

Emergent frameworks of research teaching and learning in a cohort-based doctoral programme

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This article argues that alternate models of doctoral research teaching and learning pedagogy could address the challenge of under-productivity of doctoral graduands in the South African higher education system. Present literature tends not to focus on the models of research teaching and learning as a form of pedagogy. The article presents a case study of a doctoral cohort model programme where attention to both quantity and quality of doctoral “production” are engaged in the curriculum design and methodological approaches employed. In this alternate to the traditional “master-apprenticeship”, epistemologies that the programme creates are influenced by its pedagogical methodologies. This reflective theoretical exploration draws on the experiences of supervisors, staff and students as co-producers of knowledge involved in the research pedagogical process. The doctoral graduands that emerge are able to embrace the roles and responsibilities as researchers and knowledge makers. Rather than the PhD being about individualistic learning, the programme attempts to infuse multi- and interdisciplinary notions of responsiveness to knowledge production in community. It concludes with emergent frameworks for doctoral pedagogies – “democratic teaching/learning participation”, “structured scaffolding”, “Ubuntu” and “serendipity” – as useful explanatory shaping influences which underpin and frame the model promoting a contextually relevant and appropriate doctoral research teaching and learning pedagogy.

Keywords: Cohort model of supervision, postgraduate research supervision, learning to become researcher, teaching and learning in higher education, democracy, *Ubuntu*, serendipity.

Introduction

The Academy of Science of South Africa (ASSAf, 2010) study has confirmed that South Africa is underproducing at the scale of only 26 doctoral graduands per million of the total population of the country based on a 2007 cohort analysis of higher education institutions with only 1274 doctoral graduates qualifying in that year. Education statistics released by the Department of Basic Education (2010) suggest that, in 2009, of the 144 852 graduates and diplomates across all 23 universities in the country only 1380 (0.95%) were doctoral graduates and the percentage of doctoral degrees awarded per university ranged from 0 to 17% (an average of 13%). In 2009 the call by the National Research Foundation (NRF) for higher education institutions to consider a five-fold expansion of the country’s present doctoral output highlighted the production of doctoral graduands within South Africa. It was argued that doctoral graduands as bearers of the crucial high-end qualifications are essential drivers of the economic and growth needs of the country (CHE, 2009). The impact of such a call for escalation could infuse another form of “paper chasing” into the higher education system without attention to the following details: What kind of economies are the doctoral graduands being prepared for? What are the disciplinary ranges of doctoral study that could “fuel the economy”? Who are these potential doctoral students likely to be? What research education and training models are needed to realise this goal? The discussion about doctoral studies raises the question about the varied nature of the economic and development context of post-apartheid South Africa, with its combinations and complexities of a juxtaposed first- and third-world economy. Sen (1999) cautions one to consider how knowledge being produced perpetuates hierarchies of power across the separated “first”- and “third”-world economies. He encourages new definitions of development linked not only to capitalist

productivity, but also to notions of freedom and democracy as key quality drivers for a society's goals. The production of PhDs therefore cannot be restricted to only disciplines, departments or institutions (Backhouse, 2009), but it is located within a broader sociological terrain questioning who becomes PhD graduates, for whom, and to achieve what?

The emphasis on “doctoral productivity” leans towards the “input-output” econometric analysis which has tended to be part of business systems that measure productivity. The Council on Higher Education (CHE) in South Africa was concerned about the skewed nature of the PhD production: racially, institutionally and disciplinarily. They suggested that major policy intervention was needed to address

the ongoing enrolment of students who neither graduate nor drop out; and the increasing burden of supervisors, given the shrinking of the academic workforce mostly through retirement (CHE, 2009:vii).

A narrow interpretation of steering policy mechanisms to encourage the uptake of higher education institutions (HEIs) in research productivity could be regarded as potentially infusing into the system a kind of econometry which pays scant attention to the quality of the doctoral graduand: what they think, how they think, and what kinds of epistemologies they will introduce into the wider social system. These debates have certainly introduced a welcome gaze into the notions of doctoral productivity.

This article, therefore, chooses to focus on how one operates within the terrain of underproductivity of doctoral graduands. It asks questions about what and how doctoral graduands are being produced, not simply from an “increase in productivity logic”, but also in terms of producing **quality** doctoral graduands by understanding the educational processes in that production. The article presents a model for disrupting notions of the traditional “master-apprenticeship” notions of doctoral supervision, thereby providing tools for explaining the underproductivity. In exploring alternate pedagogies for research teaching and learning, this article offers a cohort model of doctoral supervision as a counterpoint to the traditional models, arguing that its enactment has powerful consequences for the quality of students and supervisors. It simultaneously addresses the “underproductivity” or **scale** question, while paying detailed attention to the methodology or **scope** of doctoral pedagogy and supervision. It provides an analysis of how senior postgraduate students become quality researchers.

The article is authored from the lived experiences of two doctoral supervisors who in 1999 founded what has come to be called “a seminar-based cohort model” of supervising doctoral studies in Education. The article outlines the context and the thinking which infused the introduction of the model both on pragmatic and theoretical considerations. It highlights the philosophical and pedagogical rationale of the programme, showing how it draws on conceptions of “democracy”, “scaffolding”, “*Ubuntu*” and “serendipity” as useful constructs underpinning the pedagogical design of the cohort model.

Researching doctoral programmes

The 2009 CHE Report points to the “burden of supervision” which characterised the South African university system as the average student numbers to supervisors ratios increase, and the increasing number of students become assigned to an ageing (White) teaching force. In 2005 the average supervisor would have to supervise 7 Masters and Doctoral students. This figure has risen to approximately 12 postgraduate students in fields such as the Social Sciences. Traditional models of “one-on-one” supervision described as being based on “master-apprenticeship” learning relations have been sharply critiqued. The ASSAf study (2010:40) lists limitations such as too narrowly focused; lack of integration across traditional knowledge boundaries; completion times too long or not completed, and graduates being unable to apply knowledge and skills. These institutional resource contextual factors are not unique to South Africa as research on doctoral education is being undertaken in other countries – Europe and North America (Kehm, 2006), Australia (Thompson, Pearson, Akerlind, Hooper & Mazur, 2001), United Kingdom (UK GRAD, 2004) and the USA (National Academy of Sciences, National Academy of Engineering, Institute of Medicine, 2006).

New modes for supervision and support of postgraduate studies are clearly needed. A particular focus has been on alternative models and approaches to doctoral supervision different from the “apprenticeship”

models elaborated on in the literature (Lee 2010; Parker, 2009; Lieberman & Dorsch, 2005; Price & Money, 2002; Burnett, 1999).

One approach refers to models that involve developing communities of sorts. In her review of approaches to doctoral supervision, Lee (2010:18) identifies as one a

conceptual approach to teaching and supervising at this level ... [which entail] practices implied by the model of 'community of practices' (Lave and Wenger, 1991), which is, in effect a decentralized version of the master/apprenticeship role ... [and] in which the student is helped (or not) to move through legitimate peripheral participation to an understanding and mastery of the tacit knowledge required to participate fully in an academic community. (Emphasis added).

By comparison, a “community approach” usually exists side by side with traditional modes. Parker (2009) describes, for instance, “a learning community approach to doctoral education involving scholarly writing groups”. In this approach communities are usually formed in respect of a particular disciplinary area or specific aspects of the research training and education such as research proposal development or seminars on advanced theoretical orientation.

The literature has focused a great deal on the supervision process and the role of supervisors in the different approaches or models. Sayed *et al.* (1998) argue that the PhD research journey is one which shifts over time and that at different phases of the doctoral study the kind of support being offered to PhD students should alter in relation to the evolving stages of doctoral study. A pedagogical model of research learning therefore must take cognisance of different kinds of support offered at different levels of the student’s journey. However, like all journeys the trajectory is never linear, even though planned and directed to attain some degree of systematisation. Research learning must include opportunities for multiple sources of influence, especially at the doctoral level, which aims to produce new theoretical, methodological and contextual knowledge.

Creighton (2008) argues for the need to move towards supervision modes which address preparing PhD students not just to engage with the academic nature of the research study itself, but also focus on what students will do as they enter into the career of utilising their high-end research skills. Engaging in a PhD is also about being inducted into the career of a professional community in the world of “work”, whether within or outside academia. It is suggested that “advisors” are needed at the early stages of the research journey; while “mentors” bridge the PhD graduate into the career world. The “advisor” is a generalist commentator supporting the students on personal level (in organisational and structural concerns), whereas the “mentor” is an academic and professional inductor into the research study and the theoretical landscape of producing and engaging with new knowledge within a research community. PhD programmes that do not succeed fail to acknowledge the multiple levels of support and induction needed for the emerging doctoral student: from being entered into the membership of a graduate community, to attaining candidacy of a competent independent research student and towards ultimately engaging in self-directed research analysis (Tinto, 1993 in Gilliam, 2006).

Many studies on PhD production tend to concentrate on the nature of supervisor-student relationships (Dietz, Jansen & Wadee, 2006; Lee, 2010). These are usually characterised by categories of student discontent. Krauss and Ismail (2010:803) report the Moses (1984) review of literature from Australia, New Zealand and Britain which lists the following factors:

personality factors which include interpersonal differences in language, work style and also personality clash; professional factors which include a supervisor who is ignorant, misinformed or who has few or different research interests; and organizational factors which include the supervisor having too many students or too many competing responsibilities, and inadequate departmental provisions.

Alternately studies concentrate on the kind of work study groups that PhD students themselves set up in the form of scholarly writing groups, focusing on providing peer support learning of academic writing (Mullen, 2006; Parker, 2009).

The area of research teaching and learning curriculum (sometimes referred to as research training programmes) is relatively underdeveloped. For the purposes of this article reference is made to “research teaching and learning” or “research pedagogy” as the strategies that are engaged between researcher students, supervisors and their disciplinary studies in a collaborative dialogue which produces opportunities for disruption, engagement and re-definitions of the doctoral study. These positive disruptions allow for the birth of new knowledge, new possibilities rather than simply an imitation or cloning of the knowledge systems, practices of methodologies of the master supervisor.

History of and background to the cohort doctoral programme

In the early 1990s the Faculty of Education at the University of Durban-Westville, much like other such Faculties at historically black and disadvantaged institutions, was predominantly undergraduate with honours programmes and barely a sprinkling of masters and doctoral students and hardly any research or publications to speak of. The mid-1990s in the Faculty saw a rapid expansion of coursework masters, and by the late 1990s the Faculty was graduating a number of master’s students who began to put pressure on the Faculty to offer a doctoral programme.

A number of other factors fuelled the growth of the postgraduate sector. At the time a critical mass of relatively junior staff had completed their masters abroad and drove the Faculty masters programme. This outside knowledge, experience and perspective was critical to how the programme innovated around the challenges. Another factor was the rapid drop in undergraduate student intake from several hundred to a few dozen, following the implementation of the national teacher redeployment policy. A number of academics left the Faculty as it was downgraded to a School of Educational Studies. This, however, also provided an opportunity and impetus to develop the postgraduate programmes. The pressure on staff to move into postgraduate teaching intensified as did the imperative to improve their own qualifications in order to become supervisors. Many important lessons were also learnt from managing the research teaching and supervision of large numbers of master’s students across different specialisations. Structured research support was provided alongside the thesis component, which initially was done informally and later formally through research education and training modules. To strengthen each specialisation in both the content to be taught at master’s level and supervision support, a number of internationally renowned scholars in various educational specialisation areas were invited to work alongside staff and students to ensure a quality programme foundation.

At this time those academics who were active in the masters were also simultaneously completing their own doctorates in a variety of models of support. For example, a Danish-South African mathematics education doctoral programme (Vithal, 2010) provided a different model of international supervisor who travelled to South Africa periodically to support a group of doctoral students, while working alongside local South African supervisors successfully enabled all 6 students who participated in the programme to graduate. By 1999 many staff members, including the authors, began to discuss models of doctoral programmes – European approaches, UK and Scandinavia as well as USA – and crafted a programme that took the best elements from each.

The main feature of the programme is that a collective of supervisors who recognise both their individual strengths and their limitations collaborated, complementing and supplementing each other’s knowledge base, and providing a space for a collective of students to come together to think, learn and take risks in crossing disciplinary and methodological borders. The programme also took the form it did because there were very few senior academics to supervise and the majority of them chose not to participate. The group of newly graduated doctoral staff used their own experience and networks to support each other and the doctoral students as a group.

In 1999, 11 students were enrolled for the first time into the doctoral programme and committed to participate in a structured seminar support system while being assigned individual supervisors. All but 2 of the first 11 have graduated (81.8%). Of a second cohort of 14 that began in 2002 (with the authors as part of the supervision team), 12 (85.7%) have graduated. Soon after the first cohort began, the demand for entry led to other cohorts being set up in successive years as a set of supervisors and students continue to work with a

cohort for all three years during which a group is supported. The success of the programme and the demand from students led to the setting up of an application and selection process. The programme has evolved over more than a decade as graduating staff have joined the programme and have themselves become supervisors and teachers on the programme, several of whom now lead their own cohorts of PhD students.

By the time the merger between the Universities of Durban-Westville and Natal took place in 2004 and came into effect in 2005, the doctoral (and masters) programme was well established. The period between 2000 and 2005 provides a naturalistic comparison of the usual traditional one-on-one supervision at the University of Natal (UN) and what has come to be called the seminar-based cohort doctoral programme at the University of Durban-Westville (UDW). During this period UDW had an average of 48 doctoral students enrolled per year compared to UN which averaged 39. However, UDW had 25 graduates compared to UN's 3 graduates.

At the time of the merger the programme again faced opposition from some of the professors. However, this resistance was not sustainable in the face of the success of the programme. The programme was adopted and offered as a doctoral programme across the newly merged Faculty of Education at UKZN. The doctoral programme has since its inception always been oversubscribed. Many students voluntarily chose to participate in the programme, often without their supervisors' knowledge or advice.

In the 5 years (2005 to 2009) since the programme has become established in the new Faculty, the average annual enrolment has been 107 and the Faculty has graduated a total of 76 doctoral students (an average of 15 per year). In 2009, of the 158 doctoral graduates in UKZN, the Education Faculty accounted for 21 or 13%, the third highest Faculty graduating doctorates. All students who are accepted into a PhD in the Faculty of Education at UKZN are required to participate in a support programme. While the vast majority of students participate in the faculty-wide seminar-based cohort programme, other discipline-specific smaller support programmes are also offered. Some students elect to participate in more than one programme.

The Education Faculty has since expanded the doctoral programme. In 2011, for the first time the Faculty has two first-year cohorts. A second cohort, consisting of 14 doctoral students, includes staff from across the university who are researching an aspect of higher education in their disciplines. This programme is co-managed by the Faculty of Education and the office of the Deputy Vice Chancellor: Teaching and Learning. Supervisory staff members from across faculties are now drawn into the cohort model, including past graduates of the cohort model programme. Versions of the cohort model of doctoral support are being introduced across other faculties (e.g. Health Sciences) who have perceived the benefit of this support programme for fuelling quality doctoral work.

The doctoral studies cohort model

The doctoral studies programme consists of three "phases", each directed towards students' developmental trajectory from refining the research design, to engaging with producing data within the field, and finally to the writing of the thesis report. It must be acknowledged that these three phases are not mutually exclusive and that each stage of "headwork" (epistemology), "fieldwork" (methodology), and "textwork" (representation) all co-influence each other as the study mutates and develops. The development of a research protocol (or research proposal) at the beginning of the study involves paying attention to all three "phases" of text work, methodology and potential reporting representation. The choice of methodology must be coherently linked to the epistemological framework chosen for the study, in as much as the choice of what one admits as data is influenced by the methodology and epistemological stance of the study. The purpose of defining the three phases is to organise students broadly into cohorts of students grappling with similar kinds of design phenomenon as they embark on their studies. The students are usually drawn from a range of disciplines in Education, including management, psychology, and gender studies. They are also drawn from the faculties of Health Sciences, Law, and Computer Sciences. Each student brings his/her unique disciplinary and biographical heritage of conducting research gleaned from their particular relationship established in masters, honours and/or undergraduate studies in their disciplines. Some have intersecting variants of these influences as they have found congruence or dissonance with their previous

epistemological or methodological frameworks. The choice to opt for a doctoral study within the Faculty of Education is often an opportunity to “escape the clutches” of the strong disciplinary rituals and routines that characterise cloning master-apprenticeship models.

Similarly, the doctoral cohort model includes staff members who are potential supervisors from a variety of disciplines and methodological persuasions. They too represent a diversity of paradigmatic perspectives relating to educational research. The cohort group becomes an assemblage of potentially different vantage points on the nature of research, its methodologies as well as analytical frameworks and styles. The novice supervisors (usually recently graduated doctoral graduands) join more experienced supervisors. Approximately 5 supervisors serve as a team of potential advisors and mentors to the PhD study topics.

At the initial stages of registering with the Faculty of Education the students present a draft research proposal which marks their broad field of study and potential methodology. This is regarded as a “candidacy” phase in which students are assigned “loosely” a potential supervisor who would serve as an advisor to the project. In the majority of instances, the student would have some notion of whom s/he would like to work as supervisor, but the candidacy panel team makes recommendations based on the selection interview into the doctoral programme. Over time students may choose to rethink and re-select their supervisors more appropriately as the research design and methodology evolves.

The first phase of the study is characterised by exposing students to a variety of possibilities for re-designing their study drawing from the range of students’ and mentors’ input in the cohort. The students come together in a weekend programme from Friday afternoon to Sunday afternoon six times a year. The doctoral cohort weekend programme commences with an input of past doctoral graduands presenting their work, usually focusing on methodological choices made in their studies and advice to induct students into the research community and its journey. The Friday afternoon seminar is also a space where all students across the three different phases meet each other, and converse with visiting lecturers or resident academic staff who present cutting edge issues in their research studies. The Friday seminar is also an exemplary opportunity for students to be exposed to making research presentations, fielding questions, and participating with an audience in a research community of scholars.

The Saturday and Sunday programme is characterised by the students presenting “work in progress”, identifying blockages and successes in their particular work according to their different phases or targets set during each successive cohort meeting, thereby also honing their future conference presentation skills about their studies. Each phase group meets separately, but shares communal time and space during the tea and lunch breaks to exchange views with each other. A cohort group of approximately 100 students constitutes the students and supervisors who will meet on any given doctoral cohort weekend. In addition to the large cohort group, there are also smaller cohort groups of students and supervisors who discuss particular methodologies or epistemological opinions. Some of these cohorts are constituted around single supervisors, or teams of supervisors, and may even sometimes be constituted by students themselves as a collective of students only. The collaborative model of doctoral study has many variants, and students may also belong to more than one cohort at any given time.

Each seminar is evaluated by the students who identify the agenda and the potential input that might be necessary on a generic issue pertinent to the group as a whole. These generic inputs are usually staff- or student-driven. However, as the study progresses, the students increasingly express a need for some degree of “independence” as they become more focused on their own work.

The doctoral collaborative cohort model is directed towards reaching the goals of being able to complete a doctoral study, as well as become a doctoral supervisor, a future contributor to supervising others to this high-end type of study. The new Higher Education Qualifications Framework (DOE, 2007) expects the following from doctoral studies:

A Doctoral degree requires a candidate to undertake research at the most advanced academic level culminating in the submission, assessment and acceptance of a thesis.

Coursework may be required as preparation or value addition to the research, but does not contribute to the credit value of the qualification. The defining characteristic of this qualification is that the

candidate is required to demonstrate high-level research capability and make a significant and original academic contribution at the frontiers of a discipline or field. The work must be of a quality to satisfy peer review and merit publication. The degree must be earned through pure discipline-based or multi-disciplinary research or applied research. (DOE, 2007) (Emphasis added).

It may be stated that the doctoral cohort programme at UKZN is a classical interpretation of the expansive goals set by the Higher Education Qualifications Framework for this highest form of academic qualifications (DoE, 2007). The programme signals both the process and product features required within doctoral studies: a consultative and supervisory pedagogy, culminating in a thesis report. This research learning includes learning how to become a research student as well as how to be a supervisor of research. The final product, i.e. the thesis report is the object that is examined as a demonstration of competences generated through the process of a doctoral studies engagement. The programme's activities are specifically designed to add value to enhance the development of the expertise of the doctoral candidate as a researcher. These activities are not credit-bearing but are a key feature of the design of the development process.

Independent one-on-one supervision with the assigned supervisor continues to exist alongside the cohort collaborative model. A significant challenge facing students in the programme is how to negotiate the multiple sources of advice they receive from the various participants in the programme: the different students, the different advisors and mentors, and above all their assigned supervisor of the study. For many this challenge is similar to the one they will face as they negotiate entry into the world of conferencing, publication and dissemination of their studies. The student has to learn that each comment offered towards their PhD study is but a potential source of influence: the choice of whether to admit such advice is the ultimate choice of the student who is responsible for his/her study. However, this is not without the vagaries of power, hierarchy and status which the different sources of advisors/mentors/supervisors have to offer. The student is hereby inducted into the world of knowledge production as a contested terrain, a matter of making choices in relation to dominant and dominating worldviews about research epistemology, methodology, and representation. Ultimately, after three years of engagement with the three phases of study, the student is left to his/her own devices with the support of the assigned supervisor to bring the study to examinable status. Some cohorts continue to meet on their own for an additional year, creating their own programme of support.

Doctoral pedagogies: Emergent frameworks for research teaching and learning

By understanding the weekend seminars primarily as a research teaching and learning space, and analysing these as a specific kind of teaching and learning allows for a different theorising of doctoral studies. Becoming a researcher and scholar may then be considered to have many parallels with becoming a teacher or a health professional. Constituting this as an educational space and bringing educational theories and conceptual tools to bear provides a different approach to doctoral studies programmes.

The above model of doctoral collaborative supervision in a research teaching and learning programme could be said to draw broadly from four emergent philosophies. It should be emphasised that these are not philosophies that were prospectively assigned interpretations to design the programme. Increasingly as we shared ideas about what the doctoral programme has achieved, commentators drew parallels. These are shared accordingly.

The pedagogy of the doctoral programme is deeply infused and underpinned by a **democratic philosophy of teaching and learning**. Many of the ideas for this approach and educational philosophy came from a Danish-South African mathematics PhD project drawing on the strong democratic traditions of Scandinavian doctoral programmes (Vithal, 2010). A democratic learning space is characterised by students having greater freedoms, voice and agency, and in which authority is exercised in students' emancipatory interests (Giroux, 1997). The entrenched values associated with such a philosophy have sustained it over a decade and through a merger by being inclusive and inviting participants into it and allowing the programme to transform in response to the diversity of staff and students it serves. This

underlying philosophy and its values are lived and communicated to both staff and students as participants explicitly and tacitly. Ground rules for participating in the programme are agreed upon and the responsibility for observing these is shared by staff and students.

The inherent hierarchy of the supervisor-student relation and the experienced-novice supervisor is present but minimised by means of strategies such as students' chairing seminar sessions to reduce supervisors' domination and co-construction of the programme of activities for each seminar. The programme is responsive to the needs of students who have direct input into shaping the programme as it unfolds and through their ongoing evaluations. In this way each participant's reason for participating in the programme is valued while standards of rigour, quality output and innovative thesis generation are shared goals.

The nature of the teaching learning space which the cohort model enables through its pedagogy opens out and makes transparent the largely private supervisor-student relation. During the seminars students refer to sessions with their supervisors and both bring and take advice from the seminars to their supervisors. In this way a transparent collegiality is forged as differences in perspectives, knowledge domains, and ideologies are expanded, come into conflict, and sometimes find new expression. The cohort supervisory team provides an advisory and mentorship role (Creighton, Parks & Creighton, 2008). It also perceives and addresses gaps in supervision and in this way supports the student and his/her supervisor even when there are disagreements. Seminar spaces provide a safe and caring environment for public defence of all ideas at all stages of research learning and development. Confidence is built, skills are developed and modelled such as how to listen, how to engage critique as a tool for learning, questioning and challenging and allowing oneself to be open to the same in becoming a researcher and scholar.

This democratised research teaching and learning space is embedded within a strong structured support underpinned by a **philosophy of scaffolded learning** (Vygotsky, 1962; 1978) where the support is offered around the learner researcher's present potential, with the view of enabling them with building blocks for reaching a new higher level of competence. This is not, as is often erroneously understood, a "taught doctoral programme" in which a system of formal continuous assessment may be utilised to mark the milestones of development. Each activity of the doctoral programme is used as a scaffolding to reach the ultimate goal of producing better quality and more broadly trained researchers, while simultaneously leading towards the production of the thesis report. This scaffolding, which is provided through a structured programme, is critical and keeps doctoral students on the task. Having to attend a seminar and account for progress made (or lack thereof) makes for self-regulatory pressure.

The programme also generates the possibilities for many different disciplines to potentially influence a study by scaffolding methodological and disciplinary border crossings. For example, in any cohort there are likely to be staff and students from different disciplines, different methodological persuasions, and different paradigmatic orientations. The programme allows for all positionalities in the research process to be "put under pressure" (Lather, 2001) offering new ways of approaching one's study. Disciplinary or methodological border crossings and the associated risks are encouraged and discussed to enable innovations and new knowledge possibilities. Each member of the group is valued as an intellectual resource.

The scaffolding is extended not only to students but also staff, especially novice PhD graduates who wish to supervise other PhD students and publish. As the programme matures, staff take the opportunity to use the forum assembled during a doctoral studies weekend to share papers and publications in which they were involved. This modelled research publication processes and encouraged the participation of students in seeing possibilities for presentations at conferences, sometimes with supervisors for doctoral colleagues. It was simultaneously a staff capacity-building initiative. The students also came to appreciate the value of using the publications process as a way of gaining national and subject-based expert commentary on their draft analyses in progress as they chose to either publish or present at conferences. This constitutes induction into the career of being a knowledge producer. As suggested by Creighton *et al.* (2008), the doctoral student needs to be inducted into the world of being a researcher, within academia, within the world of work, and within society at large.

The notion of community or collective is deeply embedded in the pedagogy of the doctoral cohort support programme. The democratic ideals and ethos infused into the doctoral seminar teaching and learning space is enhanced by what is best described by the African values and philosophy of *Ubuntu*. Murithi (2009:226) describes *Ubuntu* as an African “world view that tries to capture the essence of what it means to be human” and defines it by citing Tutu (1999:34-35), who notes the difficulty of interpreting it in Western languages:

We say, ‘a person is a person through other people’. I am human because I belong, I participate, and I share. A person with Ubuntu is open and available to others, affirming of others, does not feel threatened that others are able and good; for he or she has a proper self assurance that comes with knowing that he or she belongs in a greater whole and is diminished when other are humiliated or diminished...

The notion of *Ubuntu* has been discussed in relation to educational discourse (Venter, 2004) in which it is characterised by relatedness; collectivism; communalism; spiritualism, and holism (Msengana, 2006). Caring about how other students are doing in the cohort, being present and generous with advice and comments on each other’s studies; sharing whatever knowledge and skills one has, and being critical, intellectually honest and yet compassionate in interactions are all values that are actively encouraged. It emphasises that the success of each person in the cohort group is linked to the success of the group as a whole. Some students find this difficult to understand and accept at the beginning because of their strong focus on their own study and progress but most of them realise and perceive the importance of this value over time.

A cohort implies a community (Parker, 2009; Lee, 2010). The programme takes the notion of community seriously by requiring students to make a commitment not only to their own studies but also to each other, and a core group of supervisors remains with a cohort over a three-year period. The social and emotional dimension of research teaching and learning is recognised. A shared collective responsibility for the growth and development of all in the programme is set up as a ground rule. For example, all students are expected to be present at each student’s presentation. Every member of the group counts and his/her presence or absence enriches or impoverishes the group respectively. Creating community is a key feature of the model but it is the fluidity, the formation and the dissolution, the temporal nature and the multiplicity of communities that form within each cohort and across cohorts that support communities in learning, not as discrete entities by themselves but in a network of co-existence.

Pandor (2011) critiques those who parade *Ubuntu* merely as an abstract concept. *Ubuntu* must translate into active engagement to reinforce communal growth and development, must engage with dialogue, respect and commitment to co-building our future through drawing on our collective resources rather than falling prey to competitive self-interest. *Ubuntu* cannot be guided by a false egalitarianism (Ginwala, 2011) where acceptance of the lowest common denominator suppresses the rights of individuals who want to move beyond fatalistic abandonment to their histories. *Ubuntu*, like the ideals of peace, must paradoxically be a constant battle, a war against odds, but directed towards a greater common good. Democracy and *Ubuntu* entail activating one’s freedom consciously and collectively. Within the cohort-based doctoral programme, this is regarded as students increasingly and developmentally self-direct their educational research goals, defining and re-defining their choices more forcibly while negotiating competing multiple perspectives, and organising their own research learning opportunities.

The increasing value of working in inter-, multi- and juxtadisciplinary ways has become the hallmark of researchers and designers of new knowledge systems. The interconnected realities of different valuing systems, their impact and influence on each other are regarded as providing opportunities for new insights to be fostered. The doctoral studies programme works on these framing principles of producing knowledge that is at the cutting edge of major disciplinary debates. But it brings even these cutting edge debates into dialogue and contestations with other stances, other orientations, other possibilities. The cohort programme is designed to draw on students and staff from multiple paradigmatic perspectives, with multiple orientations and methodological perspectives to educational research. It also encourages drawing students from a wide range of fields beyond merely the traditional undergraduate “teacher education”

backgrounds. Students and staff from these multiple perspectives bring into the programme a range of resources to activate fresh, or different ways of engaging with the pursuits of research. The opportunities created in the doctoral cohort model programme are created so that these different voices from multiple sources can influence each other. This is referred to as providing opportunities for “creative accidents” to happen, in which students and staff members learn from each other, in confrontational and supportive dialogues. **Serendipity** refers to the effect of finding interesting or valuable resource, in particular when one is not looking for it. There is a tendency to limit one’s horizons by the heritages one brings into the research endeavour. These may be framed from one’s own epistemological backgrounds, racialised or geographed positions, vantage points to accumulated habitual observation or articulated reasoning. Posel (2011) mentions that the interdisciplinary project is by definition “transformative”, since it seeks to create new (heightened) definitions of disciplines. Unlike “multidisciplinarity” which constitutes “additive” interests (accumulating parallel perspectives), interdisciplinarity seeks to disrupt, disengage fossilised disciplinary boundaries. Interdisciplinarity organises itself to promote serendipitous possibilities.

In the doctoral study collaborative programme various vantages are offered to potentially co-influence one’s studies. Many students have reported that simply listening to others talk about their own studies is never a neutral phenomenon. Listening is an act not just of hearing, but of comparison and seeking compatibility about what one already knows or does not know. Serendipity is therefore a positive infusion into a collaborative cohort model of doctoral research teaching and learning.

Concluding thoughts

The seminar-based cohort model has been in existence for over a decade and is now generating critique and research from those who have completed the programme (Govender, 2010). This signals the maturity of the programme and reflects the critical knowledge and skills which the programme seeks to develop in students. Cohort models are described in the literature (Burnett, 1999) but are seldom theorised to provide a deeper understanding of how and why they work. Models that are practised at Faculty level, involving many different disciplines and large numbers of staff and students, are less common.

This article outlined how the pedagogy of research teaching and learning evolved into a mature doctoral cohort model within UKZN. It signalled the emergent philosophies of democracy, scaffolding, *Ubuntu* and serendipity as useful pillars to frame both the quantitative and qualitative generation of doctoral studies. Future research should address how the assessment strategies of doctoral studies may also constrain the directions taken in doctoral pedagogy. It is also important to note that the way in which doctoral supervisors and researchers define their academic roles, responsibilities and identities must also be reviewed in order to address re-definitions of doctoral education. One learns, lives and grows in, through and with others in ways that cannot always be neatly pre-figured. Curriculum design of doctoral studies should embrace these principles confidently.

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