her to continue with the writing groups.

A Writers' Circle@UTeM was established by Mariana on a voluntary basis within three weeks of the workshop—on 8 January 2010—with eight participants who were academics in the process of completing their Masters and PhDs. The attendance at this Writers' Circle was officially endorsed and supported by the University. Conducting these Writers' Circles has not been an easy task due to constraints on both the participants and the facilitator. The uniting factor that kept them together and strong was that the meeting was conducted in an unofficial manner (although discussing serious matters, for example, the organization of the thesis, literature review and other writing-related issues). Besides that, participants shared personal problems and experiences in pushing through finishing the thesis and on top of that, shared food— including delicious home-made cheese cake! This group met regularly every Friday afternoon from 2.30–5.30 pm and sometimes longer. After nine months of working unofficially, the University officially accepted and endorsed the structure of the Writers' Circles Support Group (WCSG) whose sessions are now funded.

The WCSG was officially launched in June 2011 when Monica led a follow-up academic writing workshop, this time with 100 participants. Despite its infancy, the WCSG participants have published numerous journal articles which were polished during the WCSG and three of its members have finally submitted their PhD. Increasingly the work of the WCSG is being recognised with many staff wanting to join but, due to resource constraints, numbers have been limited to 14 official members (most doing PhDs). Based on these small but significant accomplishments, further initiatives are being taken by some lecturers to establish similar groups and, in the near future, there could be some collaboration with these other groups. 2012 will see a minor changes with sessions being conducted twice weekly in alternate weeks of the month and with members bringing writing drafts of chapters instead of sections with the facilitator examining coherence and cohesion.

This narrative abstract has illustrated how WCs constituted a powerful space for Mariana by providing feedback and support to an emerging research writer, and how she subsequently was empowered to transfer the approach to support research writing into UTeM. Key factors in the transfer of WCs to UTeM have been the establishment of personal relationships of trust, institutional support, the energy and commitment shown by Mariana as facilitator, acceptance of informality and food to share.

References

Aitchison, C 2010, 'Learning together to publish: writing group pedagogies for doctoral publishing', in Aitchison, C, Kamler, B & Lee, A (eds), Publishing pedagogies for the doctorate and beyond, Routledge, London, pp. 83-100.

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Abstracts

Employers' Views of Suitability for the Workforce of Higher Degree Graduates

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Any broad discussion about postgraduates' transition to the workforce must take into account the views of those who employ them. However, little of substance is known about the ways these graduates and the work they perform are perceived and valued by their industry employers. This paper reports the key findings of a study that canvassed the views of industry employers of higher degree by research (HDR) graduates in engineering fields. The aim of the study was to gain a more complete understanding of how employers perceive the abilities developed through HDR study to contribute to the Australian industrial workplace. The study found that employers of these graduates valued them for both their adaptive and creative innovative approaches to engineering problems, but revealed several concerns about engineering research graduates which emanated from beliefs about the nature of problem-solving and the perceived personal characteristics of the graduates. We identified three dominant factors that influenced the employers' determination of engineering HDR graduates' workplace fit. We illustrate our findings with a model of the decision-making process that indicates that each employer accommodates these graduates by reconciling the value the employer places on creativity to achieve workplace outcomes and the costs to the workplace of the perceived personal attributes of a particular research graduate. We argue that these factors reflect the employers' implicit beliefs about the creative process and creative individuals and support this contention by positioning our findings within the contexts of theories of social stereotyping and the psychology of creative achievement.

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Counting (on) the contribution of the doctorate to industry?

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This presentation addresses doctoral graduates' contributions to professions and industry, and governments' increasing enthusiasm to ensure graduates are adequately prepared for such non-academic careers. National innovation systems and employer groups are 'counting on' doctoral graduates' productivity and effectiveness for social and economic development. Yet, 'counting' such contributions raises a number of conceptual and methodological matters. We argue that while research outputs can be measured quantitatively as income, publications, patents etc, research capacities require qualitative measures and conceptualisations that explain how capacities emerge and are mobilised, or not, within workplaces.

In the context of this presentation it is suggested that research and generic capabilities are not instrumental possessions of the graduate, nor is research knowledge a static product capable of being 'transferred', seamlessly, from graduate to workplace or vice versa. Although a graduates' knowledge and skills and their workplace context can be understood as mutually constitutive and interactive, the continually emergent nature of knowledge and skills rests on the dynamic relationship between both skill and capability, and on the conditions within which such skills can be realised in industry and the professions.

This paper examines how doctoral professional identities are (per)formed using Foucault's work on how people develop their sense of self, and the factors that govern them. From this perspective, the formation of doctoral professional identities can be understood in terms of the development of a specific relationship to oneself and others, especially in workplaces and professional contexts where the graduates' research skills and capabilities are deployed.

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Enhancement of a Postgraduate Research Culture: Research In Progress

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In times of change, reactions are needed that address contemporary demands while supporting the evolution of different ways of working. This dynamic context can be challenging but also stimulate improved practices. In New Zealand, increased external policy directives and stakeholder accountabilities are challenging universities to develop strategies that increase income while improving performance. Postgraduate research is receiving increased scrutiny, since it can provide income through a larger student base and successful research completions. Since previous research has identified that the student research experience impacts heavily on academic outcomes, greater emphasis is being placed on the environment in which students undertake their research. Student interaction with the organisational research culture influences their motivation and academic development, so the strength and effectiveness of supervision and research support are crucial elements for successful outcomes. By drawing on these premises and Wenger's theory (1998) of a 'community of practice', we initiated a research project to identify how to enhance a postgraduate research environment in which communication and interaction play a crucial role. The project utilises a qualitative case study methodology with mixed methods for data collection. The defining characteristic of the study is its commitment to an integrated approach (McAlpine & Norton, 2006) that takes into account the student's assessment of their own needs as well as the conditions, contexts and interactions that support those needs. The research findings, while identifying practical strategies for implementation, will also contribute to the extant literature. This paper reports on the research which is still in progress.

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Understanding the emerging role of research education coordinators

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The conduct of research higher degrees has progressively moved from the domain of projects undertaken simply as part of or an adjunct to the practice of research, to an area which is being conceptualised as research education. The role of academic staff in research education is extended from that of supervisors and administrators of selection and allocation procedures, to that of research educators. As part of this shift, there is emerging a new role, variously titled, of research education coordinator (REC). RECs are those that lead and manage the range of activities and processes associated with research education.

The paper reports on an analysis of this type of position. It maps the activities undertaken and identifies the leadership features of such roles as they interact with all those parties involved in research education. The study was part of an ALTC-funded project 'Building local leadership for research education'. Interviews were conducted with six academics in each of four universities (ANU, Macquarie, UTS, UWS) selected on the basis of having research education coordination as a discernable element of their role. Interviews were transcribed and analysed to identify varying notions of and opportunities for leadership in the role. The framework of distributed leadership is adopted as RECs are in many situations in which they can exercise influence, but do not have direct responsibility for outcomes. The paper concludes by outlining an initial framework for conceptualising such positions and the kinds of learning needed if RECs are to be effective in their roles

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Lost in transition? A perspective on university higher degree risk management

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The paper investigates how Australian universities, operating in a complex, competitive international regulatory environment manage the risks associated with higher degree research (HDR). The research project suggests organisational trust and culture, distinguishing features of the HDR environment, are critical to effective university risk management. Adoption of quality standards for higher degree research requires clear conceptualisation of risk by the regulatory authority.

There are potential contradictions in the creation of standards for an organisation that exists to foster innovation, exploration, discovery and risk-taking. Higher degree research (HDR) is a distinguishing feature of universities, a practice integral to the university's purpose. Innovation is central to HDR, hence to the purpose of a university. Innovation courts risk. What tensions emerge between enabling innovation and the risk based approach to regulation of that same innovation? How are these tensions managed by Australian universities?

Between 2011 and 2012 Australian higher education is witnessing the transition from AUQA, a higher education quality assurance agency, to TEQSA, a regulatory authority. The **Tertiary Education Quality and Standards Agency Act 2011** affirms the primacy of a risk-based and proportionate approach to higher education regulation. This paper considers implications of the transition from quality assurance to regulation for the management of higher degree research in universities.

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Developing excellent researchers in Medical Sciences: start early!

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The Researcher Skill Development framework (RSD7) is a conceptual model for developing research skills. The Framework has been taken up by educators in The University of Adelaide and around Australia. Its use has been evaluated in separate projects covering different year levels and Faculties. This paper discusses the benefits of consistent application of the framework in guiding student learning and feedback from year 1 right up to PhD level in Medical Sciences. The aim is to increase student understanding of research and the required skills, increase the skills of potential research students, increase engagement of research focused academics in teaching and retain promising students to pursue research careers. Students should develop their skills and autonomy level when they progress through their study to have a good understanding by the time they need to think about Honour degrees. Using the framework to make expectations explicit would be beneficial for the growing number of students from a Non English Speaking background. Having a record of the students skill level at time of selection could prove valuable in selecting students for Honours and PhD. Introducing the framework as a standard tool to use through the year levels would make teacher expectations more explicit and open inter-collegial discussion about expectations. The Framework is already being used in several courses in the Bachelor of Health Sciences; the discussion will focus on whether consistently using it could improve student outcome, academics engagement and retention in research of good researchers of any age.

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From Eden to agora: E-learning as transformative

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E-learning is not just a teaching innovation; it also signals a shift in human communication and cognition. It moves us from the world of the book to that of the screen — with implications for language, knowledge and identity. We teachers don't yet have a myth to ground this new mode of education; instead, we borrow the programmatic language of information science: of users and useability. Out of fiscal expediency, institutions see e-learning as a digital Eden, albeit one where it is *good* to eat of the Tree of Knowledge. But, in practice, it defaults to information transmission, or "delivery." The language of the factory corrupts our educational Eden. Interpassivity rules. We need a new myth.

A case study of the construction of an electronic version of generic doctoral skills sessions highlighted for us the pedagogical implications of shifting medium. Contextualising e-learning within myth, mnemonics and learning theories, we recognised that, to match the benefits of interactivity in face-to-face teaching and learning, e-learning must be performative rather than informative; to be truly transformative of scholarly identity, e-learning must embrace "life on the screen" (Turkle, 1995), the new "agora" (assembly).

Key words: e-learning, communication, identity

Turkle, S. (1995). Life on the screen: Identity in the age of the internet. New York: Simon & Schuster.

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Theses by publication in Engineering and the Health Sciences disciplines: A comparative study

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One notable transition in the research education area is from a time when a 'traditional' thesis was the norm to now when, increasingly in the scientific and technical disciplines, there is pressure for the thesis to comprise a compilation of scholarly articles, whether published or in the process of publication. Students are often uncertain what form this projected thesis is expected to take and while university guidelines provide general advice about the structure of a thesis by publication, there is considerable variation possible. Without an understanding of the different ways of writing the thesis, it can be difficult for students and supervisors to decide on the best possible thesis structure. The current study identifies and examines a corpus of theses by publication in the disciplines of Medicine, Nursing and Health Sciences, comparing these with Engineering theses. In the first phase of analysis for this Conference poster it appears that, in both discipline areas, the thesis may be almost entirely by publication; partly by publication (a couple of articles are included as chapters); or appear as a hybrid of the traditional and the anthology, where articles are appended to chapters. The aim of the study is to investigate and compare the generic structure of the thesis by publication in two disciplines, and speculate about the possible reasons for any differences. Questions are raised about the imagined and actual audience for different components of these theses and whether the thesis by publication can be said to exist as a stable genre.

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Undercover Recruits: Academic Interns

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How can postgraduates with the desire to pursue an academic career learn about the job – or know whether it is what they imagined or perfect for them… or not?

An academic Internship may be the answer. At Flinders a cohort of postgraduate students, usually with some teaching responsibilities and chosen for their potential to succeed, are trained in a program that promotes self-development that endorses Boud's 'collegial view of academic work' (1999). Motivational stimuli underpin the course principles, for instance teaching: how to engage students, evaluation, the role of assessment and feedback, as well as how to develop a research plan.

Through interactive activities, especially innovative presentations and peer reviews, Interns learn their responsibilities: to be involved and motivated. In addition, they are inducted into their institution's strategic directions, including policies and procedures of relevance to junior academics. The challenges that face participants align with those in the sector: the increasingly diverse profile of students; growing class sizes; convergence of hardware; and implementation of educational technologies.

Situated learning within the workplace may then assist postgraduates' transition to continuing professional employment within the HE sector, or at least help uncover the internal workings of a university from within to decide whether or not it is the place for them.

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From Research Proposal to Published Research: Conversations for Supervising a PhD by Publication

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The growing popularity of PhD by publication is one of the key transitions currently occurring in doctoral education, and one that alters the postgraduate journey in interesting ways (Robins and Kanowski 2008). Despite increasing acceptance of this form of PhD within research education, the rhythms, particularities, and pedagogies of research supervision in this mode remain seldom discussed (cf Aitchison, Kamler and Lee 2009). The purpose of this roundtable is to provide a forum for the sharing of practice-based stories of supervising this form of thesis, and the pedagogies that inform them. To focus discussion specifically on supervision, we will use the following prompts drawn from the research supervision literature:

- Research planning – what does planning for publication entail and how does it dovetail with institutional expectations about stages of candidature?
- Mentoring for publication – what needs to be addressed (e.g. choosing journals, responding to referees, etc) and when are they best addressed?
- Thesis and 'voice' – what struggles do candidates have with finding their voice and how are they addressed?
- Authorship – what are the potential concerns related to co-authorship and how can those problems be circumvented?
- Beyond the supervisor – what are the perspectives of journal editors/reviewers and how do they shape the thesis?

It is envisaged that the discussion will provide insights into the thesis by publication as well as foundations for a pedagogy of supervision that facilitates the thesis by publication.

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Backing a winner every time. Are PhD supervisors risk averse in the selection and management of doctoral candidates

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It is a sad statistic that the PhD attrition rate is estimated to be as high as 50%, especially considering that PhD research is a key contributor to the nation's knowledge economy and the actual completion of a PhD prepares future academics and researchers for the public and private sector. The objective of this research is to explore how PhD supervisors manage the risks the candidate may experience and how these risks can be minimised. The study adopted a qualitative approach. Scenario based, semi structured interviews were conducted with 20 PhD supervisors from a major Australian research university. Findings from the study indicated that doctoral supervisors were risk averse in the selection of candidates, however, for those that they did select and manage supervisors employed a number of initiatives to minimise the likelihood of failure. These initiatives were categorised into seven broad areas (the 7Cs). During selection: competence, commitment and compatibility; and during the management of the process: coordination, care, career and coordination.

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Managing Postgraduate Research Service Quality: Developing and Assessing a Conceptual Model

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This paper reports on the conceptual development and empirical evaluation of a postgraduate (PG) research service quality management model, through conducting an electronic survey among a cohort of masters and doctorate graduates at one of the top three research universities in South Africa, using specifically developed and validated research instruments.

By fitting the data from a sample of 117 graduates to a conceptual model using structural equation modelling, it became evident that the PG students' perception of their Role (RC) as well as the Organizational Climate for Research (OCR) is associated with their perception of the PG Research Service Quality (PGSQUAL), the PG Service Experience (SERVEXP) and, their overall satisfaction with the PG service (SERVSAT).

The implications of the findings for better managing PG research service encounter and PG research service quality are apparent.

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Research training? Research Education? Visions, tensions and the 3MT: perspectives from contrasting Australian universities

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The Three Minute Thesis (3MT) is a research communication competition developed by The University of Queensland (UQ) and run as an international competition since 2010. Research higher degree students have three minutes to present a compelling talk on their thesis topic and its significance in language appropriate to an intelligent but non-specialist audience. The 3MT is an "exercise that develops academic, presentation and research communication skills" and "forces students to consolidate their ideas and crystallise their research discoveries" (http://www.uq.edu.au/grad-school/three-minute-thesis). The facilitation of focused thinking and effective communication align well with university objectives to develop students' generic skills, which are highlighted as keys to graduate employability, and to promote quality in research, which is increasingly emphasised in research policy.

Universities in the Australian region have adopted this competition, with 32 universities competing in the Australia & New Zealand 3MT at UQ in 2010, and 42 universities competing at The University of Western Australia (UWA) in 2011. Despite the strong support for the 3MT at university level, participation within universities by students has varied. This paper seeks to review reasons for this and present the experiences of those engaging with the 3MT to understand the pressures and tensions that may exist between research training and education objectives and research performance outcomes. This presentation considers the value of the 3MT as a tool for research training, and strategies for encouraging participation, through comparing perspectives of two research intensive universities and a smaller less research intensive university.

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Developing Successful PhD Graduates

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The PhD has evolved from the 'dissertation as output' to a 'trained connected researcher as the desired output'. Governments and higher education institutions worldwide are collaborating to transform the apprenticeship model of student and supervisor interaction to a contemporary model of doctoral education that aims to broaden research training and increase strategic engagement with multiple scholars. The importance of developing a strong and work-ready research workforce is stressed in 2011 policy documents such as the Australian Qualifications Framework and DIISR Research Skills for an Innovative Future. While we have some understanding of strategies to improve research training, we have limited knowledge of the necessary structures and mentoring environments to support postgraduate students at different stages in their doctoral journey. Given the importance of linking students with resources that will foster success and desired outputs, the lack of guidance for developing supportive networks and reciprocity is concerning. We present a protocol for a systematic plan that can be implemented to ensure the mentoring, strategic engagement and achievement of 'desired outputs' by doctoral students. The protocol is framed by the networks and norms of the concept of social capital. Specifically, doctoral students are included as members of dynamic research groups and have opportunities to engage in meaningful dialogue with their supervisors and a diverse range of researchers. Such collaborative networks will foster the expected generic learning outcomes of doctoral students in the areas of knowledge, skills and their application in specific discipline contexts.

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Supporting candidates and supervisors: transition to becoming a researcher

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The past decade has seen increasing numbers of students coming to Western education institutions from developing countries and for whom English, the language of research, is not their first language. These students face the particular complexities of adapting to and assimilating into new cultural environments, in both social and research contexts. Issues emerge and change throughout the candidature, on the candidate's journey to becoming a new researcher, and this paper will present resources that have been developed to support both supervisors and candidates who are working in a cross-cultural context.

Building on preliminary work that was presented at QPR in 2010, video and paper-based scenarios explore many of the issues that face supervisors and candidates at all stages of the postgraduate research journey, from what happens at the first meeting to the final stages of writing up, and what happens when the candidate returns home. Themes are drawn from interviews with supervisors and candidates from three universities, and the characters are composites of interviewees.

Most of the scenarios display multilayered and complex situations – as happens in real life. They show the situation from the points of view of both the candidate and supervisor. Although the scenarios are intended to provoke reflection, they deliberately do not provide solutions, as there are usually more than one solution and these must be contextualised to the individual circumstances. The issues portrayed often stem from a variety of interacting factors such as personality and individual circumstances as well as the cross-cultural context.

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Calling All PhDs: The Positioning of Doctoral Research in Advertisements for Postgraduate Study

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Doctoral education is becoming a competitive line of business or niche market for universities. To attract top candidates and to raise the profiles of institutions in a competitive global tertiary environment, opportunities for postgraduate research are now widely advertised by universities. This project analyses advertisements distributed by universities for postgraduate researchers in print and online sources. The research is motivated by several questions: how is the PhD degree positioned, and how is postgraduate research conceptualised in these advertisements? Are there identifiable trends in advertising material, such particular types of institutions, or even disciplines, which choose to advertise in public domains? What are the main selling messages universities are using to lure would-be doctoral students to their institutions? To examine these issues, we scoped for print advertisements for the period 2010-11 and online for June–August 2011. The methodology is two-fold, involving a textual analysis of a range of advertisements to examine the conceptualisation of postgraduate research, and a statistical analysis of the institutions and disciplines advertising online in the 'Find a PhD' website to provide a detailed snapshot of PhD opportunities during a specific period.

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From 'student' to 'academic': doctoral candidates' transition to understanding academic work

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What are the transitions that aspiring early-career academics make when they participate in a professional development programme preparing them for a future in academia? In November 2011 we are interviewing doctoral candidates who voluntarily participated in a doctoral academic career module in 2011 to gauge the nature of a conceptual shift in their understanding of 'academic work' or, as one of the candidates termed it, "the beauties and dangers of academic life". The research involves conducting interviews with each of the participants, all of whom commenced the module with the intention of pursuing an academic career. Two aims of the research are to ascertain the impact of the module on the participants' understandings of an academic career, and to explore its impact on their sense of themselves as intending academics. In particular, we will ask if there were significant changes in their knowledge of the three areas of academic work (teaching, research and service) or if there were troubling moments or concepts that they encountered during the programme. This paper will begin with briefly outlining the module and the research project; it will then discuss how contemplating an academic career through a taught academic development module may engender identity shifts and impact on ways in which pre-entry academics begin to understand themselves as soon-to-be academics.

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Reducing attrition rates amongst doctoral students without previous research experience: A case study from South Australia

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The completion rates of doctoral candidates and also the time taken to completion by successful candidates are issues of concern to both governments and universities. A significant element impacting on both is the extent to which research degree candidates are prepared for study and research at doctoral level. One way this has been tackled is through the provision of coursework as part of doctoral programs. This paper reports on the implementation of such a coursework program for PhD students prior to commencement of their period of study for a University of South Australia research degree. The students involved were all based in Asia-Pacific countries and did not hold Australian Honours degrees (or equivalent) prior to commencing the coursework program and moving onto their research degrees. The coursework program developed academic research skills and involved the development and assessment of the student's proposed doctoral research project. Initial results demonstrate a significantly reduced attrition rate (down from 48% to 16%) and reduction of > 1 year on time required to develop the doctoral thesis in readiness for examination when compared to similar students who had moved directly to doctoral study without taking the coursework program.

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Approaches to The Research Question

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Research candidates face a number of issues when approaching the research question. Literature indicates that it is presumed that when entering the academic environment, international candidates are expected to understand and display the qualities of independent learning, particularly having knowledge of a wide range of literature within their chosen discipline and knowing how to synthesise that literature into the writing of a thesis. These qualities also include being equipped with a sophisticated range of reading, writing, listening and speaking skills. Using these skills the candidates are expected to disseminate their research in multiple contexts.

Anecdotal evidence suggests that this is not the case for many candidates. For candidates needing help and support, the response has been reactive rather than proactive. Using an interpretive approach, through focus groups and in-depth interviews, this paper discusses the findings of a research project that discuss issues that international candidates face in entering a research culture. In this regard, it explores the decisions affecting their choice of a research question and whether enough support has been given to them to make an evaluative decision on their choice of question and the study they have undertaken.

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Best Practice Framework for Research Training Excellence in Australia

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The Australian Government is currently reviewing research-training quality as part of the implementation of its research workforce strategy. The first consultation paper "Defining Quality for Research Training in Australia" (October 2011), is an initial phase in a review of the Research Training Scheme and funding. The research training consultation paper focuses on aspects that may be considered as base requirements for Higher Education Providers (HEPs). Research training issues raised in the consultation process are likely to inform the TEQSA standards framework, which may then be used to assess HEPs against performance and funding. This consultation process, as well as other Government initiatives (including Powering Ideas, ERA, and AQF) will all have some influence on determining the quality of research training in Australia. In this current climate, it's important that the sector work together to develop a set of best practice guidelines for research training in Australia that can be negotiated and customised at an institutional level through the Compacts process to allow for institutional differences.

This presentation will report on an ALTC-funded project that has developed a Best Practice Framework based on research across Australian universities. The framework aims to inform and guide research-training excellence in Australia and consider key processes from HDR candidate application through to graduation including admissions, supervision, assessment, performance indicators, and other elements considered important in the candidates' journey.

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Enhancing Research graduate employability and preparing them for the workforce: The e-Grad School case study.

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The e-Grad school (eGSA) was established by the ATN and launched in 2007 to provide online award and non-award courses for research students, supervisors and research managers/administrators in areas that enhance the development of their professional capabilities and employability. These areas are:

A. Commercialisation processes and strategies
B. Business and legal management concepts (intellectual property management, financial management, project management, market evaluation etc)
C. Organisational behaviour (human resources and leadership, teamwork, professional skills)
D. Non-award units and modules online in (Ethics; Critical and Creative Thinking; Practice Led Research; Risk Management; Critical Writing)

To date there have been over 4000 registrations in non-award units and 1197 award subject enrolments by students from both across Australia and internationally including 242 completions for the Graduate Certificate in Research Commercialisation, and 8 completions for the Masters of R&D Management which will become Masters in Research Management and Commercialisation later this year. Enrolments have consistently increased annually since 2008 indicating a need for formal training in non-technical professional skills among research active individuals (HDR students and early career researchers) and professional/administrative research staff, both of whom actively enrol in these offerings. The purpose of this roundtable will be to discuss the identification and remediation of unmet training needs in the research workforce by providing information on the content and delivery of these courses, by examining data on training needs and perceptions among recent participants and by reviewing individual feedback from students undertaking these courses. These data indicate a need for formal training in professional skills in the research environment and demonstrate positive outcomes/rewards for both individuals who have enrolled in the courses and their organisations.

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Japanese research supervision: challenging myths and stereotypes

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Currently, there is very little research in English on the nature of contemporary Japanese research student supervision. Instead, in many Western countries, stereotypes about Asian approaches to research student (or postgraduate) supervision remain prevalent (Manathunga, 2007). These potentially dated and inaccurate notions about Asian supervision also dominate Western approaches to the Asian research students who complete their research degrees in Western countries. This paper reports on a small pilot research project that was designed to study current supervision practices at a research-intensive Japanese university. This pilot study investigated supervisors' and students' beliefs and attitudes about effective research student supervision. In total, six supervisors and six students from the Sciences and Humanities were interviewed separately. In addition, the supervision meetings of one student and supervisor in the Humanities and two students and one supervisor in the Sciences were taped and transcribed and each of the participants emailed reflective comments after the meetings had taken place. Using a range of post-colonial theories (Hall, 1996; Bhabha, 1994; Pratt, 1991), the interview and transcript data were subjected to a thematic analysis, which aimed at understanding some of the ways in which contemporary Japanese supervision is conducted. In this way, it is hoped that more nuanced understandings of some examples of contemporary Japanese research student supervision may begin to emerge in the English literature on supervision so that more appropriate and effective supervisory practices may be used with Japanese students studying in Western countries.

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Changing Pathways: Transitions in Managing the Quality of HDR Intake

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What is the appropriate preparation for undertaking postgraduate research? With declining domestic enrolments and competitive international markets, Australian universities are looking towards diversifying the pathways to HDR admission. In recent years, the strategy has been to be flexible about the qualifications students need, reaching out to include skills beyond formal academic qualifications, in fields as diverse as film-making, labwork and policy development. But what *academic* qualifications are the most appropriate preparation for HDR, and why? How do they guarantee suitable depth of disciplinary knowledge and appropriate training in research skills and how can they be measured against other forms of research experience? This paper will consider the broad issue of academic pathways to HDR in the light of coming changes to what has been the "gold-standard" HDR preparation pathway in Australia: the Australian Honours degree, and its possible replacement by a Research Masters on the Bologna model. The case study in question will be the implementation of a new Research Masters as the standard pathway to Higher Degree Research at Macquarie University in 2013.

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Critical Alliance between Researcher & Practitioner: A Model of Reciprocal Professional Development

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This paper discusses the ways in which an emerging researcher developed her research skills, gained a better understanding of her field of practice, identified the types of research methodologies best suited to her work, as well as found, and strives to maintain, a distinctive voice by developing a critical alliance with an emerging practitioner.

Often when students enrol in a doctoral program, they embark on a journey of data collection, analysis and reporting, but also on a journey of self-discovery. By the end of the project they will have built their scholarly capacity, but also, hopefully, found their voice and feet as a researcher. Once they transition into an academic position, however, most of them find it challenging to retain their skills and levels of commitment to and enthusiasm for research.

Drawing on elements of Vygotsky's zone of proximal development and Freire's processes of conscientisation, and illustrated by a personal account of research training in social sciences, this paper will present a way of developing a mutually rewarding and efficacious working relationship that strives towards integrity in developing both the researcher and the practitioner's practices and careers.

This paper will argue that this model of reciprocal professional development can address some of the challenges researchers face in the early stages of their career.

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These are issues that shouldn't be raised in black and white: the culture of progress reporting and higher degrees by research

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This paper reports findings from Australian research into student, academic and administrative staff understandings of the role and efficacy of periodic progress reports designed to monitor the progress of higher degree by research candidates. Major findings are that confusion as to the purpose and ultimate audience of these reports is linked to less than effective reporting by all parties; countersigning and report dependency requirements inhibit the frank reporting of progress, and 'social learning' impacts on the way students and sometime supervisors approach reporting obligations, running counter to institutional imperatives. We conclude that no ready or transparent nexus between the progress report and progress may be assumed. Fundamentally, this calls into question the usefulness of this process as currently implemented. Arising from this is the recommendation that progress reporting be linked to substantive reviews of progress and embedded in the pedagogy and curriculum of higher degree by research programs.

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Interdisciplinarity in Research Higher Degrees

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Interdisciplinary research reflects the convergence of multiple disciplines, and this convergence can take a variety of forms. Disciplinary convergence contrasts with what is often observed as the 'siloed' nature of academic work. Students navigating this space often face challenges in working outside an established disciplinary culture, including challenges in identifying and developing academic career pathways and in the dissemination of academic work.

This paper will address the challenges that arise for students undertaking interdisciplinary research. Drawing on recent international examples, this paper addresses the how students undertaking interdisciplinary research in Australia may be better supported. Following from this, the paper will explore possibilities for the development of system-level and institution-level strategies for supporting interdisciplinarity in research higher degrees.

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PhD women talking: managing emotions, managing candidature

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In Australia, the US and the UK women doctoral students now outnumber male doctoral students and in China, Denmark, France, Japan and Mexico the number of women enrolling and completing doctoral studies exceeds the number of men (Brown & Watson, 2010; Halse & Mowbray, 2011). While broad brush commentaries and quantitative data sets capture this shift in the doctoral student population (Nerad & Heggelund, 2008; Powell & Green, 2007), little attention has been paid to the gendered nature of the PhD undertaking, and even less to examining and theorising how women PhD students manage the often conflicting, often emotionally charged demands of candidature. In government and institutional policies, PhD students are usually positioned as "super-technicians" who acquire knowledge *fait accompli* without struggle, anxiety or grief (Barnacle, 2005; Pearson, Cowan, & Liston, 2009, p. 100). In contrast, the growing literature on students' experiences of the PhD indicates emotion is an integral part of doctoral studies. We draw on interview data from women doctoral students in different disciplines attending a large metropolitan university in Sydney, Australia, to explore this disjuncture. Using Hochschild's (1983) concept of 'emotional labour', we examine how the women actively managed two sites of emotional investment during candidature; writing and personal relationships. We show how they purposively managed their public and private emotions to inform their responses and actions to build commitment and resourcefulness as students, thereby enriching their doctoral experience and demonstrating the positive role of emotions in doctoral candidature.

References

Barnacle, R. (2005). Research education ontologies: Exploring doctoral becoming. Higher Education Research and Development, 24(2), 179-188.

Brown, L., & Watson, P. (2010). Understanding the experiences of female doctoral students. Journal of Further and Higher Education, 34(3), 385-404.

Halse, C., & Mowbray, S. (2011). Editorial: The impact of the doctorate. Studies in Higher Education, 36(5), 513-525.

Hochschild, A. (1983). The managed heart. Berkeley: University of California Press.

Nerad, M., & Heggelund, M. (Eds.). (2008). Toward a global PhD? Seattle: University of Washington Press.

Pearson, M., Cowan, A., & Liston, A. (2009). PhD education in science. In D. Boud & A. Lee (Eds.), Changing practices of doctoral education. Abingdon: Routledge.

Powell, S., & Green, H. (Eds.). (2007). The doctorate worldwide. Maidenhead: Open University Press.

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Doctoral students and the slow-release induction kit

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Doctoral students may have a fixed sense of purpose when they embark on their doctoral path, but navigating the way can be a little more tricky. Although they talk positively about the induction and orientation events that initially welcomed them to their school or faculty, research students are often unsure of where to go for information once the welcome has worn out. As one of our doctoral students commented recently, when it comes to academic and administrative matters, 'You don't always know where to look because you don't know what you don't know'.

In my poster presentation I shall offer a solution to this issue via the 'slow-release' RHD induction kit. This innovation comprises a series of road maps and web-links that guide students in a sustained way – like a drip-feed – through their candidature hurdles to post-degree career pathways while connecting them in to their research community. I recently made a recent bench-marking visit to the UK to investigate the induction practices of three research-intensive universities, I am currently developing my induction kit to offer students, supervisors and RHD administrators a set of resources to help the student make the most of their research journey. My presentation will focus on the adaptable nature of the induction kit across universities and how the kit can provide a means of connection for students in times of tranistion. The slow-release induction kit makes the case that there are times when it is actually a good thing to outstay your welcome!

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Participation in Research Education

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Patterns of participation in and pathways through graduate study are different for each discipline. There is also a 'pipeline' effect in progression through course levels in each discipline area (Palmer, 2011). Graduate students show greater variation in age and enrolment status than their undergraduate colleagues, and there are also differences in areas like access to student income support. These factors combine to shape patterns of participation in research higher degrees.

In order to support diversity of participation in graduate study, participation needs to appear as both a valuable and a viable proposition from the student perspective. Strategies to support students to participate and successfully complete their degree serve to make graduate study look more attractive and viable, and also support achieving the kind of 'fit' that allows students to balance their studies with family and other commitments. These factors combine to determine the feasibility of postgraduate study for many among under-represented groups, along with their ability to balance the demands of a research degree with other challenges they face.

Following the work of Thomas and McCulloch (2010) and Wakeling and Kyriacou (2010), the paper proposes three broad dimensions for the development of policies, programs and strategies in support of participation:

- Pathways and selection;
- Student support; and
- Flexibility and 'fit'.

The purpose of this paper is to provide an overview of patterns of participation in graduate study in Australia and the programs and strategies relevant to supporting equity of participation and equality of educational opportunity in research higher degrees.

References

Palmer, N. (2011). The Role of Research Higher Degrees in Building and Sustaining Research Capacity, University Research and Innovation Capacity conference. Sydney, Australia: Criterion Conferences.

Thomas, L., & McCulloch, A. (2010). Widening participation to doctoral study: Issues, methodology and a research agenda. In M. Kiley (Ed.), 9th Quality in Postgraduate Research Conference: Educating Researchers for the 21st Century (pp. 49-58). Adelaide, South Australia: The Centre for Educational Development and Academic Methods, The Australian National University.

Wakeling, P., & Kyriacou, C. (2010). Widening Participation from Undergraduate to Postgraduate Research Degrees. York, UK: University of York.

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Research Assessment Matrices: a framework towards developing and evaluating multiliteracies in postgraduate research students

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Graduate Attributes for research candidates highlight the importance of leadership, development of independent thought and creativity. Although the literature abounds with descriptions of the required attributes, how supervisors can effectively provide students with feedback to facilitate the development of the high level multiliteracies underpinning these attributes remains unclear. In addition, although the research indicates that experienced examiners generally evaluate and give feedback consistently (Holbrook, Bourke, Lovat, & Fairbairn, 2008), inexperienced examiners can find acceptable thesis standards difficult to define and can be inconsistent in their feedback (Kiley & Mullins, 2004). This paper describes a conceptual framework for evaluating PhD research, along with two assessment and feedback tools known as the Research Proposal Assessment Matrix and the Thesis Assessment Matrix. Consistent with the pedagogy of the New London Group, the use of the Matrices in discussion with their supervisors guide HDR candidates through situated practice, overt instruction and critical framing towards transformed practice. The Research Proposal Assessment Matrix was developed, evaluated and refined as part of a participatory action research cycle. The research student respondents rated the Matrix highly and provided feedback for further development of the tool. Based on the feedback received, an assessment and discussion tool the Thesis Assessment Matrix facilitating the provision of supervisor feedback on thesis drafts was also developed. We hope to later extend this conceptual framework to thesis examination and provide a tool to assist inexperienced examiners. This study is significant in that it responds to the call by Kumar and Strachie (2007) to build a taxonomy of good feedback practices. This project provides a framework for the staged development of and feedback on high level research literacies from proposal to (potentially) examination.

Keywords: assessment of doctoral education; supervision pedagogy; multiliteracies

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Assuring Quality in Postgraduate Education Programmes at the Nelson R Mandela School of Medicine, University of Kwazulu-Natal

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This paper derives from a study that explored the factors influencing the transition of master's level students into emerging healthcare researchers at the Faculty of Medicine, University of Kwazulu-Natal. Achieving quality in postgraduate education is a complex task underscored by wide-ranging, variable factors influencing its outcome. The aim of this paper is to explore how quality was defined and identified in the research arrangement, and how this shaped learning and expectations of the postgraduate experience. Students who graduated in 2011 with a master's degree from the medical faculty, and their supervisors were invited to participate. Data from students and supervisors were produced separately. Individual semi-structured interviews and focus groups were conducted amongst 22 graduates, and 14 supervisors. Verbatim transcripts of the interviews were produced. Data were coded and categorised into common themes. Practices cited to assure quality were varied, implemented at different stages in the research process, and influenced by the structure of research education and training programmes. Adherence to laboratory protocols, access to funding, degree of supervisor monitoring, agreement on quality assurance measures, peer review, and supervisor expertise were important in determining the quality of research and post-graduate learning experience. There is widespread agreement on the diverse factors that influence quality. However, mechanisms to monitor and evaluate these applications remain nebulous. These are important considerations for the future development of postgraduate programmes.

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Gender-Awareness in Doctorate Supervision

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According to the theory of "Situated Learning", the aim of doctoral education can be described as the transition towards becoming a fully accepted member of the academic society. This has two implications related to gender. Firstly, it means also becoming a *gendered* member. Secondly, the learning process of "doing academicity" in the proper way tends to be more difficult for groups which traditionally has been excluded from higher education. Besides the risk that gender-based stereotypes lead to expectations on both the PhD-students and the supervisors behalf, in terms of complicating the learning process, women have reason to feel like outsiders in the academic system. Therefore, gender-awareness in supervision, which leads to a non-discriminating educational practice, is necessary.

The aim of the presentation is to discuss in which ways gender has an influence on supervision and what gender-awareness means for supervisors in order to support doctorate learning. A selection of strategies, to be used by supervisors in order to create a gender-friendly climate, will be presented. These ideas mostly emanate from qualitative and semi-structured interviews done on a university-wide level with supervisors active at Uppsala University, all of which accounted for in my recently published study about gender-awareness in supervision (Schnaas, 2011). Finally, further questions probing into how to proceed further with gender issues related to supervision will be discussed: how can strategies be widened in order to become an including supervising practice in general? What are the gains and losses of an intersectional approach?

Reference

Schnaas, Ulrike (2011), **Könsmedveten forskarhandledning: teoretiska utgångspunkter och praktiska erfarenheter**, Uppsala universitet. (119 p)

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Repositioning of fIRST for the new era of research

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This session will present the results of work recently undertaken on the repositioning of fIRST (for Improving Research Supervision Training). The fIRST website was conceived over ten years ago to address a broad range of supervision issues in research education. It was developed by a consortium of universities to provide a range of resources which can be used by supervisors, research degree co-ordinators and supervision developers. Currently, fIRST has over 35 member institutions from Australia, New Zealand and Europe. As a result of the ALTC 'Building Research Supervision Capacity' report in 2010, the fIRST steering group felt there was a need to reposition fIRST to address its recommendations, including facilitating rich and sustained conversations about research education, addressing the impact of growth and diversity in research education, and addressing academic literacy in research education. Also the report identified that research supervision is now more complex with students having a multitude of different relationships with their supervisors and significant others. fIRST has responded to these changes by expanding its remit from supervisors to supervision and thus broadening the audience for its resources. This session will discuss the redevelopment of fIRST, examine some of the new resources such as those exploring the conceptions and pedagogy of research supervision.

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The Research Higher Degree Student Experience: A Qualitative Research Report Investigating Higher Degree by Research Students' Experiences in Australian Higher Education Institutions (2011)

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I will be discussing the Council of Australian Postgraduate Association's (CAPA) work on our report's findings entitled: The research education experience: Investigating Higher Degree by Research Candidates' Experiences in Australian Universities. This report is the product of a project carried out for the Australian Government's Department of Innovation, Industry, Science, Research and Tertiary Education (DIISRTE) by CAPA. The primary findings of this report are based on the outcomes of a national survey, 12 focus groups and 8 case studies of Higher Degree by Research (HDR) candidates at 31 of Australia's 39 universities. In total 1,166 students responded to the survey, and 125 were involved in the subsequent focus groups and case studies.

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Transitions to 'Graduate School' in the UK

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In 1993 Henkel and Hogan (Henkel, M and Hogan, M, 1993, p.90) refer to a lack of institutionalisation of graduate studies in the UK, in contrast to the strong history of Graduate Schools in the US. This was set to change and by 2011 approximately 70% of UK Higher Education Institutions had adopted the Graduate School as the preferred 'organisational device' (Woodward, D and Denicolo, P, 2004, p.13) for the support of postgraduate research. At various stages of maturity and formation, Graduate Schools in the UK have all been imposed on existing institutional structures, and have created a new site of socialisation for doctoral candidates, supervisors and focus for the 'practice of doctoral education' (Boud, D, 2009). Often created to improve submission/attrition rates, homogenise aspects of the research degree process across institutional structures, rationalise resources for doctoral education and enhance the quality of the research degree experience, Graduate Schools have been instrumental in shaping the discourse and practice of doctoral education at an institutional level to reflect the priorities of the Research Councils and funding bodies, supporting the globalisation of doctoral education and the neoliberal reform of higher education. This presentation will present a case study of a Graduate School in the UK. Based on qualitative interviews with research students, supervisors, managers and administrators within a British University, examples will be provided demonstrating the extent to which the discourse of the dominant agenda in doctoral education has entered into every day practice. (242 words)

References

Boud, D and Lee, A, eds (2009) Changing Practices of Doctoral Education, Routledge: Abingdon

Clark, B, ed, (1993) The Research Foundations of Graduate Education, Germany, Britain, France, United States, Japan, University of California Press: Oxford

Henkel, M and Kogan, M (1993), Research Training and Graduate Education, The British Macro Structure, in Clark, B, ed, (1993) The Research Foundations of Graduate Educaton, Germany, Britain, France, United States, Japan, University of California Press: Oxford

Woodward, D and Denicolo, P (2004) A review of Graduate Schools in the UK, UK Council for Graduate Education

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Safe from Harm; Do Ethics Review Processes in Australia extend beneficence to PhD Research Candidates?

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Australian Universities require PhD candidates to understand and embrace core the principles of research integrity outlined in the Australian Code of Conduct for Responsible Conduct of Research 2007 and the National Statement on Ethical Conduct in Human Research 2007. University ethics approval and research governance requirements for any PhD research study involving humans provide a minimum level of assurance in this important area. However, some PhD studies require additional organisational review outside of the University, sometimes by several different organisations. The Australian Health Ministers Advisory Council has been working since 2006 towards a national system to facilitate multi-centre ethical review.

This paper describes one PhD candidate's experience of the current state of multi-centre ethical review in Australia and draws on existing literature to explore three key themes.

The initial theme argues that a PhD candidate can simultaneously share the status of researcher and active participant in a research study. Organisational responsibility to use research review processes that promote and support beneficence is explored and the question is then raised as to the level of beneficence due to a PhD candidate.

The impact of Site Specific Approval application processes on research integrity is the second theme, with a particular focus on potential procedural threats to participant privacy and confidentiality.

Finally, the paper reflects from personal experience on factors which appear to encourage continued duplication of ethical review, despite national efforts to streamline processes.

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Stories of students becoming researchers, researchers becoming renowned

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The Researcher Skill Development framework (RSD7) is a conceptual model for developing research skills from First Year University through to becoming a leader of a research team of international repute, and was presented at the 2010 QPR conference. This paper provides perspectives on the RSD7 from two groups of people - those who have used it in practice, and those who have not. Interviews were conducted with PhD students, PhD supervisors, and researchers more broadly. Those who had utilized the RSD7 as a conceptual framework for their own learning and/or for supervision were asked to explain the ways that the framework had aided them, and areas for which the framework was unhelpful or silent. Furthermore, ways that the RSD7 was aiding their transition towards becoming fully-fledged researchers, or towards establishing the pre-conditions for growing status in their field were explored. For those who had not used the RSD7, impressions of the framework were sought, in terms of scope of potential use from their perspectives, as well as its strengths and weaknesses.

Thematic analysis of the interview data will be presented, with comparisons and contrasts of the perspectives of PhD students and supervisors highlighted. The audience will have opportunity to provide their own perspectives on the RSD7 and so contribute to the emerging stories of its use to strengthen PhD supervision pedagogy and anticipation of research trajectories.

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QPR 2012

Quality in Postgraduate Research

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Narratives of Transition: Perspectives of Research Leaders, Educators & Postgraduates • *Edited by Margaret Kiley*