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Alternation

Interdisciplinary Journal for the Study of the
Arts and Humanities in
Southern Africa

Higher Education in an Era of Reconstruction, Internationalisation, Competition & Cooperation

Guest Editors
Rubby Dhunpath,
Mary Goretti Nakabugo
and
Nyna Amin

2013

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Durban

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Editorial: Higher Education in an Era of Reconstruction, Internationalisation, Competition & Cooperation

Rubby Dhunpath
Mary Goretti Nakabugo
Nyna Amin

The question ‘what is the university for’, is as old as the institution itself and has fuelled many a philosophical debate – without resolve. In recent times however, there is an increasing and somewhat disconcerting consensus that higher education is essentially a driver of national and international development, generating a slew of discourses around notions of reconstruction, internationalisation, competition and cooperation. The internationalisation of higher education discourse, in particular, has crept into the agendas of both developed and developing countries even though access and equity in local contexts remain unresolved and the criteria for both access and equity are contested. Aspirations for a ‘world class’ university are being driven by several forces: demands for more flexibility for hyper-mobile skilled workers in a globalised world; an imperative to generate revenues which are inspiring econometric models of governance; a need to expand capacity through international linkages or simply a need to look modern which are propelling vigorous forms of internationalisation. The papers in this compendium touch on these issues, with each paper located within a macro or a micro perspective.

In this volume, Kenneth King reviews South-South cooperation in the internationalisation of African higher education, using the case of China as his lenses. He attempts to disentangle the history of university partnerships associated with China’s involvement with African universities. In reviewing China-Africa university partnerships, he pays attention to some of the history of this modality, while examining two more recent manifestations, the Confucius Institute partnerships between China and Africa and the

20+20 partnership between twenty African institutions of higher education and twenty counterparts in Mainland China. He explores the relationship between the actors in the partnership and, whether there is any substance to the claim that ‘China and Africa will learn from and draw upon each other’s experience in governance and development, strengthen exchange and cooperation in education, science, culture and health’.

King contends that the notion of partnership is a notoriously slippery one, as it conjures up ideas of symmetry, and yet, all too often, partners may not be financially symmetrical. For instance, aid donors began some years ago to rename themselves ‘development partners’ but the recipients are seldom called by this same name. Equally, even within the same nation, such as South Africa, there can be what we may call partnerships-for-development between stronger and weaker universities or technical colleges, and it is clear that one of the purposes of the partnership is to boost the weaker partner through association with an institutionally stronger one. On the other hand, when universities are developing partnership relations with foreign institutions, much attention is given to ensuring that the relationship is with an ‘internationally’ reputable university or college.

The push for internationalisation raises a number of questions for governments and higher education institutions, notably, whether this re-configuration is a betrayal of national agendas or a necessary condition to elevate the quality of higher education? Whether international access is being widened at the expense of access and equity for local students? Whether, in a context of pervasive globalisation, the push towards internationalisation is inevitable and irrepressible? Whether internationalisation offers opportunities to envision new paradigms, curricula, research and teaching and learning approaches? The answer to the question, therefore, of what universities are for, is not self-evident, despite the apparent consensus that the university is a lever of the knowledge-based economy. Indeed, the notion of the knowledge-based economy is in itself perilous, for as Geoffrey Boulton (University of Edinburgh) posits, it assumes a ‘knowable future and a static societal or economic frame’. He argues that to expect universities to serve as instruments to rescue ailing economies from recession, places on them obligations for which they are ill-equipped, instead of allowing them to produce ‘useful knowledge’, for an unpredictable future.

The notion of under-preparedness has enjoyed renewed prominence

in the recent past. Higher Education no longer enjoys the luxury of ascribing its underperformance entirely to the underperformance of the schooling sector and the under-preparedness of students. There is also acknowledgement that the prospect of any radical change in general education is unlikely to yield any significant improvement in the foreseeable future. Hence, the ‘articulation gap’ between the school and Higher Education is likely to persist unless Higher Education through its own volition and decisive action reconciles the gap between the education systems.

The Council on Higher Education (CHE) characterises under-preparedness as manifesting itself in a several ways, ‘from struggling in the formal curriculum to difficulty with adjusting to independent study and a university environment’ (CHE 54). An enduring feature of under-preparedness is that ‘what the students know and can do – attainments that were good enough to gain them entry to higher education – does not match the expectations of the institution’ (CHE 54). Acknowledging this disjuncture, Ahmed Bawa argues that the higher education participation rate in South Africa has been stagnant over the last 20 years and this has resulted in a substantial gap between graduate supply and demand. In his paper appropriately titled ‘Righting an Inverted Pyramid: Managing a Perfect Storm’, Bawa contends that the pressure for massification is a response to external socio-political and economic imperatives, which compound the structural inefficiencies of post-school education and, paradoxically, militates against massification in Higher Education. In responding to this dilemma, Bawa offers a model for re-configuring post-school education in KwaZulu-Natal, which will respond to the structural constraints and inefficiencies. He proposes a model comprising a federation of at least 60 existing campuses spread throughout the province. A necessary condition for the model to work is that it will have to be highly differentiated and strongly articulated, to meet the needs of increasing numbers of school leavers seeking access to higher education. Bawa’s speculative model demonstrates that there are indeed viable ways to re-think the construction of the post-school education and training system to respond to the material conditions that prevail in KwaZulu-Natal.

There is a realisation amongst members of the Higher Education community that it can no longer defend the perpetuation of a system that is structurally designed to fail the majority of students. It is becoming increasingly clear that academics will have to bear some responsibility for

the under-performance of the academy in relation to teaching competence and curriculum choices. The discursive shift has inspired academics to take control of those conditions that are within their capacity to change. The next set of seven research papers report on an array of efforts made to support students in Higher Education at bachelors, masters and doctoral level of study, though not all have achieved the outcomes they desired.

Katie Bryant and Kathleen Diga contribute to research capacity building activities that specifically target researchers located at universities in the global South. They argue that although research capacity building activities, usually funded by development agencies in the global North, place some focus on the activity of writing for publication (particularly because of African researchers' low rates of publication in academic journals), such activities do not necessarily take into account theories and research coming from the field of writing studies. The authors reflect on learnings deriving from this writer/writing coach relationship support programme and use them to propose a preliminary model. They recommend that this model could be used to inform the construction of writing support programmes being designed, implemented, and facilitated at African universities to address African researchers' challenges with publication. At the core of this model is a writing coach who has two attributes: First, an empirical understanding of the writers' specific contextual challenges with publishing; and second, three theoretical understandings of writing informed by writing studies research: writing as process, writing as social, and writing as rhetorical.

Similarly, various specialist disciplines face challenges of enabling epistemological access as they have traditionally been perceived by students to be 'difficult', largely because students do not fully grasp the underlying disciplinary concepts and are unable to transfer knowledge from one context to another. Such is the case with Managerial Accounting and Financial Management (MAF). Reflecting on students' experiences of learning in a structured Writing Intensive Tutorial (WIT) programme, Bargate and Maistry report on the success of an approach that used informal exploratory writing. The authors argue that informal writing is low stakes, ungraded and encourages critical thinking and learning of concepts rather than grammatical correctness. The participants in this study were MAF students who voluntarily participated in an 18 week WIT programme. The study was informed social constructivism and conducted within a qualitative interpretative framework.

Using Interactive Qualitative Analysis (Northcutt & McCoy 2004) as a data analysis tool, several key affinities (themes) were revealed. These affinities include an increase in personal confidence, improved study and examination techniques and the interactive tutorial environment. Students felt that their study techniques had improved as they adopted a deeper approach to learning. The structure of the tutorials was enjoyed by all students. They were able to interact with each other to develop a contextualised understanding of MAF concepts. These findings have implications not only for Higher Education accounting pedagogy but for high stakes gatekeeper courses and modules that set students up for failure, not least because of peculiar conceptions of teaching methods and pedagogical orientations.

The complexity of the challenges facing higher education pedagogy in Africa are evident in a number of recurring problems relating to: how to recruit and retain students graduating from an inadequate schooling system, how to provide a curriculum that supplements content knowledge gaps and allows for successful completion rates, finding ways to encourage active participation and deep learning in large groups within the context of large student-lecture ratios. Undoubtedly, an unsatisfactory learning experience in the first year of study is a leading cause of student attrition in higher education. There is, consequently, a greater burden to provide meaningful learning arrangements that bypass the traditional lecture mode which does not support learning barriers endemic to heterogeneous societies. In their paper, Seth Hakizimana and Andreas Jürgens explore the experiences of first-year Biology students who attended a peer teaching and learning module. Inspired by Paulo Freire's dialogical approach, they set up a complex multi-layered peer support system where students learned from and taught each other. The findings indicate impressive pedagogical benefits with decreased competition among students, more cooperation, and increases in motivation, self-confidence and self-esteem levels. This study demonstrates the benefits of an academic support programme that is context sensitive, in line with contemporary social learning tendencies and accommodates contextual peculiarities.

Context sensitivity is insufficient in some instances as the next article illustrates. Exploring reasons for the high level violence in South Africa in a psychology module and the provisioning of psychosocial support in another, Anthony Collins discovered that many of his students had personally experienced violence and the content of the modules he was teaching them

awakened traumatic memories. His paper, ‘Teaching sensitive topics ...’ recounts the unexpected realisation of the scale and extent of post-traumatic stress disorder amongst those taking these modules and the distress, confusion and dilemmas that he as the lecturer experienced. Violence and victimhood, teaching and lay therapy, curriculum and transformative learning are engaged with in a deep and reflexive manner. Collins does not offer solutions; instead he provides a conceptual rethinking of the content and the ways in which pedagogy can be therapeutic and transformative. Transformative learning Collins argues, in which students were continuously challenged to rise above and move beyond trauma, is fundamental to situations involving the overlap of theoretical and experiential realities This article is a reminder that even in Higher Education, there are personal aspects that lecturers may not know about students and when tough issues emerge in the lecture room, they have to be dealt with intellectually and sensitively.

The sharp distinctions between pedagogical approaches used in schools and in higher education are being blurred, the result of shifts towards student centeredness, innovation in teaching and inclusivity. In higher education, in particular, the onus of student success is expected to be jointly shared by students and lecturers, resulting in the appropriation by higher education of frameworks, learning theories and teaching strategies from general education. The article by Lokesh Maharaj, Noor Davids and Bheki Khoza is an analysis about their experimentation with transformative learning and team teaching approaches inspired by national frameworks which advocate learner-centeredness. The article outlines their reflections about student complaints and their resilience when teaching was destabilised. Undoubtedly, dabbling with teaching approaches that students are unfamiliar with requires patience, intelligent design and critical reflection and this paper is instructive and unapologetic about the messiness and complexities associated with transformative pedagogies.

Transforming pedagogy and increasing epistemological access by changing the language of instruction is another core issue that is not easily achieved. The area of language of instruction is a minefield of politicisation, ideology, colonisation, hegemony and power. The dominating positions on the language debate can be summed up as one side supporting internationalisation and globalisation, advocating for a language of instruction that will ensure that students can stake a claim in a global world. On the other side are

the supporters of instruction in the language spoken by learners at home so that learning is accessible, meaningful and successful. With eleven official languages and with most teachers credentialed in English, the task of moving to home language instruction is an onerous one. Linda van Laren and Busisiwe Goba tackle ‘volatile’ issues associated with the language of instruction practices. Using a self-study approach these mathematics teacher educators explore the language practices of four higher education institutions in the preparation of teachers who will have to teach basic mathematics in the foundation phase. They take a principled stance that ‘starting with ourselves’ may be the most appropriate way to deal with language volatility and leave no doubt that linguistic genocide cannot be supported. The Van Laren and Goba article highlights that though there is a desire to provide pre-service teacher educators with the competencies to teach in the language spoken at home, the dearth of financial and human resources, speedy translation services, and teaching to multilingual groups can scupper attempts to offer home-based language instruction. Van Laren and Goba are, nevertheless, optimistic that the wisdom gained from their experiences provides a foundation for facing the challenges that are endemic to transformative work.

The arena of masters level study throws up a different set of hurdles that have to be negotiated not only for personal success and achievement, but also to increase institutional throughput rates. Generally, two types of programmes are available: full thesis under the supervision of an academic or coursework followed by a mini dissertation. Myra Taylor and Prithashni Naidu discuss the endeavours undertaken to improve completion rates of those who chose the coursework and dissertation option. The concerns of the authors were in respect of the non-completion of the dissertation by students enrolled in the Masters in Public Health degree. Their response was to fathom the exact nature of the support student required which were administrative issues and lack of academic writing skills. Sorting out the administrative problems was painless and while academic support was provided, the outcomes were dismal as completion rates remained low. The contribution this paper makes is not so much about what they did as much as it is about what they discovered about why their endeavours failed. The material condition of students’ lives is an important factor for success and most of those who did not complete the dissertation were constrained by personal problems. The challenge for Higher Education is how can personal peculiari-

ties of postgraduate students be accommodated in an academic setting?

Continuing in the area of postgraduate studies, the Govender and Dhunpath article continues a conversation they began in 2011 concerning the cohort model of doctoral supervision. The stakes at doctoral level transcend issues of completion rates and epistemological access; the concern is directed towards originality, intellectual growth, academic prowess and wisdom, the aspects that emerge in the post-proposal development period. The authors argue that it is in this period that students need to experience conflicting sets of critique, contested views on research, and advice that challenges the worldviews of student and the appointed supervisor. The conflict, which emerges from the differing viewpoints of the cohort peers and supervisors (who often critique each other) and the appointed supervisor, is a necessary tension for developing intellectual maturity and to prepare doctoral students for the world of research. Dhunpath and Govender suggest that doctoral education is characterised by pedagogies of conflict and disharmony.

The next two papers can be conceptualised as being beyond pedagogical issues in higher education. Access and success in Higher Education can often not be predicted from scholarship emerging in the West and applied in developing contexts. Both these papers make apparent the variable conditions and materiality of living in Africa that suggest widening the lenses of academia. Higher Education is undoubtedly a luxury that many on the continent cannot afford. Support through initiatives like scholarships, which are merit-based and financial aid for those from economically disadvantaged backgrounds are available and in many instances, found to be inadequate. The paper by Suna Kassier and Frederick Veldman, 'Food security status and academic performance ...' lays bare the statistics that draw together the numbers that suggest that most of the students who receive financial aid underperformed academically. One of the main findings was that more than half of those receiving financial aid were food insecure. The recommendation of the authors is nutrition intervention programmes, and if one takes into consideration the gamut of challenges that students from poverty backgrounds face, a Living Skills programme could be considered as well.

Community engagement is a buzzword in Higher Education. There are expectations that the work in Higher Education is not only about knowledge; it is also about how that knowledge inspires a commitment to uplift society in general and vulnerable communities in particular. An

altruistic character is valued as much as disciplinary expertise. There are many models of community engagement and in the conceptual paper by Julia Preece, ‘Service learning and community engagement ...’ she counsels against efforts that do not bring about productive changes in communities. Tracing the ideological roots of community service, community engagement and service learning, Preece reveals the complexities and complications related to changing conceptions of these three notions, the gap between theory and practice, and the negative consequences that arise when service learning drives community engagement. The contribution this paper makes is by offering a new concept of engagement, namely, ‘adaptive engagement’.

The final two papers are juxtapositions about the value of teaching in Higher Education. There is a general assumption that teaching and research, two of the primary role functions of Higher Education, are oppositional entities and that universities favour and reward research while teaching has a subordinate status with little or no reward. Salochana Hassan’s paper, ‘Perceptions of academics ...’ argues that the sense of teaching as a calling has made academic staff vulnerable victims of exploitation and manipulation. Deploying a critical lens, Hassan makes a compelling argument that academics are responsible not only for their subordination but also for their emancipation from the stranglehold of oppressive practices. The flip side of the argument, that teaching is as valued as research is proposed by Reshma Subbaye and Renuka Vithal in their article, ‘Valuing teaching in university ...’. Using one institution’s statistics, the authors provide evidence that not only is teaching rewarded, it is one of the ways in which upward career mobility can be achieved. Offering a gendered analysis, the statistics reveal that more women attain associate professorships through teaching excellence, men achieve through research excellence. The paper is instructive about the ways in which teaching is supported through various initiatives and unlike Hassan’s paper highlights the active role an institution can take to place teaching on the same footing as research. The Subbaye and Vithal study shares the pre-emptive measures that mitigate the suggestions of critical actions from academic staff advocated by Hassan.

We would like to believe that the principle of ‘useful knowledge’ has under-girded papers in this volume. The conference has attempted to promote a conception of ‘useful knowledge’ which is informed by an evidence-led scholarship of teaching & learning. However, the editors of this special issue

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have resisted the inclination to subjugate their conception of the scholarship of teaching and learning to instrumentalist agendas. However, we are acutely aware that in the context of high attrition and dismal success rates, higher education does not have the luxury of ‘navel gazing’ as a scholarly indulgence. Our scholarship of teaching & learning should, in the first instance, help us better understand how to interrupt the syndrome of chronic dropout and unsustainable success rates, while elevating the quality of graduates. The papers in this volume signal the centrality of the student in our scholarly agendas. Hence, while issues of access & equity, language of instruction, university quality, accreditation, rankings & ratings, career mobility, community engagement and internationalisation of higher education continue to grow as crucial areas of enquiry, the focus on relevant pedagogies, methodologies and technologies in the context of pervasive diversity, complexity and uncertainty remain the cornerstones of our core business. In acknowledging the gravity of our responsibility, we take seriously the warning of Achille Mbembe, who highlights the futility of academic enquiry which is ‘devoid of philosophical reasoning... [which is not] based on any sound scholarly work [and which] do not lead to new forms of civic or political activism... nor do they contribute to the emergence of new forms of creativity in the arts or in the field of literature, cinema, music or architecture’.

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South-South Cooperation in the Internationalisation of African Higher Education: The Case of China¹

Kenneth King

Abstract

Set within the discourse of South-South Cooperation, the article seeks to disentangle some of the essential history of university partnerships, before looking in more detail at the kind of partnerships associated with China's involvement with African universities. In reviewing China-Africa university partnerships, it pays attention to some of the history of this modality, as well as looking briefly at two more recent manifestations, the Confucius Institute partnerships between China and Africa and the 20+20 partnership between twenty African institutions of higher education and twenty counterparts in Mainland China.

Keywords: Partnership, Cooperation, Confucius Institute, 20+20 higher education project

Introduction

In a paper connected to a major conference in 2012 on Teaching and Learning (T & L), it may be important initially to relate South-South Cooperation (SSC) to T & L. Unlike a good deal of North-South Cooperation, in higher education, where it is widely assumed that the North

¹ A first version of this article was presented at the 6th Teaching and Learning Conference in UKZN, 27th September 2012.

is building the capacity of the South through partnership, SSC claims that there is a symmetrical relationship between the actors in the partnership. Indeed, in *China's African Policy* (2006: 3), it is claimed that 'China and Africa will learn from and draw upon each other's experience in governance and development, strengthen exchange and cooperation in education, science, culture and health'. The same language can be found in the Delhi Declaration which resulted from the India-Africa Forum Summit of April 2008 (GOI 2008). In other words, the emphasis of the South-South Cooperation discourse is on learning from each other, which shares some ground with the discourse of Teaching and Learning.

Central also to this SSC discourse is the notion of partnership. This is a notoriously slippery concept, as it conjures up ideas of symmetry, and yet all too often partners may not be financially symmetrical. For instance, aid donors began some years ago to rename themselves 'development partners' but the recipients are seldom called by this same name. Equally, even within the same nation, such as South Africa, there can be what we may call partnerships-for-development between stronger and weaker universities or technical colleges, and it is clear that one of the purposes of the partnership is to draw up the weaker partner through association with the institutionally stronger. On the other hand, when universities are developing partnership relations with foreign institutions, much attention is given to ensuring that the relationship is with an 'internationally' reputable university or college. The same use of the word 'international' to mean 'high quality' is frequent in reference to publications in particular journals, or to research, to staff or to students.

In this complex situation of the 'politics of partnership'², we shall seek to disentangle some of the essential history of university partnerships, before looking in much more detail at the kind of partnerships associated with China's involvement with African universities. In this review of China-Africa university partnerships, we shall also pay attention to some of the history of this modality, as well as looking briefly at two more recent manifestations, the Confucius Institute partnerships between China and Africa and the 20+20 partnership between twenty African institutions of higher education and twenty counterparts in Mainland China.

² See *NORRAG News* No 41, The New Politics of Partnership.

A Different Partnership Discourse?

We should start by discussing the character of the partnership discourse used by so-called emerging economies, another name for the stronger of the countries in the South. It has several characteristics. First, it stresses that there is a shared identity between the Southern ‘donor’ and its recipients because fundamentally they are both still ‘developing countries’. China, for example, very frequently claims that it is the largest developing country relating to the continent (Africa) with the largest number of developing countries. Second, emerging economies which are becoming donors tend to emphasise that they have appropriate recent experience of successful development. As compared to UK or France, whose dramatic economic development lies back in earlier centuries, South Korea or China can point to extraordinary developments that have taken place in the last thirty years. Third, these new collaborators do not use the discourse of aid or charity, or of donor-recipient relations. They refer to South-South Cooperation. Fourthly, they continually discuss the importance of mutuality, solidarity, reciprocity and learning from each other. Finally in the economic sphere, they constantly refer to win-win outcomes and ‘common good’ or ‘common development’, thus underlining the fact that development is something that works for both partners, and not something that one partner helps the other to achieve³.

An Earlier Partnership History

We should not forget that versions of what we are calling partnership-for-development were critical to some of the earlier university foundations in the developing world. The model of the University of London with its many associated colleges was influential in colonial India where the central university examining body as in Calcutta, Delhi or Bombay was surrounded by multiple associated colleges. There was again a University of London

³ For a discussion of this discourse in relation to many emerging economies, see *NORRAG News No. 44*, The Brave New World of ‘Emerging’, ‘Non-DAC’ Donors and Their Differences from Traditional Donors. See also Mawdsely 2012.

linkage developed as universities were set up in the British colonies. Whether in the West Indies, East, West or Central Africa, Malaya or Hong Kong, the new university colleges were linked to the mother institution in London, and there were crucial connections maintained for accessing staff as well as securing curricula and examinations. Ashby's classic account of *Universities: British, Indian, African: A Study in the Ecology of Higher Education* (1966) remains an invaluable account of this particular era of partnership. Of course, there are many other examples of where a new foundation, whether Harvard, Cape Town, or Tuskegee, has retained a powerful link with an original source of institutional development.

Disciplinary associations have also been critical to the maintenance of scholarship across newer and older institutions. These have operated at the national, regional and world level, and may be illustrated from many different disciplines, including comparative education⁴ or teaching and learning itself.

At the Pan-African and global levels, there are university associations which connect universities in arrangements of assumed symmetry. Thus, instead of the older relations between London and the new colleges in the former colonies, there has emerged, since 1963, the Association of Commonwealth Universities (ACU), still however headquartered in London⁵. There are parallels with Francophone universities and their relations with the metropolis. Then within Africa itself there have emerged partnerships which cut across the main languages of the continent in the Association of Africa Universities (AAU) established in 1967. An interesting partnership-for-development would be the Partnership for Higher Education in Africa (PHEA), linking a number of US foundations with eight Sub-Saharan African universities. At the continental level, the once donor-driven Donors to African Education changed in 1988 into the Association for the Development of Education in Africa (ADEA). Disciplinary organisations continue to be vital for linking scholarship across the whole or parts of the

⁴ For an account of how the field of comparative education was constructed, see Manzon (2011).

⁵ In celebrating its centenary in 2013, the ACU looks back to the Universities Bureau of the British Empire (1913) and to the Association of Universities of the British Commonwealth (1948).

continent of Africa, such as the Organisation for Social Science Research in Eastern and Southern Africa (OSSREA) [founded in 1980], and the Council for the Development of Social Science Research in Africa (CODESRIA) [founded in 1973].

The independence of the newer nations has not removed the need for development partnerships in higher education. Indeed many OECD countries have maintained for years mechanisms for linking higher education institutions in lower and middle income countries with those in the particular OECD country. Variations of these North-South institutional partnerships are evident in Sweden, Norway, Denmark, Netherlands, the UK, Ireland, Switzerland, Spain, France, and Germany, as well as in Canada and the USA. The rationale for these partnerships has altered over time, even if a key element in their discourse has been the capacity building of the allegedly weaker Southern partner by the stronger Northern partner. In most cases, they can be considered as a form of tied aid as the southern partner has to link with a partner in the particular northern, donor country. There are some variations of the North-South model; thus Japan has encouraged the notion of an Asia-Africa Dialogue, with financial support from JICA, but a key catalytic role has been played by the Centre for International Cooperation in Education (CICE) of Hiroshima University, for partnerships between some twelve African countries and countries in Asia, notably India, the Philippines and Indonesia.

In some situations, partnership with the South has become a precondition for securing research funds in the sphere of development. Thus, many opportunities for Northern scholars to bid for research funds from Northern donors now require a Southern partner, and even the successful winning of scholarship funding by a Northern researcher for doctoral work can in some situations require the identification of a Southern scholar as an advisor-cum-monitor.

UKZN's Partnership Portfolio

It would be interesting to analyse the range and character of partnerships within the UKZN itself, acknowledging of course that the university is itself an example of a partnership-for-development, including the former University of Natal with a number of initially less powerful partners, such as

Durban Westville. First of all, the formal claim by the university on its website is that it has no less than 250 institutional links (or partnerships) world-wide. Naturally, some of these linkages are supported by memoranda of understanding, but they may not progress beyond that; they are, in fact, 'paper partnerships'. Another way of looking at the partnership portfolio is to assess with what kinds of universities, North or South, does UKZN have active agreements. At a glance, it would appear that the bulk of UKZN's exchange agreements are with OECD countries, though there are not large numbers of UKZN students taking advantage of these agreements. One exception in the northern pattern of exchanges is the Gandhi-Luthuli Chair of Peace Studies funded in UKZN by the Indian Council of Cultural Relations (ICCR). On the other hand, at the merger of the University of Natal with Durban Westville, the latter's Centre of Indian Studies was disbanded, thus cutting the link between India and one of the cities with the largest number of Indians outside the sub-continent.

At the student level, the great bulk of the 'international students' in UKZN (as many as 80%) are from the SADC countries. These are supported by a South African 'aid' policy which allows such students to pay the same fees as South Africans, apart from a levy per semester of some 950 Rand. There is a strong distinction between SADC and non-SADC international students in terms of fee levels, but intriguingly at the full-time masters and doctoral level, from 2009, there don't appear to be any fees charged at all, whether for local, SADC or international students. The rationale for this generous provision needs careful analysis.

Another dimension of the 'international' versus the 'local' relates to research. In terms of 'international' research and publications, it is noteworthy that South Africa maintains a list of approved South African journals as well as identifying some researchers as rated in different categories by the National Research Foundation. This may be seen as a South African construction of the 'international' for the purposes of rating publications and research standing.

Overall, we can see that running through this UKZN partnership portfolio there are a series of working assumptions about linkages, partnerships, publications and research excellence. The critical importance of the last of these for the university's research funding from government is certain to have an impact on what linkages, partnerships and publications are

supported. Interestingly, the University's vision: 'To be the premier university of African scholarship' makes the important point that African scholarship must be seen as 'international'. The lack of clarity about the exact meaning of 'African scholarship' does not appear to get in the way of the university striving to be one of the three or four top South African universities, and also to figure in the other world class rankings.

South-South Cooperation in Higher Education – The Case of China-Africa

This brief review of UKZN's partnerships may suggest that its most significant version of partnership is what might be termed transformative South-South cooperation in which, within the nation state, universities with different historical apartheid legacies are put in a partnership-for-development process. There is a small element of Indo-African partnership also as we have seen in the Gandhi-Luthuli chair. But so far there is very little of a China-Africa higher education dimension in UKZN; indeed, Taiwan has been much more evident than mainland China through its 2012 tour of all the UKZN's constituent colleges. We shall turn therefore to look more broadly at China's discourse on and conception of higher education partnership with Africa, illustrating this where possible from South Africa.

Partnership is in fact the principal modality whereby China engages with overseas universities, whether in Africa, Asia, or Latin America. On the few occasions where it builds a tertiary institution, as it has done in Liberia, Ethiopia and Malawi, for example, it delivers the staffing, if required, through a partnership with a Chinese university. China-Africa university partnerships are also the method China has adopted for spreading its Confucius Institutes both in Africa and in all other regions of the world. Then there are also a whole series of China-Africa Higher Education partnerships set up through the pledges of the Forum on China-Africa Cooperation (FOCAC). We shall examine a few of these, and particularly the so-called 20+20 partnership between 20 higher education institutions (HEIs) in Africa and 20 in China.

Several of these partnership mechanisms have been used by the OECD countries mentioned above in promoting their version of partnership;

so in several of these examples, there may not be anything distinctive about the China-Africa partnership. Two dimensions, however, do seem to differentiate China's approach from that of the traditional donors. One is the strongly ethical discourse that is connected to the delivery of higher education cooperation; and the second concerns the promotion of Chinese language and culture via the host university. We shall examine these briefly in turn.

China's Ethical Discourse on Cooperation

Going back for some 60 years, China has maintained an almost identical account of why it was involved in cooperation with other developing countries. We have alluded to this earlier in our discussion of the partnership discourse of so-called emerging donors. In China's case, some of this derives from the Five Principles of Peaceful Coexistence developed in the 1950s with their emphasis on 'equality and mutual benefit'. These principles were reinforced in early 1964 in Premier Zhou Enlai's Eight Principles of Foreign Aid, announced in Ghana. Their emphasis is on 'the poor helping the poor', in Zhou Enlai's words, and not at all on China's providing 'unilateral alms' to Africa. Despite their being almost 60 years old, they seem remarkably modern, and are widely referred to in China's current discussions about cooperation with Africa. The demand that Chinese experts in Africa should not expect to be treated any differently than the local experts is still particularly relevant⁶. It remains a critical dimension of China-Africa partnership.

There is a powerful concern, at least at the level of the discourse, with sincerity, reciprocity, solidarity, mutual benefit and symmetry in these principles. The focus is on cooperation that benefits both parties; hence the term 'common development' and the frequent use of the phrase 'win-win'. The employment of the term 'mutual' seventeen times in just eleven pages of *China's African Policy* (2006) underlines this focus on cooperation that is

⁶ 'The experts dispatched by China to help in construction in the recipient countries will have the same standard of living as the experts of the recipient country. The Chinese experts are not allowed to make any special demands or enjoy any special amenities' (China 2000).

claimed to be advantageous both to China and to Africa. ‘Cooperation’, too, is an absolutely vital notion, and is much preferred to the word ‘aid’; indeed in this same short White Paper on Africa, it occurs no less than 78 times in eleven pages, while ‘aid’ appears just once, and then only in relation to humanitarian aid. Finally, the key term ‘friendship’ is central to the Chinese understanding of the relationship with Africa. This is not a term that appears at all in the four White Papers by UK’s Department of International Development since 1997.

An ethical discourse is one thing, but what does this amount to in the actual practice of higher education cooperation between China and Africa? Is the ‘new type of China-Africa partnership’ really different from the other partnerships mentioned earlier? Is there some difference, in the ethical domain, in the experience of an African student in China as compared to an African student in Europe, Japan or North America?⁷ Is a Confucius Institute partnership between a Chinese and an African university different from any other cultural or language partnership with Europe or North America? These are complex questions and they cannot be easily answered without the kind of qualitative analysis of Chinese human resource projects which may be difficult to find at the moment. We can perhaps get a little closer by looking at the operation of the Confucius Institutes in Africa.

The Confucius Institute as a Unique University-to-university Partnership

By any standard the Confucius Institute initiative since its inception in late 2004, in South Korea, is quite simply the largest language and culture project the world has ever seen. It is not of course only a China-Africa project, but one that extends to all regions of the world. Whether its China-Africa arm is in any way distinctive from its operation in other regions would be hard to establish. But what can be claimed, more generally, is that the Confucius Institute (CI) partnership operates in a substantially different way from the comparator French, British, German or Spanish language and cultural

⁷ For the complex history of African students in China, see King (2013) chapter 3.

institutes. The most important distinction is that the CI is essentially a partnership between a Chinese and a host country university, and it is not a stand-alone institute set up by the British Council, Goethe Institute etc. These European comparators are **not** organized on a partnership basis.

Illustrative of the partnership assumptions is that there are always two co-directors of any CI, one Chinese from the Chinese partner university and one from the host university. In addition, the host university is expected to provide accommodation for the CI and for its Chinese staff, and the Chinese partner provides staff, while Hanban (The Chinese Language Council) supports the host university with an annual grant for the CI, to cover course provision as well as regional travel and travel to the annual conference in China of all the CIs. The University Principal or Vice-Chancellor would normally also attend this annual convention.

There is no single pattern for this CI relationship. Even within the three existing CIs in South Africa, there is a wide diversity. The CIs in Rhodes and in the University of Cape Town (UCT) have been responsible for introducing Mandarin at the degree level into their respective universities, while in Stellenbosch, as there was already established Mandarin teaching, the CI has played a key role in extending language teaching into surrounding primary and secondary schools and also into a college. When South Africa's fourth CI starts in Durban's University of Technology later in 2013, it will again be possible for Mandarin degree level teaching to be started.

Over the last nine years, the CI partnership has not only been effective in offering a new international dimension to almost 400 universities around the world; it has also contributed greatly to the internationalization of the Chinese university partners. For example, Xiamen which is the partner of Stellenbosch University has no less than fourteen other partner universities around the world with which it has a CI link. But Jinan University which is partnered with Rhodes only has a single CI. There does not seem to be a common pattern for CIs; each one develops its own identity, and is encouraged so to do.

What is clear is that the CI as a mechanism does offer an opportunity for the kind of people-to-people exchange that is so often talked of in China's cooperation policy with Africa. There is a lot of traffic of staff and volunteer teachers coming from the Chinese partner, and a lot of both long- and short-term visits from the African partner. These are not just officials or

high level academic administrators, but include some of the very people who are attending classes, whether in the main university classes or in the satellite classes outside the university. The CI also offers the opportunity for African learners to meet some other members of the Chinese community who may be working in Cape Town, Nairobi, Cairo or wherever the 33 operational African CIs are located. The celebration of Chinese festivals such as Chinese New Year and of China Weeks brings some of these other Chinese celebrations into the host university.

Other China HE Partnership Opportunities

The Confucius Institute is just one of the more visible partnerships affecting universities in some 33 African countries. There have been older HE partnerships, in some cases going back into the late 1990s. In many cases, it seems to be that the newer modalities of university cooperation have been built on to these early initiatives in partnership. Thus China's resource bases for specialist short-term training are sited in universities such as Zhejiang Normal and Nanjing Agricultural which have had long links with Africa. The same is true of the development of CI partnerships with African universities. Equally, one of the latest modalities of university cooperation, the 20+20 scheme between tertiary institutions in China and Africa, includes at least twelve participating universities in Africa which have a Confucius Institute.

We therefore have an intriguing situation where there are several different layers of HE cooperation found in the same Chinese and African university. Thus the University of Stellenbosch is a member of the 20+20 programme; it has a CI; and it also participates in the China-Africa Joint Research and Exchange plan; and it will be the Africa partner in the China Africa School for International Business with Zhejiang Normal. The same is true on the China side; those universities which are most active in Africa participate in many different modalities, including in some cases having a Centre for African Studies, and they are resource centres for the training of African professionals.

In this sense, the link with Africa has certainly helped to put a university like Zhejiang Normal on the internationalisation map. The speed with which this has happened has been truly remarkable.

It will be interesting to see what shape the 20+20 partnerships take⁸. But it seems that, like the CIs, there will be considerable diversity and no standard pattern. At one point in 2011, it looked like China would help UNESCO to play a role in trilateral HE cooperation between the China and Africa partners, but it is too early to be clear what may happen in this area. A second meeting convened by UNESCO in October 2013 on the 20+20 partnership offered an opportunity to look critically at this form of trilateral cooperation. But more generally, at the moment, just some three years after they were launched, the Chinese and African partners are testing the water, and exploring what kinds of partnerships make best sense.

In Conclusion

Even though China has been partnering African universities for a long time, there is still relatively little known about the ‘feel’ and detail of these partnerships. We currently lack rich qualitative accounts of how Confucius Institutes are operating, or indeed how all the different layers of collaboration with Africa are altering the shape and focus of a number of key Chinese universities and vice versa⁹. It will be fascinating to see how somehow some of these partnerships impact on Africa over the next ten years. What will be the influence of the CIs over this period? What will be the impact of the tens of thousands of short- and long-term African trainees and students returning from China over this next decade? At the moment only some 10% of the academic writing on China-Africa is being carried out by African scholars. But as China plans for the expansion of China research centres in African universities, will there naturally be larger numbers of young African scholars making the study of China in African education their chosen field of study?

Putting this another way, will a university like UKZN with its mission to be the premier university of African scholarship recognize that such African scholarship will need to be able to include research on some of

⁸ The author is participating in a new research project on the 20+20 higher education project from May 2013.

⁹ There are some preliminary insights available in King (2013), *China's Aid and Soft Power in Africa*.

the newer partnerships with Brazil, India and China, and perhaps through this on different traditions of university teaching and learning? Equally, will UKZN, with its tradition of critical scholarship, be one of the first African universities to carry out rigorous research on what university partnerships with China mean in practice? As a university which does not itself have a CI and is not a 20+20 partner, could UKZN play an influential role in analyzing the symmetry, rationales and realities of China-Africa partnerships, particularly in Southern Africa? The question of whether China's higher education partnerships with Africa constitute an alternative partnership paradigm is surely a relevant one¹⁰, but getting behind the persuasive rhetoric of South-South Cooperation cannot be achieved without detailed qualitative research on the reality of partnership-in-practice. Currently, there has been very little research on this challenging dimension, though King (2013) has begun the process of interrogating this lacuna.

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Righting an Inverted Pyramid: Managing a Perfect Storm

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Abstract

The higher education participation rate in South Africa has been stagnant over the last 20 years and this has resulted in a very substantial gap between the supply and demand of undergraduate education. The pressure for massification is also a response to other sociopolitical and economic imperatives. Notwithstanding the projections in the Green Paper on Post-School Education, it is argued that the structural inefficiencies in the way in which post-school education is currently structured will prevent massification. A purely speculative model is discussed for the organisation of higher education in KwaZulu-Natal, which it is argued, deals with these structural constraints and inefficiencies. It is proposed as a speculative model because its primary function is to demonstrate that there are indeed viable ways to re-think the construction of the post-school education and training system to respond to the material conditions that prevail. The model proposed is a single federal institution of at least 60 existing campuses spread throughout the Province. A necessary condition for the model to work is that it will be a highly differentiated and then strongly articulated, thereby dealing with a rather contested national challenge of differentiation but in the context of meeting the needs of widening access.

Keywords: massification, post-school education, articulation, differentiation, federal university system.

Introduction

This article is an attempt to understand how to deal with a tremendous, perfect storm that is coming down at the higher education system and about

which there is little if any major thinking going on – a storm centered on the growing disjuncture between the supply and demand of higher education. This article does not attempt to arrive at a solution to this very serious problem. Rather, it is an attempt to demonstrate that there may well be new and innovative ways of thinking about the massification project through addressing the *construction* of what we now refer to as the post-school education and training system. This takes into account the sociopolitical and economic contexts that prevail. It asks whether we ought to go back to basics in thinking about the purpose of higher education in society - to shift its central purpose from the production (and reproduction) of elites to one in which it builds the intellectual culture of society at a more general, broader level and is more responsive to the needs of socioeconomic development.

The Challenge of Access

Durban University of Technology (DUT) received some 76,000 applications from individual students for about 6,000 first-year places in 2013. This type of ratio is reproduced at all universities in KwaZulu-Natal. At the centre of the student demonstrations at DUT over the last 5 to 10 years has been the issue of student access though this has had a variety of representations. This is not surprising in the context of South Africa's extraordinarily high unemployment rate and the advantage that graduates bear in the labour market as they seek jobs.

This matter has to be seen in the context within which universities are located. More generally, higher education in South Africa faces serious challenges as it contemplates its future in an uncertain global environment. Perhaps the most complex of these are the shifting sands of national imagination that impact on the way in which higher education policy is driven. In the post-1994 period, the system has seen itself responding to the Reconstruction and Development Programme (RDP), the outcomes of the National Commission on Higher Education, the RDP White Paper, the Growth, Employment and Reconstruction (GEAR) macroeconomic plan, the African Renaissance Project, the Accelerated and Shared Growth Initiative for South Africa, among others. Each provided a framework for rethinking the role for higher education in society. Perhaps most importantly, it has produced a shift towards short-termism in national strategy (Bawa 2012).

With the publishing recently of the National Development Plan (2011) that uncertainty continues.

Instability in subsidy funding has been another source of uncertainty. While the overall budget for higher education has remained (admirably) steady, the subsidy per student FTE (Full Time Equivalent) has begun to decline. Coupling this to inflation at about 5.5%, it is clear that this is a system under growing financial stress. The failure of the higher education system to produce sufficient numbers of doctoral graduates makes the system unsustainable (ASSAf 2010). There is recognition that the major problem here is the narrowness of the pipeline that produces possible candidates for doctoral education. The inability to recruit academics with doctorates in some disciplines has reached crisis proportions and it is fair to say that the system is not quite sustainable in terms of securing its future professoriate.

Perhaps the challenge of most consequence is the growing sense that the legitimacy of higher education in South Africa is under serious threat. There are a number of reasons for this and primary amongst them are the notions that universities are elitist, exclusionary, undermining of government development strategy and unresponsive to the challenges of South African human resource development needs. These are common perceptions and there is sufficient evidence in meetings between Higher Education South Africa (HESA) and the Minister of Higher Education and Training and between (DHET) and the Higher Education and Training Parliamentary Portfolio Committee that there are concerns in governmental circles about the conditions of institutional autonomy and academic freedom. While strong, coherent arguments have been made to refute these concerns, it would appear that they are underpinned by deeply ideological factors. In post-1994 South Africa, there has never been an attempt to develop a social contract between higher education, the state and the general populace. Universities will not be able to address all the expectations that have been heaped on them. This does not however, permit them to simply abrogate their responsibilities to address these expectations as social institutions. And this must mean that they ought to consider new and viable approaches to their organisation either amongst themselves or in new formations. For the purposes of the arguments presented here with regard to massification, the idea is to consider higher education (and its institutions) within the broader post-school education and training framework.

The Challenge of Massification

Between 1994 and 2012, the participation rate of 18-24 year-olds in higher education was mainly stagnant as it grew from 14% to about 17%. This is mainly by design, following on the policy discussions that unfolded under the aegis of the National Commission on Higher Education (NCHE 1995) and then in the Green and White Paper processes that followed in 1996-1997. This must be seen in light of the global growth in tertiary enrolments by 160% since 1990 - with some 170 million additional students in the systems of the world (Sharma 2012). Between 2002 and 2009 this growth was dominated by the growth in enrolments in India and China. According to Sharma (2012), these nations accounted for some 26 million of the 55 million additional enrolments during this period when enrolments in South Africa grew from about 643,000 to about 840,000 at about 4% per annum (Taylor 2011).

This slow growth scenario is somewhat out of synchrony with the policy impetus of macroeconomic frameworks and their impact on, for example, policy in the areas of science and technology, trade and industry, and so on. The creation of a Department of Science and Technology and the National System of Innovation with all its institutional and structural paraphernalia is a direct result of the aim to create a knowledge-based economy. Societies that have made this transition have had to vastly increase the participation rate of 18 to 24-year olds in post-school education.

There are a number of reasons for this stagnation in South Africa and primary amongst them is the fact that one of the outcomes of the National Commission on Higher Education, after much debate and discussion, was *not* to massify the system but to use a measured, safe approach of growing the system gradually (NCHE 1995). This was one example of an imagination of the 'new' South Africa: that of the *negotiated revolution*. Much fear was expressed at the time that the successful parts of the higher education system (meaning mainly the historically-white universities) would be damaged by a process of massification. And little thought was given to finding new ways to achieve this goal of growth.

Another important determining factor is the issue of affordability in terms of the space in the national fiscus for a rapid expansion in enrolments at higher education institutions. No attempt was made to address new,

innovative constructions of the post-school education system to produce higher participation rates.

Massification has been achieved in many industrialised societies such as the USA, Canada, South Korea, the Scandinavian countries and others. Many approaches have been adopted to address this growth imperative but at the heart of all of them is the construction of post-school systems that are properly differentiated and articulated.

In many cases there is also a thriving for-profit higher education private sector. Increasingly, there is acknowledgement that in South Africa, the public post-school sector by itself will not be able to achieve the kinds of growth in enrollments required for the development of a massified system. Particular attention has to be shifted towards the development of the for-profit and not-for-profit private sectors. In particular this means reviewing the regulatory framework for these sectors so that they are encouraged – rather than discouraged – to invest in the supply of good quality post-school education. Again a significant number of important studies have already been done which indicate that much has to be achieved in terms of developing enabling regulatory frameworks (see for example, Kruss 2004).

While the role of technology in higher education has been gaining momentum over the last 2 to 3 decades, more recently, the use of technology has been strongly geared to address the issue of online learning at massified levels. The development of MOOCs (Massive Open Online Courses) – with all the hype and apparent contradictions associated with them – provide a hint of just how radical the changes to higher education may be in the near future. The story of 12 year-old Khadija Niazi of Lahore, Pakistan, studying MOOC courses in Artificial Intelligence, Physics and Astrobiology designed by professors at Stanford University, is noteworthy (Smale 2013). A recent issue of *EDUCAUSE Review* describes and categorises the different kinds of technology-based programmes on the market, of which MOOCs are just one example (Hill 2012). Udacity has 2.5 million students and Coursera, established only in 2012 by computer science professors Andre Ng and Daphne Koller at Stanford University, has 2.7 million students taking the 222 courses it offers. The impact of all of this on universities is yet to be properly understood but their influence on broadening access to post-school learning is likely to be profound.

The University in Ruins

The legitimacy deficit that has surfaced over a number of years in South Africa is due partly to the failure of good communication and meaningful dialogue between the sector and national and regional stakeholders. It is also due partly to a lack of trust and a failure of leadership. In 2012 no fewer than 5 universities were ‘under administration’, meaning that the ministry stepped into these institutions, disbanding their councils and instituting the facility of administrator. But at its heart, the legitimacy deficit is based on the fact that there is a strong perception that the higher education sector is not responsive to the demands of national development. It is in this context that the issue of massification has to be addressed. It is not possible for the higher education system – and more generally the post-school education and training system – to simply ignore the disjuncture between the demand and supply of post-school education opportunities for South Africa’s young.

In his provocative, final book, *The University in Ruins* (1996), published after his tragic untimely death in a plane crash, Bill Readings the Canadian sociologist raises in eloquent terms the big idea that the purposes of the university as a social institution producing and reproducing the nation have been eroded to the extent that there is no coherent route for its revival (Readings 1996). His focus is on the emergence of the corporate university and the effects of globalisation on it and on the environment in which it exists. He decries the burgeoning market model for universities as undermining collegial, cooperative governance. The two threads that he follows are the undermining of the centrality of reason in the university and destruction of the vision of the Humboltian university as the place where national culture is created and recreated. The university that Bill Readings defends *is indeed* in ruins. But the extraordinary increase in the demand for higher education globally both for teaching/learning and research mandates must mean that there is need to revisit his sad pessimism. It is hard to accept that the space for re-invention of the university in South Africa is closed, and especially so because the development of nationhood remains such a priority.

But as Readings points out about the global university too, South African universities experience intense and growing pressure to be more relevant to the needs of the developmental state, industrial innovation, to be more market-oriented and so on. This happens primarily through the evolution of funding mechanisms in the post-1994 period. And some

analyses have been performed about the impact of this on the system (Bawa & Mouton 2002). Local history overlays this kind of global uncertainty with local texture drawing on a past and present that are racialised and unequal.

As has been pointed out South African higher education is experiencing an erosion of legitimacy with a strong and prevailing view in governmental, parliamentary and in broader social circles that universities continue to be unaccountable islands of privilege. Ordinary people don't quite see themselves and their lives in these institutions. And so there has been, over the last 6 months, the emergence of a number of new measures by the state aimed ostensibly at 'correcting' the trajectories of the universities and the university system more generally, striking seriously at the very essence of institutional autonomy. Although massification is by no means an imagination of the current South African government, it is key to addressing the issue of legitimacy.

There hasn't yet been the emergence of a social compact between the universities and the sociopolitical context in which they are embedded. The emergence of such a compact is necessary for the development of trust and the basis for a common understanding as to the importance of institutional autonomy and academic freedom for the proper functioning of higher education. A fundamental part of this is to work with government in understanding how to address the disjuncture between the supply and demand of post-school education and training and hence massification.

Returning to Massification

The impetus for massification is driven by many factors and policy imperatives. Firstly, all societies aspire towards building deep and broad intellectual cultures and social infrastructure of quality so that democracy and conditions of peace, stability and so on are enhanced. South Africans have been shocked in the recent past by horrendous acts of xenophobia, violence against women and children, the seemingly lost battle against HIV/AIDS, the burning of train coaches by commuters, and so on. Bawa and Vale (2009) pose the conjecture that while it is important to ask what the cost of universal post-school education is, the more pertinent question to ask is what is the social cost of not having universal post-school education.

Secondly, the impetus for massification in other societies is driven in large part by the needs of information and knowledge-rich economies. In *Constructing Knowledge Societies: New Challenges for Tertiary Education* (World Bank 2002), the World Bank makes the argument that it was investment in higher education in South Korea that was an important determining factor in the divergence in its economic profile from that of Ghana between 1960 and 2000. In 1960 both nations had similar values for the GDP per capita. Korea now has the highest post-school education participation rate in the world. It is also the most highly IT connected nation in the world. In South Africa, as was pointed out earlier, the Growth, Employment and Redistribution macroeconomic policy, or GEAR as it is more commonly called, unleashed tremendous policy enterprises in the areas of science and technology and in trade and industry. It did not however, result in any policy impetus relating to building much higher levels of participation in higher education.

Thirdly, sufficient evidence exists both nationally and internationally that there is a close correlation between educational levels and the earning power of individuals. As has been pointed out in the introduction, this is not surprising but it is doubly important in South Africa with its extraordinarily high unemployment rate and its high Gini coefficient. For millions of young South Africans a higher education is a step out of poverty and perhaps into the middle classes. It should not be surprising therefore that an institution such as DUT consistently receives in excess of twelve times the number of applications from individual students than there are places available for them in its programmes.

Consistent with this demand for access to higher education is that for financial aid. In 2013 DUT has distributed in excess of R300 million in financial aid to students who qualify in terms of the criteria laid down by the National Students Financial Aid Scheme (NSFAS). The scheme is extraordinarily important as an infrastructure for access. The allocations to DUT are by no means enough to satisfy the demand for financial aid and this demand-supply gap is consistently at the centre of, often violent, student protests and actions on the university campuses serving students from poor families and communities.

The South African higher education system is wasteful. Although this is not yet fully understood, the drop-out rate of students from universities

is at about the 50% level. This is a shocking statistic even if the figure were a half of this. But there is also wastage at the systemic level. The system operates very much like an inverted pyramid in the sense that the largest participation rate (more than 70% of it) occurs in the most expensive part of the system: the universities and universities of technology. These institutions have a high cost per FTE for a variety of reasons including the fact that they have a research mandate. Only 30% of the students are in the Further Education and Training (FET) college sector; that is, the cheaper part of the system has the smaller participation rate. This is an absurdity. And it is doubly so in the circumstances that the school systems are simply dysfunctional. Further, the rules of articulation between the bottom of the pyramid and the top are not fully developed and students often find themselves caught in 'dead-end' qualifications.

Perhaps, with most capacity to cause havoc and degradation of performance of the higher education sector is the appalling performance of the primary and secondary school systems in developing and preparing students for successful participation in the world of work or in post-school education – whether it be at the universities or at the FET colleges. There can be two responses to this. The first is to deliberately and systematically exclude underprepared students from higher education and to build higher education just for small elites. The other approach is to agree with Dr Blade Nzimande, the current Minister of Higher Education and Training, that these are the only students there are and they have risen to the top in the system in which they have studied, the cream, and the challenge is to understand how best to manage their successful performance in higher education. The former option is educationally unsound, politically untenable and has to be excluded.

It is argued here that a responsive, responsible higher education system has to be proactive in addressing the demand for post-school education and training, that it cannot take refuge in its traditional location as a social institution. And it has take into account a number of large issues as it addresses this matter: the issue of building a broad-based intellectual culture, the needs of an economy that seeks to transform towards a knowledge-based economy and its research and education/training needs, deep structural inefficiencies in the current post-school education and training system, national fiscus constraints and the utter dysfunctionality of the primary and secondary schooling systems.

The Post-School Education System

The publishing of the Green Paper on the Post-School Education System by DHET in 2012 opened up the way for a formal set of processes to investigate the ways in which we may consider the challenge of building the skills base of the South African workforce but to do this in a way that creates some level of cohesion between the university sector, the FET sector and the sector education and training authorities (SETAs). The concomitant White paper will follow shortly and it will be interesting to see how this document impacts the debates on massification.

The Green Paper adopts a minimalist approach to massification in three ways. The first is that it sets targets for the participation in higher education and in the FET sector. In the former it expects an increase of participants from current 800,000 to about 1.5 million by 2030. It is very thin on how this will take place and how to manage some of the crisis points such as the production of new academics. Second, it sees the dominant growth as taking place in the FET sector where the number of participants will grow from about 300,000 to about 6 million. How this will happen is not spelt out in any detail. Third, it adopts a narrow skills development paradigm that has a number of rather serious consequences as will be pointed out later.

Ten years before the Green Paper, several attempts had been made to address the creation of a post-school system coherent and synergistic in its parts. Amongst these are attempts by individual universities to address the issue of articulation between the colleges and the universities (CEPD 2012). At first this focused on structural articulation via implements such as the National Qualifications Framework (NQF). Notwithstanding the enthusiasm of the government to get this sort of articulation done, it has never made much progress because there were very few systemic attempts to address the matter of curriculum articulation at the micro level or the use of steering mechanisms at the macro level. In discussions, this failure is always posed as a political problem – the elitist universities keeping students from the FET colleges out. In fact there has always been steady stream of students transferring from the FET sector to the universities and especially to the universities of technology.

There have been other interesting attempts. A Ford Foundation funded set of projects to address this has been in operation since 2003 and some exceptional work has been done, led in part by the Centre for

Education Policy Development. There are a number of new attempts in which universities are engaging directly with Colleges. One example of this is a fairly substantial discussion between DUT and the FET colleges in KZN that came up with a three project plan: that the institutions would collaborate on staff development (both academic and administrative), on curriculum articulation and on the co-offering of NQF level 5 programmes which are currently out of bounds for FET colleges. Articulation is critical. It allows fluidity of the post-school system for the movement of students from the FET sector into the university one and vice versa. One characteristic of all of these, including the Green Paper, is that they are non-systemic in nature. They address key issues in a fragmented way without a coherent overarching imagination. For instance, a critical factor in thinking about the post-school system is the very poor reputation that the FET colleges enjoy amongst parents and students. This leads inexorably to the massive demand for places at universities and for the apparent intransigence of the inverted pyramid. This has to be remedied.

Imagining a Responsive System

What follows is an attempt to find a new configuration of post-school education and training to provide the basis for a new high volume system. The NCHE, when it sat and deliberated, could not have known the extent to which its policy advice would hamstring the emergence of new imaginations for higher education and training and especially to foster growth in participation rates. The speculative model presented here takes us beyond the NCHE and potentially addresses the constraints listed above. It is a speculative model because its primary function to demonstrate that there are indeed viable ways to re-think the construction of the post-school education and training system to respond to the material conditions that prevail.

KwaZulu-Natal has four universities and nine FET colleges. The four universities have about 110,000 students and they are based in Durban, Pietermaritzburg and in the Empangeni/Richards Bay complex. The FET colleges have 50 campuses in both urban and rural parts of the province and about 54,000 students altogether. The University of South Africa and other institutions also operate in this region but for the purpose of this model it is assumed that the focus is on the public institutions in the post-school

education sector that are domiciled in KwaZulu-Natal. Then there are the Cedara Agricultural College and a number of public nursing colleges respectively under the jurisdiction of Department of Agriculture and the Department of Health.

It has been noted above that one aspect of a solution to the issues raised above is the use of technology for mass-based learning. This has enormous potential to address some of these issues but the use of technology has to be seen as a facilitating enterprise in such a project rather than as a panacea. Higher education in South Africa has a nation-building role and the importance of face-to-face engagement in suitable curricula in the processes of education.

There are a number of models internationally that try to address the kinds of issues that are posed here. In most cases, there has been what may be thought of as retrofitting, where changes have been made to the systems to address the challenges of access and success, massification and issues of retention. Each has strengths and weaknesses but there is much to learn from them. City University of New York (CUNY) and State University of New York (SUNY) are two examples that function well with continuous attempts at trying to improve their performance. The former comprises a set of 2-year community colleges, four-year colleges, senior colleges and the Center for Graduate Studies and has an enrolment of about 250,000 students in formal programmes and about 450,000 students in formal and informal programmes. These are structurally and educationally differentiated and articulated. Another well-referenced and feted example is the so-called California Master Plan involving community colleges, state universities of California offering courses up to Masters qualifications and then the University of California system. These examples are replicated in some form or other in most massified systems.

What follows is an attempt to construct a model for a coordinated, differentiated and articulated provincial model of post-school education and training that addresses the key challenges of broadening access considerably – to shift the participation rate towards massified levels. The model is predicated on four underpinning principles:

- *It is a system that is first highly differentiated and then highly articulated.* If either of these fails then the purposes and objectives in

terms of the research and teaching mandates of post-school education will not be met and it would be a high-risk adventure.

- The model is conceived of as providing access to all who graduate from the secondary school system.
- The model has to take into account the deep inequities and the dysfunctionality of the school system. The implications of this are that the post-school system has to address the underpreparedness of students for higher education.
- The model takes into account the fact that it must have a serious research, knowledge-producing mandate with a strong emphasis on postgraduate education.

So What would a Model Look Like in KwaZulu-Natal?

Assume that the public institutions of KwaZulu-Natal – universities, universities of technology and FET colleges – merge into a single, federal institution, called KZN University (KZNU) to distinguish it from the University of KwaZulu-Natal (UKZN). Since KZNU will be a single institution, it will have a council and a chancellor. The university vice-chancellor (UVC) would chair the KZNU Senate and the KZNU ‘federal’ administrative offices will occupy a space independent of any of the 60 campuses of the new university.

What will the ‘Federal’ Administrative System Do?

The Council and UVC will bear the responsibility for the fiduciary wellbeing of the whole system. The UVC will be the public face of the ‘federal’ system. The ‘federal’ administrative system will be responsible for the creation and maintenance of a system-wide financial system. It will be responsible for the system-wide policies of various kinds such as differentiation and articulation, the approval of new programmes to be offered, conditions of service, and so on. It will be responsible for procuring

and managing licences for journal holdings and academic and administrative software that will be accessible to all the constituent campuses. One can imagine that there will be a large number of system-wide infrastructural facilities such as the procurement and management of a Learning Management System. And so on.

Each campus of more than 4,000 students will be managed independently by a structure similar to that of any current university. It will have a vice-chancellor, a campus senate and the rest of the administrative paraphernalia that goes with a university administration except for all those covered by the centralised system. There will be clearly demarcated mandates for the University Senate and the Campus Senates and for other governance structures.

At the beginning, the FET colleges will offer two-year qualifications (called associate degrees, perhaps) predominantly of a vocational nature. At the end of 2 years of study, students should be in a position to decide whether to enter the labour market or to proceed with their studies. This requires articulation. The university campuses will offer three and four year undergraduate qualifications (degrees) and masters and doctoral programmes.

Articulation has to be instituted by design. The pathways for students to migrate through the system, if they desire, should be clearly laid out. There are at least three levels at which articulation has to work for it to succeed. The first is a set of national instruments: the South African Qualifications Authority, the quality councils, the National Qualifications Framework, etc. that create the infrastructure for articulation. The second is a suite of university-wide policies and governance and management mechanisms to support the movement of students between programmes and qualifications (and hence between institutions). The third is curriculum articulation, ensuring that vertical, horizontal and diagonal articulation within and between the three qualifications sub-frameworks. The first is available. The other two would be projects of the new University.

General Education as the Cement

A discussion about the curriculum is probably too much of detail at this stage but General Education is an essential part of the model. At least 50% of all

undergraduate qualifications at KZNU will be General Education, which will include philosophy, mathematics, literature, history and so on. Some will be offered and assessed as writing courses, others as communications courses and so on. There are many reasons for this General Education component.

The first is simply to address deficits that students have from poor schooling. This curriculum provides for a systematic approach to address academic development on the one hand and the basis for building national and global citizens on the other hand.

The second is to address the idea that skills development has to be embedded in an educational paradigm. Young people are not cogs in some industrial machine. It is about education and education of young people. At meetings with about 6,000 first-year students at DUT, the Vice-Chancellor asked whether any had read a novel by Zakes Mda. Not a single hand went up. Just a very small fraction had any idea who South Africa's Nobel Laureates for Literature were. How will a nation be constructed when young South Africans have little or no knowledge of the nation's literature? And so with 12 years of schooling behind them we have to understand how best to utilise the opportunity of this sojourn at a campus of a university to help them to grow intellectually.

The third is General Education elements of these qualifications will be the cement of the system. They will provide the glue for the articulation pathways. The underlying principle is that all students will take mathematics, languages, history, and so on. Students who attend a two-year campus will have the right to access higher education if they perform at a certain level in the General Education elements.

The fourth reason to introduce General Education elements into the curriculum of undergraduate studies is simply to build the intellectual culture of new generations of university goers so as to enhance the deepening and strengthening of democracy and to build the capacity of young South Africans to engage with and grow to enjoy the rich diversity of South African society. The recent catastrophic xenophobic incidents shocked the nation but little is done to intellectually engage young South Africans with the beauty and challenges of diversity and difference in the construction of nations.

The fifth is to develop university goers to be lifelong learners. Most graduates will hold a number of jobs in their lifetime and each change will require education and retooling. Perhaps most importantly the challenge is

for new generations to access information and knowledge independently and mainly through the use of technology. The General Education elements will enhance their capacity to be lifelong learners.

The employers of graduates recurrently complain about poor skills of graduates relating to communication, writing, mathematical reasoning and so on. This is the sixth reason for General Education elements in the curriculum.

What is the Importance of this Particular Configuration?

The existence of a single university with as many as 60 campuses across KZN gives post-school and higher education a very large footprint across the province. The campuses will be highly differentiated in terms of mandate and strongly articulated in terms of student mobility. This will ensure that students see their local two-year campus as part of a large university. The Gamalakhe campus of Isayidi FET College outside Port Shepstone will be the Gamalakhe campus of KZNU. Over time this will contribute to the development of a new tradition that it is perfectly satisfactory for one to enter post-school education at a local two-year campus and to progress from there to a senior one.

With such a footprint, many students and their parents will be spared the cost of expensive urban accommodation and transport. Even if families are dependent on NSFAS grants for accommodation these loans have to be paid back. In a financial aid package the cost of accommodation could be up to 50% of the full package. This will allow the financial aid allocations to go much further in terms of the number of students that may be assisted.

What is the purpose of restricting this to KwaZulu-Natal? Firstly, this makes the project a doable one – a constrained, closed project. Secondly, it is the issue of ownership so that the local post-secondary institutions, local and provincial government, local industry and local communities may take ownership of the construction of such an arrangement. Thirdly, while not wishing to constrain the capacity of institutions to explore knowledge production at all of its frontiers – what is a society that does not explore the dynamics of an expanding universe – this will allow for a natural alignment between the challenges of contextualized development and industrial and social research and innovation.

Differentiation and Articulation

There is a raging national debate at the moment within the national institutions of higher education and at Higher Education South Africa (HESA), the Council on Higher Education (CHE), the Department of Higher Education and Training and in organisations such as Centre for Higher Education Transformation (CHET) and more generally in the higher education research community. There are many reasons for this debate but its driving impetus is the idea that a differentiated model with a differentiated funding model will produce world-class universities, how so ever this is defined.

A KZNU model makes this debate much more compelling and deals with building excellence at the same time as access is broadened and it allows these to be managed coherently and cooperatively rather than competitively.

Notwithstanding the need for well-equipped laboratories, libraries and small-class teaching, the cost of graduating a student at a two-year campus will be cheaper than at one of the senior campuses. The primary reasons for this are that they will not have a research mandate, they will be teaching intensive, they will focus on particular kinds of programmes and their cost of infrastructure and real estate management will be much smaller. The first two of these have important consequences for the staffing structure, which is by considerable measure the biggest cost on the budgets of these institutions. The declaration in the Green Paper on Post School Education to have as many as 6 million students in the FET colleges by 2030 may be infused with some optimism but it is correct in its orientation and represents an important shift in the policy terrain. This will contribute enormously to correcting the orientation of the post-school education pyramid.

At KZNU the majority of the students will be in the two-year teaching intensive college sector. Some of the existing campuses will have mixed mandates (teaching and research) and a small number will have research-intensive mandates. This is a much more developmental, constructive way of address-ing the differentiation issue since it addresses the issue of access at the same time – providing coherence in dealing with the demand-supply issue and the construction of a world-class university, whatever that may mean.

Attempts to secure the transfer of successful students from the FET colleges into the universities have been ongoing for more than ten years – with very limited success. In desperation, the Director-General of the Department of Higher Education and Training has written to all South African vice-chancellors to speed up this process. This is articulation retrofitting. Notwithstanding the existence of the NQF and the ladder of qualifications that populate it, the process of articulation depends on the development of a policy, funding and procedures infrastructure and the construction of processes to ensure the articulation of curricula.

The model described in this article will have a chance to succeed if and only if articulation is built in at the very outset. Articulation will have to be institutionalised in the sense that pathways for students in the two-year colleges either into employment or into higher education will be clearly articulated. The issue of articulation is fundamentally about curriculum articulation and has to reach beyond the precepts of the National Qualification Framework and probe the way in which what is taught at the two-year campuses fits with what is taught at the senior campuses. This will be one of the core functions of the University Senate. Perhaps more importantly, the senior campuses cannot disengage from this project because these two-year campuses will be extremely important student pipelines for them. Articulation will be the norm rather than the exception.

The successful operation of this type of differentiated/articulated model depends on there being sufficient capacity in all of its parts for the system to work. The Department of Higher Education and Training has instituted a significant programme of capacity development activities to improve the performance of the existing FET colleges and there is no doubt that this will have an impact in time. The development of a single system will provide an impetus to this. But there will have to be new, innovative approaches in the development of this capacity, at least in the short-term.

With respect to teaching, staff development programmes will have to be instituted for the long-term sustainability of the system but we can also contemplate the possibility of having some level of co-teaching going on, as a way to build capacity. Another, perhaps lightly more risky approach but one that may present interesting options, would be a requirement of all full-time masters and doctoral students at KZNU –as part requirement of their studies – to spend at least a quarter every year teaching at a two-year campus.

This has the potential for a win-win situation: these students will be paid, it will also give them a track record and hold them in good stead as an internship and this may contribute partly to addressing the capacity issue. If 10% of the students at KZNU are postgraduate students then about 11,000 postgraduate students could be drawn upon to teach on programmes at the two-year campuses.

One of the most exciting prospects would be the development of a single Centre for Postgraduate Studies that would coordinate postgraduate programmes for the entire system. What this would mean is that for the design and offering of programmes and for supervision, the University could draw on the best people in the KZNU system to design and teach on them irrespective of whether they are on a two-year or a senior campus. This will help to improve the quality of staff at the two-year campuses since it would not be necessary for highly qualified staff to be at the research intensive campuses for them to participate in postgraduate education. The students would have to be at their home campuses, attached to their laboratories or connected with research groups. This says to young academics it doesn't quite matter which campus you are at, you are, if you wish to be, a member of the research faculty at KZNU. This is not very different from the way that The Graduate Centre works at the City University of New York, except that this institution has a resident professoriate.

Conclusions

This article does not purport to present a blueprint for a new arrangement of higher education. It suggests that *if* there is a desire to address the issue of massification then there would have to be a very serious review of both the internal and the macro-structural inefficiencies of the post-school education and training system as currently exists.

In terms of the internal inefficiencies the suggested system may contribute directly to improving efficiencies by providing many students with two years of formative tertiary education in teaching intensive institutions as part of their post-school education. This will provide these students with access to the labour market or to higher levels of education.

The urgency with which these issues have to be dealt with may depend on the growing disjuncture between the supply and demand of higher

education and the size of the political challenges that may flow from this. A technology solution by itself will not solve this issue since the conditions for their application are far from optimum. One simple example of this is the cost structure of bandwidth. And depending on the entrepreneurship of for-profit private providers won't solve this problem either because of the cost structure of that kind of provision and the inability of students from poor backgrounds to pay for their studies.

This model will contribute by deliberate design to improve the cost structure of public higher education by righting the inverted pyramid. Some fairly complex economic modeling of the new structure will be required to assess its impact on access in terms of numbers. Just as importantly, the construction of such system will contribute enormously to affordability of post-school education for most students. It will allow many to stay at home while studying.

The argument presented here is that if the issue of massification (as process) is one that is resonant with the sociopolitical and economic imaginations of the South Africa then this may well require an approach that looks at the structural reshaping of the post-school system (at a fundamental level) rather than rearranging the existing institutions and institution-types.

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W/rihting Research Capacity Building: A Preliminary Model to Inform Writing Support Activities for African Researchers

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Abstract

This article contributes to the literature on research capacity building activities that specifically target researchers located at universities in the global South. It argues that although research capacity building activities, usually funded by development agencies in the global North, place some focus on the activity of writing for publication (particularly because of African researchers' low rates of publication in academic journals), such activities do not necessarily take into account theories and research coming from the field of writing studies. Therefore, to address this limitation, this article discusses a particular research capacity building programme that used its funding to focus solely on the activity of writing for publication. The authors reflect on learnings from this writer/writing coach relationship support programme and use them to propose a preliminary model. They recommend that this model could be used to inform the construction of writing support programmes being designed, implemented, and facilitated at African universities to address African researchers' challenges with publication. At this model's foundation is a writing coach who has two attributes: 1) an empirical understanding of the writers' specific contextual challenges with publishing; and 2) three theoretical understandings of writing informed by writing studies research: writing as process, writing as social, and writing as rhetorical.

Keywords: African universities, research capacity building, writing capacity, writing research, writing theory, writing support programmes

African Universities and Research Capacity

African researchers¹ low rates of publication in international journals² have been well documented (e.g. Hofman, Kanyengo, Rapp & Kotzin 2009; Lillis & Curry 2010; Mouton 2010; Tijssen, Mouton, van Leeuwen & Boshoff 2006; Tijssen 2007). Some assume these low rates indicate African researchers are not involved in research activities or have limited capacities to do research. While we do not agree with either of these assumptions, the intention of this article is not to debate this issue but rather to draw attention to a new phenomenon in the world of development, which is the funding of research capacity building activities to address these supposed limited research capacities of African researchers³. For example, at the University of Botswana, workshops are conducted on a regular basis, through its Office for Research and Development, to develop its researchers' research capacities. Sessions focus on issues such as, manuscript writing, identifying funding

¹ We are using the term African researcher to describe a researcher based at a university in an African country for an extended period, yet, not necessarily originating from an African country. For example, the writer whose experiences are discussed in this article, does not originate from South Africa, but has spent a significant period of time both studying and working in a South African university. Although this issue is important to the definition, more significant is her involvement in a research team based at an African university that is attempting to challenge mainstream assumptions about a particular social development issue in Africa.

² Lillis and Curry (2010) estimate that researchers from the global North, North America and Europe specifically, are responsible for 30% and 32%, respectively, of the world article outputs in the natural, social, and behavioural sciences, whereas researchers on the African continent are responsible for only 0.9%, with 0.6% of this attributed to South Africa alone.

³ In further discussions about research capacity building and its place in the African university setting, it will be important to critically analyze the concept of capacity and what it means for the African researcher.

sources, writing research proposals, and ethical issues related to research. These activities are financed and facilitated both by the university as well as outside development funding, often coming from funders based in the global North in the form of grants. In addition to African universities involvement in such activities, development institutions, such as Canada's International Development Research Centre⁴ (IDRC) also offer financial and other resource support to its partners in the global South for a wide variety of research capacity building initiatives. These can include mentoring and 'apprenticeship' programmes; training programmes; workshops; conferences; study tours; institutional linkages, partnerships, and/or twinning arrangements; e-courses and programs; networks; infrastructure support; base budget support; awards, scholarships, fellowships, internships; and, publications and publication resource support (Lusthaus & Neilson 2005:9).

Although different types of research capacity building initiatives are being used to address African researchers' capacities, there is little discussion about the best practices to support researchers' writing capacities. To address this gap, this article reflects on lessons learned from an unconventional writing support programme funded by Canada's IDRC. The intention of reflecting on these learnings is to use them to begin building a potential model for writing support programmes. Such a model could then be implemented at African universities to support researchers as they write for publication. As these learnings will illustrate, at the core of the model is a writing coach who possesses two attributes: 1) an empirical understanding of African researchers' challenges in writing for publication, meaning he or she has empirically investigated the writing challenges scholars face when writing for publication; and 2) a theoretical understanding of the activity of writing, meaning he or she is well-versed in the wide body of literature on

⁴ Canada's International Development Research Centre is a Canadian crown corporation mandated, in 1970, by its government to fund Southern researchers to do research to find solutions to their countries' development issues. We have chosen to use it as an example for this article because it funded the research capacity building on which our discussion is based. In addition, it also has a strong reputation in the development community as playing a lead role in funding not only the researchers of Southern research but also the development of Southern researchers' abilities to do research.

writing theories⁵. As this reflective article will illustrate, the writer in this writing support programme was able to write two chapters for an edited collection produced by IDRC because the writing coach did the following: 1) empirically understood the writer's challenges writing for publication; 2) analysed and addressed these challenges by relying on the following three theoretical notions of writing: writing as process, writing as social, and writing as rhetorical.

The writing support process discussed here took place when the writer, Kathleen, was supported by Katie, the writing coach, in writing two chapters for publication. This article is based on reflections of the process that emerged from our discussions during and after the coaching relationship ended. These reflections have been used to collaborate in writing this article as well as inform a conference presentation we gave in September, 2010 at the University of KwaZulu-Natal's Teaching and Learning conference. The emerging reflections provide the catalyst for both this article and our conference presentation which explore the writing support process that emerged for us as we worked together. Specifically, it details the writer-writing coach relationship that formed between the two of us in November, 2010. It combines Katie's knowledge of writing theory, experience as a writing coach and teacher, and studies as a writing researcher with Kathleen's efforts and reflections from her role as writer and researcher in

⁵ Although such research capacity building initiatives could be instituted at universities and for researchers outside the African context, for example at universities in the global North, our focus is specifically on African universities. This is our focus because many of these institutions' low rates of research have led to the assumption that African researchers have limited research capacity. This assumption has then attracted the attention of many development agencies, as well as both Northern and Southern universities, to institute research capacity building programmes to address these supposed limitations. Therefore, it becomes more appropriate to focus on these initiatives in a Southern context, particularly those activities that are focused on writing; yet, are not guided by any empirical or theoretical understanding of the activity.

the field of Information and Communication Technologies for Development research⁶.

This article is structured in the following way: *First*, we discuss the key activities that took place during Katie's writing coaching time at IDRC and this experience's contribution to the writing support model proposed. *Second*, we explain the writing coaching relationship that formed between the two of us. *Third*, we discuss the various theories of writing that informed Katie's work as a writing coach, which are: writing as product, writing as process, writing as social, and writing as rhetorical. In discussing these theoretical ideas about writing, we also use them to analyse the writing-related challenges Kathleen experienced in documenting solutions used to address these respective challenges. In conclusion, based on this analysis, we propose a preliminary model that can begin to inform the design, implementation, and facilitation of writing support programmes at African universities in order to assist their researchers as they write for publication.

An Evolving Recognition of Writing in Research Capacity Building

Before discussing the theories of writing or how the actual writing support relationship worked between Katie and Kathleen, this section describes how IDRC's former Information and Communication Technologies for Development (ICT4D) programme came to recognise the importance of writing within the larger context of research capacity building.

Firstly, Katie started working for IDRC's Acacia initiative, the African regional branch of the ICT4D programme, in January 2010. She was contracted for one year to work part-time on the Acacia initiative work and part-time on her own research. The Acacia initiative focused on offering research funding and support to researchers in Africa who were investigating ways in which ICTs could address various development issues in this region. At the time of Katie's arrival, the team needed to write a final prospectus or

⁶ Although both Canadians, Katie is based at a public university in Botswana doing writing research and offering writing support for university students and researchers, and Kathleen is based at a public university in South Africa, doing her PhD and working as a development studies researcher.

end of five-year programme report for a team of external evaluators. The final prospectus report would summarize whether they met their original objectives from 2005, describe their funding allocations to various research projects during the 2005-2010 programme cycle, and share the key research findings and outcomes that had emerged from these funded projects. The Acacia team was responsible for an overwhelming portfolio during the 2010 closure year, and it was suspected that Katie's training in the field of writing studies, which people often assume means she is a strong writer⁷, may have helped her secure her position with the Acacia initiative.

As for the final prospectus writing process, a writing coach approach was applied through collaborative writing. The Acacia team leader would explain the initiative's complex research findings and outcomes and Katie would sit at the computer, coach her through the ideas and try to construct these ideas into sentences that would be understood by an audience outside of ICT4D's tight-knit research community. This collaborative writing experience began to help the Acacia Team Leader understand what it meant for Katie to have a background in writing studies. Specifically, the Team Leader realized that coaching did not mean helping writers with grammatical issues but instead facilitated the construction of ideas intended for external audiences, and illustrated how one idea could link with another within the larger story. This particular experience began to show the Team Leader how Katie's abilities as writing coach could contribute to larger writing capacity building activities.

Besides the challenging writing output of the Acacia prospectus report, the team leader's own academic challenges around writing for research purposes came from writing her Masters dissertation. Katie offered her writing coaching assistance to address these challenges. For example, in May 2010, the team leader submitted her dissertation to be evaluated by her committee and she was slightly disappointed with their comments. To assist her, Katie went through the comments and offered some suggestions as to how she could restructure components of the document to address the committee members' concerns. It was also through this particular

⁷ It is important to note that the hiring committee and even the wider Acacia team seemed to have a difficult time understanding, as many people do, what it means to be a 'writing researcher' and a 'writing coach'.

collaboration that the team leader really understood Katie's approach to supporting researchers with writing.

As the Team Leader's paradigm shifted in terms of her understanding of writing and what it meant to be coached with writing for research purposes, she suggested Katie become involved in a writing support programme for ICT4D researchers in Africa. Unfortunately, the confirmed closure of the Acacia initiative meant there would be no financial support to fund such a project. Rather, Katie was hired as a consultant after finishing her research contract to coach the writers responsible for writing a final ICT4D book.

The Book and Writing Coach's Role

The idea of this book emerged from conversations amongst the global ICT4D team members after they realized the wealth of 15 years of research findings and outcomes of the programme after writing the final prospectus report. In July, 2010, this led to the launching of the ICT4D book project. The plan for the book was that members of this team would write co-authored book chapters and the ICT4D managers (Programme Leader and Team Leaders) would make up the editorial committee. Each chapter would focus on one of the global ICT4D research themes: infrastructure, access, regulations, health, governance, education, livelihoods, social inclusion, technical innovation, intellectual property rights, and evaluation.

Katie's role as this project's writing coach was to support the collaborative writing teams as they worked to produce a well-developed draft of their respective chapters. These chapters would then be submitted to the editorial committee for review and the writing teams would produce further drafts if required. In the end, there were eleven (11) different writing teams, corresponding with the number of chapters in the book. Katie worked with the teams but was only able to sustain a writing relationship with one of the chapter writers, Kathleen.

In Kathleen's case, she was the author of two book chapters with various experiences contributing to her participation as author. First, she had spent over three years working for the IDRC's Acacia initiative, first as a research intern, then as a professional development awardee, and finally as a research officer based in the institution's South African satellite office.

These positions provided her with a wealth of knowledge about the research in ICT4D, assisted her with the completion of her Master's dissertation in ICT4D, and allowed her to support the African ICT4D programme and its research partners in various research and administrative activities. More specifically, she had coordinated the gathering of the initial IDRC research findings around ICT4D in the themes of livelihoods and poverty reduction, making her the most suitable candidate to write these chapters.

The Writing Coaching Process

In terms of the writing coaching process itself, Kathleen and Katie would meet either weekly or bi-weekly on Skype to discuss her drafts. Typically, their conversations would last for approximately one to one and a half hours and they would take the following structure: Kathleen would talk about the chapter content and Katie would take notes to determine how Kathleen's knowledge, either in ICT4D livelihoods or poverty reduction, could be organized to structure the chapter's narratives. To do this, Katie would ask Kathleen probing questions about the chapters' subject matter, focusing specifically on various research projects' findings and outcomes. This focus on constructing a chapter narrative and illustrating the relationship between various findings and outcomes came from Katie's reading of the first draft of the chapters and seeing that many of the chapters lacked an overarching narrative or argument. Finding this overarching argument was a key challenge in writing all of the book's chapters because the writers were often overwhelmed and lost in the concreteness of reporting on the ICT4D projects' research findings. To address this issue, Katie tried to help the writers, after gathering all of the research findings and outcomes pertaining to one of the ICT4D research themes, illustrate what the findings meant in terms of using ICTs to address that particular development issue, such as poverty or job creation. To do this, many of the conversations and questions during the coaching sessions would revolve around Katie probing Kathleen about the findings' content and its significance for the larger field of ICT4D research.

During these coaching sessions, after Kathleen and Katie came to an agreed upon understanding of structure and its argument, Kathleen would go away and write about a particular component of the argument. Usually this

would require her to write between one to five pages so neither felt overwhelmed with reading and feedback. She would then send these pages to Katie, who would read them, comment on them using track changes, responding as a reader rather than an editor, and then send the chapter, with its comments, back to Kathleen. Once sending them back and giving Kathleen a short period of time to go through the comments, a Skype conversation would take place to discuss and clarify the comments. After this discussion, the process would begin again, discussing how Kathleen would structure the next section of the chapter or at least how to fit the chapter's next section into the evolving argument. This writing coach process went on for both chapters until late February, 2011. The end result was the completed, yet significant restructuring of, two individual chapters: one on the relationship between poverty and ICTs and one on local economic opportunities and ICTs.

Theoretical Framework: An Overview of Writing Theories

Having described the writing coaching process that Katie and Kathleen used to produce Kathleen's two chapters for the ICT4D book, this section outlines some of the key theories about writing that guide the coaching and teaching of writing, specifically in the post-secondary context, and, which we will argue, could potentially be added to any writing support programme that attempts to address African researchers' challenges with writing for publication. We will use each of these theoretical lenses to analyse three of the major writing challenges Kathleen experienced during our coaching relationship. Although each challenge overlaps these theoretical categories of writing, for the sake of simplicity, we have separated our analysis using each of the theoretical lenses. As we will argue through our analysis, there is value in using these particular theoretical lenses to understand and address Kathleen's writing challenges and a writing support programme will be strong if it is based on both empirical and theoretical ideas about writing.

Writing studies is a field of research that understands writing to be a social phenomenon. It combines hands-on writing practice with the study of writing. It is a field of research that has, since the mid-1960s, seen 'dramatic developments in the study and teaching of writing', as writing 'theorists,

researchers, and teachers have created a complex and detailed account of writing' (Paré 2007:1). These insights have emerged by:

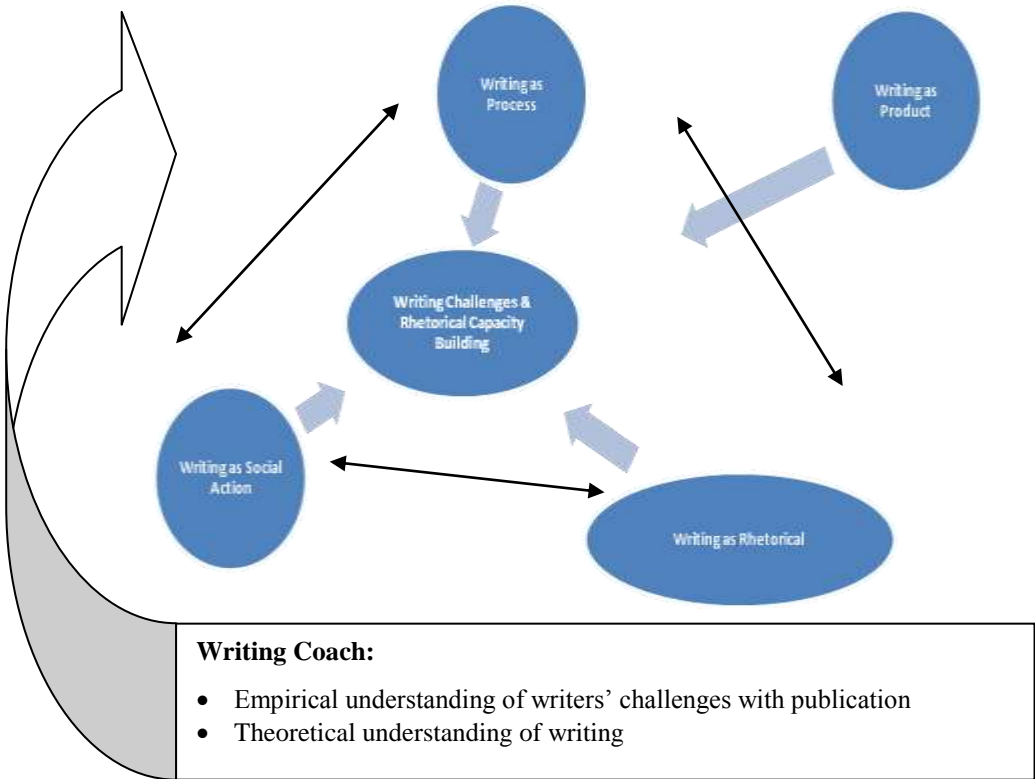
drawing on a rich variety of sources, including the classical rhetorical tradition of Greece and Rome, contemporary studies of cognition, the sociology of knowledge, research into academic and workplace writing, new literacy theories, the digital revolution, and the current cross-disciplinary fascination with discourse (Paré 2007:1).

Although conceptualisations of writing have shifted over the past decades because of this work, many university teachers and administrators still understand and teach writing as though it is a generic skill or product, equating it only with good style and the appropriate use of grammar (Hillocks 2007). For example, in the field of research capacity building, the few studies that discuss writing in the context of African researchers' challenges with publishing, tend to conceptualize writing using this 'generic skill' lens (e.g. Adewuyi 2008; Wight 2005). These authors argue that African researchers are challenged to publish because of their inadequate knowledge of grammar and the ineffective teaching of grammar at early levels of their national schools system. Thus, to remedy these issues, they suggest that research capacity building activities should understand and address these writing challenges by creating writing support programmes that improve African researchers' basic literacy, particularly by teaching grammar.

In drawing attention to the limitations of previous research on African researchers' challenges with writing, we are not diminishing the importance of thinking about writing as a product. Rather, we are trying to illustrate that our experiences from this coaching relationship highlight that we cannot only understand African researchers' challenges with writing to stem from product related issues. We are making this claim because our experience illustrated that Kathleen experienced much more complex issues when writing for research purposes than those solely linked to grammar or style challenges. Instead, as we will discuss, they were linked to process, social, and rhetorical issues. Furthermore, these non-product related challenges also need to be addressed using methods that understand writing

through these lenses. Based on this finding then, we propose that in addition to conceptualizing writing as product, one adopt a model that guides writing support programmes to address African researchers’ writing-related challenges with publication through various lenses, which are writing as product, writing as process, writing as social, and writing as rhetorical (see Figure 1 below). The following section discusses these conceptualizations of writing in greater detail, how they have been put into concrete practice in the university writing classroom, as well as uses them to analyze the writing-related challenges Kathleen experienced during this process.

Figure 1: Proposed Writing Support Model (Bryant 2013)



Writing as Product: Conceptualisation

Thinking about writing more broadly than just a product should not ‘erase or diminish the physical fact that writing is also a product’ because ‘on the page or screen is a material object with sections, block quotes, paragraphs, headings, graphs, tables, pictures, boldface, italics, numbers, and other graphic resources that carry meaning’, and writers need to understand that ‘each of those separate sections *does* something, performs some function, makes writers and readers think in different ways’ (Pare 2007:6). This also means that writers must write grammatically and follow and apply other rhetorical conventions appropriately when writing for research purposes, such as the rules of their respective disciplinary referencing style.

Although it is necessary to see writing as a product, challenges arise when it is the only understanding of writing used to make sense of writers’ challenges and, thus addresses them in a limited fashion. This often leads to thinking about writing as a skill and decontextualized teaching practices that are based on the assumption that,

[S]tudents must learn to write correct sentences, then paragraphs, and then some sort of longer theme, which, more often than not, turns out to be a five-paragraph theme. This model of what composition is continues to hold sway. It explains why grammar is strongly associated with writing and why our textbooks on writing devote so many more pages to grammar and usage than to rhetoric and writing (Hillocks 2008:312).

Nightingale (1988) argues that using this notion of writing to make sense of writers’ challenges and the solutions to address these challenges comes from the public media as it tends to allege that ‘low educational standards ... allow a generation of illiterates to be foisted upon unsuspecting employers’ (265). The media advocates for improving the literacy issues of these illiterate graduates by ‘set[ting] up some sort of fix-it programme [in tertiary institutions] to correct the problems left over from secondary education’ (265). Such fix-it programmes are often guided by the ‘assumption ... that if students learn to spell and/or punctuate, they will be literate at last’ (Nightingale 1988:265).

This section has highlighted the need to think about writing as a pro-

duct and understand how to address writing-related issues that emerge at the final stages of writing, such as the editing stage. Yet it also illustrates that thinking about writing as product needs to come closer to the final stages of the writing process; therefore it cannot be the only way in which writing challenges are conceptualized and, thus, addressed. This means that any research capacity building programme for writing support must acknowledge the writing as product conceptualization of writing, as well as address product related issues, but it should not be guided by a model that only conceptualizes writing in this way.

Writing as a Process: Conceptualisation

The first conceptualisation of writing that needs to be added to any writing support programme is that of writing as process. Thinking about writing as a process was a highly significant paradigm shift that took place in the field of writing studies during ‘the 1960s and 70s’. During this period, researchers acknowledged the ‘temporal and developmental dimension of writing, [which] is a process, a gradual movement from blank page to screen to final text’ and ‘led to a revolution in writing theory, research, and pedagogy’ (Paré 2007:5). Although this particular conceptualization of writing came from the expressivist and writing process work of Elbow (1973), Emig (1971), Macrorie (1980), Moffett (1968), and Murray (1968), it was also highly influenced by ‘work in grammar, psychology, anthropology, and other fields’ (Williams 1998:51). Notably, writing researchers came to see that behaviours were also a significant factor in writing, ‘which resulted in more attention to examining and understanding the actions that give birth to writing’ (Williams 1998:51). Contrary to thinking about invention being separate from logic, which influenced the conceptualization of writing as product, process movement researchers began to understand the significant role invention played in the activity of writing and worked to help students understand the key role of invention and various activities they could use to construct knowledge about their writing topic.

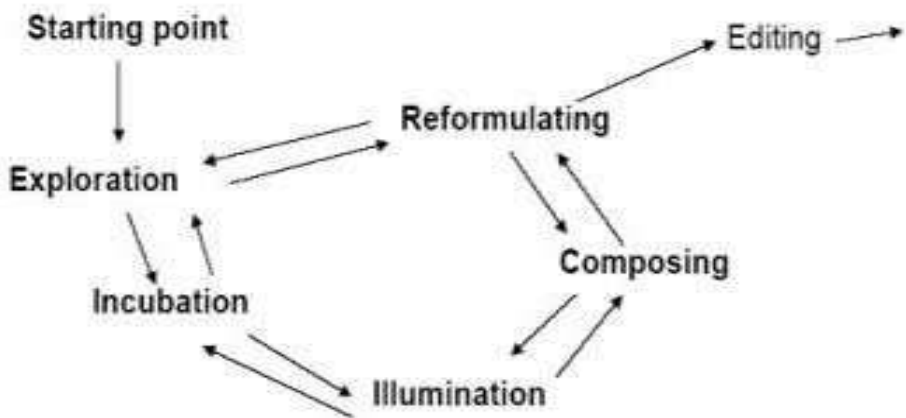
For example,

the ground-breaking work of Flower and Hayes (e.g., 1981) and others, demonstrated that expert writers engage in complex

cognitive, linguistic, and rhetorical processes as they compose. They are planning, setting goals, considering readers, producing and reviewing text, editing, revising, generating and organizing ideas, and so on. Inexpert writers, by contrast, are often stuck at the level of text production and they are engaged far too early in the editing and revision (Paré 2007:5).

The major idea in the early 1980s was that expert writers' processes should be studied and documented. Using this data, novice writers would be instructed by their writing teachers to use the various writing strategies of these experts and go through their stages of writing to become stronger writers. Although their research found a wide range of writing processes, the processes share the similarity in that that writing is a much more recursive activity than previously thought. This means that writing is not linear as writers often go back and forth between various stages of the writing process. Figure two below provides an example of one writing process:

Figure 2: Writing as Process Model



SOURCE: Freedman, The Carleton University Writing Tutorial Service

To describe this writing process, one can use the example of a writing assignment in a university classroom. The *starting point* begins when the student receives and begins to go through the professor's assignment sheet. The *second stage*, the exploration point, occurs when the student participates in various exploratory activities, such as thinking about the various questions they might want to pursue, doing some preliminary reading and research on these topics, talking with friends and their professor, and so on. The *third stage* of this process, the incubation stage, happens when the student takes a break from thinking about their assignment and engages in unrelated activities, such as hanging out with friends. The *fourth stage*, the illumination stages, occurs when, by moving away from the assignment and taking break, the student can have a break-through realization about their paper. The *fifth stage* of the writing process, the composing process, is when the student actually sits down for an extended period of time to write their paper. It is important to note though, that the student should have been writing throughout the process, but this is the stage when they write for an extended period of time. The *sixth stage* of this writing process, the reformulation stage, is when the student makes large-scale changes to their texts. This is when they move large sections of their writing from one place to another, deleting or adding sections. This stage differs from the *final stage*, which is editing, when the student writer looks for and corrects more micro surface errors in their writing, such as grammatical issues, punctuation, and so on.

These new ideas about writing were important because they started to illustrate the important role invention plays in the writing process and the need to use writing to construct knowledge and not simply display knowledge. For example, Elbow's (1981) technique, free-writing⁸ was a key tool used to help students learn how writing could help construct their understanding about a particular issue. This tool also gave students the opportunity to write for a short period of time without the pressure of thinking about grammatical and spelling issues, which can, at times, inhibit

⁸ Freewriting is the technique of writing for an extended period of time, usually ten (10) to twenty (20) minutes without stopping. Typically writers are given a prompt to respond to and asked to follow the rules of continuous writing and ignoring grammatical issues.

one's ability to construct a deeper understanding of the issue. In addition, thinking about writing as a process and designing writing assignments in ways that help students go through each stage of the process can help them understand the significant amount of time required to complete a strong piece of writing. Finally, thinking and research on writing as process also helps students understand and continue to develop their own individual writing process, particularly as they learn about what strategies they can employ at their various stages.

Writing as a Process: Challenge

Kathleen's first writing-related challenge occurred when the first draft of her chapter was heavily critiqued by the book's editorial team. By understanding writing as process though, we can see that the chapter's issues did not stem from poor writing abilities, but rather process-related issues. This happened because, at the early stages of planning the book, the editorial team did not fully understand what they wanted as the chapter's focus. For example, early in the book's development, the editors thought one of the book's chapters should detail research findings from ICT4D supported projects about how ICTs improved people's livelihoods in the developing world. After reading the first draft of this chapter though, they realized they had not originally supported research in this area and instead needed to structure the narrative into two different themes. The first would focus on how ICTs had impacted poverty levels and the second would be on how ICTs had affected local economic opportunities for citizens in the global South. Based on this realization, they asked Kathleen to split the original livelihoods chapter into these two separate chapters.

After this decision was made, as well as after some negotiating, Kathleen, with Katie's support, began working in earnest to reformulate this original chapter into two separate ones. Guided by the conceptualization of writing as process, Katie explained to Kathleen the need to restructure the chapter. This work started in late November, 2011 and finished in early March, 2012 and it was at this point that Kathleen and Katie's writing coach relationship was really solidified. Kathleen had originally assumed that the process was completed once she met her contractual obligations in writing the original chapter and submitting it to the editorial committee for review.

Upon getting this feedback on the chapter, Kathleen had to extend her contract in order to revise the two chapters. In contrast to Kathleen's assumption though, Katie, because of her theoretical understanding that writing is a process, assumed that after a first reading of these chapters, significant changes would be required, particularly because writing, guided by this lens, is a tool to determine one's knowledge or what one knows about a particular issue.

Guided by the conceptualization of writing as process, Katie explained to Kathleen why the chapter needed to be re-structured. This is important to note because rather than assume the chapter's challenges came from grammatical or literacy issues, the assumption most writing support programmes make when a piece of writing does not work, this theoretical understanding of writing helped Katie explain the chapter's issue and guide Kathleen through the next phase of writing. For example, when Katie presented the editorial team's feedback to Kathleen, it could be argued that Kathleen was able to continue working on the chapter because blame for needing to rewrite this one chapter into two separate ones was not placed on her abilities as a writer but because the editorial team needed to read a first draft to realize their supported research investigated issues of the relationship between ICTs, poverty, and local economic development, not livelihoods. Their challenges to understand the specific focus of the chapter most likely arose not only because of ICT4D's interdisciplinary nature but also because the findings and outcomes come from a newly emerging field of research. These things can make it difficult to understand how specific concepts and ideas fit together. Therefore, as the two worked together to write the larger chapter into two separate chapters, they focused heavily on illustrating the relationship between these concepts.

In concluding this section on writing as process and Kathleen's process related challenges, it is important to note that despite important ideas emerging about writing from process theorists, there were also limitations. Specifically, they were critiqued for conceptualizing writing as an individual activity and not understanding how a writer's social context influences a piece of writing. Understanding the social and its influence on the activity of writing, were critiques that the next generation of writing researchers, particularly those working in Rhetorical Genre Theory, discussed in the following section.

Writing as Social: Conceptualization

The theoretical move away from thinking about writing as process to writing as social began in the 1980s with the social construction movement (e.g. Bizzell 1982; Bruffe 1986; Faigley 1986), which shifted thinking in many academic disciplines. The social constructionist movement emphasized the significant ways in which an individual's social context impacts how they act. In the context of writing studies, this thinking influenced a shift away from thinking about writing as process because, although the process idea of writing only 'forms the foundation for expanding the notions of collaboration and audience from work groups to society' (Williams 1998:67-68), it often 'overemphasizes the psychology of individual writers' (Williams 1998:67-68). This ignores that, as an individual writes, they are situated and informed by their social context.

Rhetorical Genre Theory, a sub-field of writing studies, mainly composed of researchers based at North American institutions, was one of the first theories to purport this idea, particularly by understanding genre to be a social action. This means that a genre, a type of writing, such as an essay or a report, is not a generic text type but rather a social action shaped to respond to a particular need the writer perceives to exist in society (see Artemeva & Freedman 2006; Coe, Lingard & Teslenko 2002; Freedman & Medway 1994a; Freedman & Medway 1994b; Giltrow 2002; Miller 1984; Schryer 1994).

This idea is closely linked to the notion that writing is a social action, which can mean two things. First, writing 'is a specialized and collective practice that develops locally, in communities, organizations, and disciplines, and that one learns to join or participate in' (Paré 2007:8). This theoretical understanding means that in the writing classroom, writing cannot be separate from its context but instead needs to be understood in relation to it. For example, in the writing classroom or a particular disciplinary course, such as Psychology, students need to understand how the ways of writing for their discipline connect to how knowledge is constructed in this discipline. Therefore, if they are asked to write a critical analysis, they need to understand how the analysis' different components relate to how knowledge is constructed in this discipline. They must also learn to understand that the way a critical analysis is constructed in their Psychology course differs from how it is constructed in their English Literature course. They must also learn

how this difference is connected to what these disciplines define as knowledge and how this knowledge is then used differently to construct an argument.

The second thing students need to learn is that,

writing makes things happen, it has consequences.... We don't write writing, we write *something* – a proposal, an argument, a description, a judgment, a directive – something we hope will have an effect, will have results, change minds, spur to action, create solidarity, seed doubt (Paré 2007:8).

As writers then, to ensure our piece of writing does what we want; we must analyze three components of any writing situation. The first component is the situation's social purpose. This means understanding what goal we are trying to achieve with our particular piece of writing. The second component is the situation's audience. This means understanding who we are writing to and what our audience members need to know regarding our topic. The third component is the issue of representation. This means determining how we need to use language and other rhetorical conventions, such as references, statistics, and so on, to meet the piece of writing's purpose and its audiences' expectations.

A key concept to emerge from thinking about writing as social is that of discourse communities (see Beaufort 1997; Miller 1994; Swales 1988). A discourse community is made up of members of particular groups that 'share not only values and views but also language and language conventions' (Williams 1998:69). Guided by this notion, a writing teacher/coach must help writers understand how the discourse of the particular community they have joined or are attempting to join works. Specifically, they must understand how this community uses language to accomplish particular social goals, how they use language to construct their group's particular ways of knowing, and what type of knowledge this group requires to advance their goals (Pare 2007).

Writing as Social: Challenge

Although Kathleen experienced many different challenges throughout her

writing experience that can be explained by the writing as social action lens, we have decided to analyze one that occurred during the reformulation process discussed earlier. This arose because, despite Katie's constant prodding, the editorial team struggled to agree on the book's intended purpose and audience. These struggles made it very difficult for the writers to determine how to structure their chapters, particularly what type of argument or narrative they needed to construct to hold their chapters together as well as language they needed to use to accomplish their chapter's social purpose, and meet their audience's expectations.

For example, one editor wanted each chapter of the book to discuss the research findings from ICT4D studies, particularly studies that may have only been published as grey literature, a location that are difficult for other researchers interested in similar issues to access. For this editor, the book's chapters were intended for an audience of current or future researchers working on similar areas of research. Writing about these findings would then allow these scholars to use the book as a starting point for their own studies or as findings that could help them make sense of their own collected data.

In contrast, the other editor was more interested in having the book be a way to document thinking and learning about the more abstract issues that emerged from fifteen years of funding ICT4D research in the context of the global South. For example, she wanted to use the research findings to document how the ICT4D programme determined the most significant issues needing focus. An example of this would be Acacia's learning that in South Africa they should shift their focus from only funding technological developments to provide wireless access in rural South Africa to funding research that interrogated the impact of telecommunications policies in the country. From supporting research in this regard, they learned that focusing on policies could also lead to improved wireless access in Southern Africa. In this case, although such a discussion could be important for future or even current researchers in this particular field, it would also be specifically relevant to development institutions intending to fund research on issues related to ICT4D. This information might allow new funders in this area to avoid making the same programmatic mistakes IDRC made during its early days. In addition, such a narrative would also illustrate how thinking in the field of ICT4D research had progressed over the fifteen year period.

These conflicting ideas about the book's purpose and audience made it quite difficult for Kathleen to write her chapters. For example, at times when the feedback Katie provided was discussed, the conversation could gravitate back to the editors' expectations for the chapter. Yet, the lack of consensus about these things made these questions difficult for Katie to answer. To overcome this challenge, and what proved to work well in the end, was to disregard this conflict about the book's intended purpose and audience. Instead, Katie tried to help Kathleen create a narrative in the chapter that merged both editors' ideas about the book and chapter's purpose. This meant trying to use the research findings to illustrate how thinking in these two areas of ICT4D research evolved because of the research findings from fifteen years of research funding.

The following section, although closely linked to the notion of writing as social, places less emphasis on genres and more on the issue of rhetorical conventions and the ways they can construct, but more importantly, constrain the construction of knowledge.

Writing as Rhetorical: Conceptualization

The rhetorical conceptualization of writing places emphasis squarely on the relationship between language and knowledge, arguing that knowledge does not exist independent of language but rather that knowledge is constructed through language. It was Plato who began questioning the relationship between 'rhetoric's role in the production of knowledge', asking whether 'truth exist[s] independently of human beings as fixed certainties waiting to be discovered, with rhetoric's role as a supplementary art of presenting those truths persuasively or effectively, or does rhetoric have a constitutive role, a productive force?' (Starke-Meyerring & Pare 2011:6-7).

This means that questions arose then and continue today about the relationship between writing and knowledge. For example, does writing simply illustrate one's already preconstructed knowledge? Or is it through language and writing that knowledge is socially constructed as well as displayed? The later question leads to further questions:

does rhetoric work to constitute, shape, enable, constrain, challenge, and contest knowledge? Is knowledge rhetorical – the product of

human sociality – always contested, contingent, socio-culturally situated, resulting from advancing, defending, contesting knowledge claims based on arguments and evidence whose acceptability depends on the practices, values, and standards of the communities, institutions, and organizations whose work they do? (Starke-Meyerring & Paré 2011:7).

More recently though, it was the work of Scott (1967; 1976; 1993) that ‘brought the debate about the epistemic nature of rhetoric to the forefront of contemporary research and inquiry in rhetoric’, by specifically focusing on the question of ‘rhetoric as epistemic’ (8-9). Emerging from such events as the ‘linguistic, interpretive, and rhetorical turn in the social and human sciences ..., the rhetoric of inquiry..., [and] [c]aptured by the 1984 Iowa Symposium on Rhetoric and the Human Sciences and the 1986 Temple University follow-up conference’, reason came to be conceptualized as ‘inherently rhetorical’ (9). This means then that ‘rhetoric’s function is not simply to dress up and effectively convey some prior truth, but its role is the creation and contestation of understanding and knowledge itself’ (9). This understanding of the relationship between knowledge and language has led to rhetorical research in the natural sciences, investigating how scientific knowledge is constructed through language and other rhetorical conventions (see Bazerman 1988; Ceccarelli 2004; Graves 2005; Gross 1990; Harris 1997; Segal 2005), as well as the social sciences and humanities (see Bazerman 1988; Brown 1987; McCloskey 1994).

Despite being closely related to the theoretical idea of writing as social, writing as rhetorical puts specific importance on the relationship between writing and knowing. It does this by emphasizing the ways knowledge is socially constructed by a community’s use of language and other rhetorical conventions, such as referencing style and so on. It is an issue rarely discussed in the writing classroom but did emerge to be significant from Kathleen and Katie’s writing coach relationship. As will be discussed in the next section, it was significant because of a conflict between the knowledge claim that Kathleen’s two communities wanted her to construct in this chapter and the rhetorical conventions she needed to use to construct this claim. To address this issue, Katie needed to help Kathleen develop an understanding of how the narrative or argument she was trying to

construct about the relationship between ICTs and poverty in the global South fit into her research community as well as the funder's ways of understanding it. And then, based on this understanding, particularly because in her case they differed, she needed to understand how to use language and other rhetorical conventions, such as discussions about methodology, to negotiate their conflicting ideas about the chapter's main argument.

Writing as Rhetorical: Challenge

Although the previous two challenges could be experienced by researchers located in any part of the world, the final challenge Kathleen experienced may be more specific to a researcher located in the context of the global South. This challenge arises for researchers in this particular context because they can be caught between the competing knowledge demands of the various communities to whom they are connected. These communities include one's disciplinary research community (often located in the global South) as well as the institutional community where they do research. These two can be in conflict with the international research community and the international funding community (both of which are often located in the global North). In Kathleen's case, she was caught between the international funding community, who offered the resources for research outputs, and the South African research and institutional communities to which she belongs as a researcher. This challenge can be understood through the theoretical lens of writing as rhetorical because she was trying to negotiate how to use language and other rhetorical conventions to address the conflicting knowledge claims which the various communities would want the chapter to make.

For example, the first community was that of the funder, IDRC, and IDRC's ICT4D programme more specifically. This was the funding community for whom she was writing the book chapters, and with whom she had a very strong relationship as she had previously been employed by them for over three years. The second was the research community where she worked full-time, studies part-time, and is the university recipient of project funds from the funding community. In terms of the dilemma, the ICT4D community wanted Kathleen to construct the argument (knowledge) that a recent study it had funded illustrated ICTs could be a tool to address, and

potentially alleviate poverty in Africa. Yet, at the time of submitting the book's chapter, and being a member of the research and institutional communities that investigate issues of ICT and poverty, she knew these findings were yet to be verified. Her reservations were because at the time of the chapter's publication, the findings and papers were still being presented to the research community for scrutiny within their own discipline. Therefore, Kathleen was not nearly as forthcoming as the research funder to present these specific findings on the relationship between ICT and poverty. She wanted to wait, respecting her research community, until a rigorous evaluation of the findings was completed through a disciplinary peer review process.

This situation meant Kathleen was caught between these various communities' conflicting opinions about these findings' readiness for publication. Specifically she was uncertain about what argument the chapter could make and how to construct the argument using the rhetorical conventions of these multiple communities. Specifically, the second community, her research community, often draws on the rhetorical convention of discussing methodology to construct a legitimate argument; yet, in this particular case, Kathleen understood that the analysis methodology of a poverty and ICT article was still under peer review by the research community. Since it was still being reviewed, she did not want to be forced into relying on a certain rhetorical convention, that of the methodology, to construct this argument.

We would argue that our writer-coach relationship uncovered this rhetorical issue as a particularly interesting challenge; yet, unlike the other two challenges discussed earlier, a concrete method was not applied to resolve it. Instead, our reflections only helped us become more aware of these communities' conflicting ideas about the issue. It also allowed us to discuss how Kathleen could use language and other rhetorical conventions to construct an argument about the relationship between ICTs and poverty alleviation in the African context that might satisfy these different communities.

Conclusion

The reflections discussed in this article have perhaps raised more questions

than they have answered. In addition, they are limited because they only rely on learnings from a reflective analysis of a writing support programme that coached only one writer. Yet, our purpose is to use these reflections and insights to simply begin to discuss a particular model that could potentially be used to guide the design, implementation, and facilitation of writing support programmes at African universities. The intention of such programmes would be to address African researchers' supposedly limited research capacities. As has been illustrated by analyzing Kathleen's experiences as she was coached by Katie, at the foundation of this particular model, is a writing coach with both an empirical understanding of the writers' specific contextual challenges with writing, as well as a theoretical understanding of writing from the field of writing studies. This means understanding writing not only as a product, but also as a process, as social, and as rhetorical and using these theoretical understandings to make sense of and address the challenges of the writers they are supporting.

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Students' Experiences of Learning in a Structured Writing Intensive Tutorial Programme

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Abstract

Managerial Accounting and Financial Management (MAF) have traditionally been perceived by students to be a difficult subject as students do not fully grasp the underlying disciplinary concepts and are unable to transfer knowledge from one context to another. This article reports on a study that sought to explore students' experiences of learning in a Writing Intensive Tutorial (WIT) programme. A WIT programme is based on the approach of using informal exploratory writing in *writing-to-learn*. Informal writing is low stakes, ungraded and encourages critical thinking and learning of concepts rather than grammatical correctness. The participants in this study were MAF students who voluntarily participated in an 18 week WIT programme. The study was informed by the tenets of social constructivism and conducted in qualitative interpretative framework. The study drew on principles of case study research.

Using Interactive Qualitative Analysis (Northcutt & McCoy 2004) as a data analysis tool, several key affinities (themes) were revealed. These affinities include an increase in personal confidence, improved study and examination techniques and the interactive tutorial environment. Students felt that their study techniques had improved as they adopted a deeper approach to learning. The structure of the tutorials was enjoyed by all students. They were able to interact with each other to develop a contextualised understanding of MAF concepts. These findings have implications for higher education accounting pedagogy.

Keywords: Higher education accounting pedagogy, Interactive Qualitative Analysis, Managerial Accounting and Financial Management, programme structure, student learning, writing-to-learn

Introduction

A major impetus in accounting research over the past three decades has been the sweeping changes in the accounting profession. These changes lead to a call to reform traditional teaching practices in accounting education (Gouws & Terblanche 1998; May & Arevalo 1983; Lundblad & Wilson 2007; Howieson 2003). Accounting faculty worldwide is under pressure to develop critical thinking skills and improved communication skills to meet the demands of accreditation criteria and for the profession to remain relevant (Ahlawat *et al.* 2012; de Villiers 2010). Effective writing skills, which are part of the overarching term communication skills incorporating reading, writing, listening and speaking (Kranacher 2007), are important to accountants in their professional careers. Hence, it is essential that written skills form an integral part of the education of accounting students to prepare them for success in the profession (Corman 1986; Hirsch Jr. & Collins 1988; McIsaac & Sepe 1996). Research has shown that often writing skills developed in English courses are eroded as students are unable to transfer the skills learnt in the English classroom to an accounting context hence the importance of incorporating writing into the accounting curriculum (Lundblad & Wilson 2007; Stout *et al.* 1991).

A challenge to accounting educators is how to move students from thinking about accounting as a collection of facts to be memorised towards a deeper understanding of accounting concepts. One approach to learning to that has not been widely implemented in the accounting discipline is using writing-to-learn – “using writing to improve student understanding of content, concepts and ... method” (Reynolds *et al.* 2012: 17). Despite research showing that informal student writing or writing-to-learn is an effective pedagogy to improve both technical accounting and communication skills of accounting students (Almer *et al.* 1998; Baird *et al.* 1998; English *et al.* 1999; Woods McElroy & Coman 2002; Stout *et al.* 1991; Wygal & Stout 1989; Scofield & Combes 1993), the praxis of writing-to-learn is not widely

implemented in accounting education. Informal writing could be used as a precursor to formal writing and the implementation of informal writing assignments may well have synergies in improving formal writing (Scofield 1994).

Writing as a mode of learning is grounded in the seminal work of Emig (1977). With writing-to-learn the knowledge domain is the primary focus of learning (English *et al.* 1999). When students are required to write on issues, the concepts are understood at a deeper cognitive level (McIsaac & Sepe 1996).

In this article we explore Managerial Accounting and Finance (MAF) students' experiences of learning in a Writing Intensive Tutorial (WIT) Programme. Data for this article is extracted from a larger study which considered students experiences as a whole; for this article we focus specifically on how the programme structure impacted on the students' learning. The motivation for this research stems from the paucity of qualitative accounting education literature (De Lange & Mavondo 2004; Lucas & Mladenovic 2004) and the need for a deeper understanding of using writing as a method of learning. Lucas (2000: 482) points out that "missing from existing research is a sense of how students *experience* their learning of accounting" [*italics in original*]. Further, the extant literature on writing-to-learn pedagogy in South African accounting education literature is sparse.

This article is organised as follows: firstly, there is a review of the relevant literature on writing-to-learn in accounting programmes. The literature review is followed by the research methodology used in this study with special reference to how the structure of the WIT programme impacts on MAF students' experiences of learning. The section thereafter reports the results of the research and the final section contains the conclusions and recommendations.

Literature Review

The literature on writing-to-learn programmes is extensive. Consequently, this review is of necessity, limited to the sphere of accounting studies. Although a rigorous effort was made to cover the literature on writing-to-learn from as wide a range as possible, due to the absence of accounting writing-to-learn research in South Africa, the literature for this study was

informed by international studies. The majority of the research on writing-to-learn in accounting education has been undertaken in the United States and covers a range of accounting subjects and year of study. Fewer studies have been reported from Australasia. One needs to be cognisant of the fact that student attributes may differ between those in South Africa and in other countries. Writing-to-learn as a pedagogy gained prominence in the international accounting education literature from the late 1980's onwards (Catanach & Rhoades 1997; Baird *et al.* 1998; Almer *et al.* 1998; Wygal & Stout 1989; Stout *et al.* 1991) and from then to the present will delineate the research reviewed in this study.

One way of engaging students as active learners is the incorporation of writing skills into the accounting curriculum. Using writing-to-learn pedagogies, writing can be incorporated within the course structure with minimal loss of valuable teaching time (Kalman & Kalman 1998). Writing helps students grasp difficult concepts and a concomitant benefit of writing is an improvement in writing skills essential in their professional careers (Reinstein & Houston 2004).

Effective writing skills and critical thinking skills are desirable outcomes of university study. Writing and thinking skills are inextricably interwoven as effective writing focuses on content/critical thinking which must precede effective writing (Reinstein & Trebby 1997). As a learning pedagogy, writing can serve a number of purposes. Writing confronts students with the opportunity to reflect on what they know and do not know about an issue (Cunningham 1991). Faculty are able to assess how students' knowledge is developing and misconceptions are detected before they become problematic (Locke & Brazelton 1997). Learning to write as an accountant means learning how to compose questions, develop argument as a member of the accounting discourse community and communicate financial information to other parties. When students begin writing in new discourse communities they possess the cognitive ability but are unaccustomed to the thought processes of the discipline. They begin by copying knowledgeable members of the discipline (Carter *et al.* 2007). The consequence of the social interaction is that students are able to construct meaning and become increasingly skilled users of the discourse.

Test scores of students who completed freewrites were compared with those who did not (Baird *et al.* 1998). Freewrites are thinking aloud on

article without being concerned about spelling, organisation or grammar (Bean 2001). Students write everything they know about a topic for a limited period of time, usually three to five minutes on a faculty directed question. The intervention by Baird *et al.* (1998) improved student performance in the auditing and accounting information systems (AIS) classes, but not in managerial accounting. There was evidence that the writing intervention benefitted the students who are likely to have difficulty in class (Langer & Applebee 1987). The benefit to the top students was minimal and detrimental in the managerial accounting class. The authors concluded that the difference may have been due to the nature of examinations written by the different classes. The managerial accounting examinations included only objective questions (multiple-choice) while the auditing and AIS included both objective (multiple-choice) and subjective (essay) questions. Overall the students felt that the intervention had “help[ed] with identifying the important points from each session” (1998: 271).

In response to the study by Baird *et al.* (1998) regarding the top managerial accounting students who did poorly in writing group conditions, Woods McElroy and Coman (2002) used one-minute papers in an introductory managerial accounting class to test the finding. Student performance was measured on both essay (subjective) and multiple-choice (objective) items. Previous research had produced mixed results (Baird *et al.* 1998; Almer *et al.* 1998) regarding performance on subjective and objective testing. Contrary to the findings of Baird *et al.* (1998) study, Woods McElroy and Coman (2002) found evidence that one-minute papers benefitted students of all abilities. Consistent with Baird *et al.* (1998) findings, the positive effects were greater for subjective test material.

There are a limited number of accounting studies (Stout *et al.* 1991; Ng *et al.* 1999; Ashbaugh *et al.* 2002; Baird *et al.* 1998; Sin *et al.* 2007) which provide an evaluation of the effectiveness of writing interventions (Stout & DaCrema 2004). The problem articulated by the authors is how to measure the effectiveness of writing initiatives over a period of time, for example a semester. Habits and behavioural change need to be developed over a period of time longer than a semester hence it is difficult to measure improvement in students’ learning as a result of a writing intervention over a limited period (Stout *et al.* 1991; de Villiers 2010; Chu & Libby 2010). A sustained intervention which is an integral part of the accounting curriculum

is required to realise meaningful results. Consistent and continuous practice of writing is required for reinforcement of the writing skills to be internalised (Hirsch Jr. & Collins 1988; Ashbaugh *et al.* 2002; O'Connor & Ruchala 1998; Lundblad & Wilson 2007; Matherly & Burney 2009; Woods McElroy & Coman 2002; Reinstein & Trebby 1997). Because of the large amount of technical knowledge that has to be taught, no single course should be burdened with teaching writing skills. If each course has a small amount of writing this spreads the load and has the advantage of constant reinforcement (McIsaac & Sepe 1996).

Although an objective measure was not used to measure improvement in students' learning (Wygol & Stout 1989; May & Arevalo 1983; Hirsch Jr. & Collins 1988), faculty noted a steady improvement in student writing as a result of implementing a writing-to learn programme, which added positively to the learning environment. The writing assignments helped faculty identify areas where students were in need of assistance before commencing with final assessments. Writing assignments are most effective when they are fully integrated with learning in the discipline and consequently support the construction of discipline knowledge (Gottschalk & Hjortshoj 2004).

The act of writing is a unique mode of learning (Emig 1977). Writing makes thoughts visible and creates a permanent record which can be referred to and modified later. Zinsser (1988) states that writing and learning are connected:

Writing organizes and clarifies our thoughts. Writing is how we think our way into a subject and make it our own. Writing enables us to find out what we know – and what we don't know – about whatever we are trying to learning (1988: 16).

Because the product of writing is immediately available and visible, it provides a unique form of reinforcing feedback (Hylton & Allen 1993: 69). Writing prompts active learning as it focuses the students' attention on "what they know and don't know about an issue" (Locke & Brazelton 1997: 46). Students can mediate their knowledge with new knowledge to arrive at a deeper awareness of concepts underlying the discipline. They become reflexive participants in the learning process (English *et al.* 1999). Attention

is shifted away from rote learning to actively grappling with concepts and a deeper understanding of the subject knowledge is encouraged. This improves students' critical thinking skills and ability "to integrate and coordinate diverse concepts to generate meaning" (Garner 1994: 212).

The concept, '**writing-to-learn**' needs to be distinguished from the concept, '**learning-to-write**'. Writing-to-learn, which was used in this study, is based on the premise of "the knowledge domain being the primary focus of learning" (English *et al.* 1999: 224). Zinsser (1988) recommends that writing assignments be incorporated into all academic programmes to help students learn the material. The primary educational objective of writing-to-learn is "student understanding of subject matter". The focus is on "the writer's learning process" (O'Connor & Ruchala 1998: 94) and an understanding of underlying concepts. Writing-to-learn "discourages the viewing of material as a agglomeration of disembodied facts and formulae to be learnt" (Kalman & Kalman 1998: 15). Learning-to-write is formal writing (reader-based prose), the focus is on improving writing skills and it is largely the domain of the English/communication department (Stocks *et al.* 1992). The objective is the "student understanding of writing processes" and the focus on "writing processes, text production and/or rhetorical strategy" (O'Connor & Ruchala 1998: 94). There is a synergy between the two concepts as Baird *et al.* (1998: 260) point out "While improved writing skills can be a side benefit ... learning a topic is the primary goal [of writing-to-learn]".

Methodology

This article is based on a qualitative study informed by the tenets of social constructivism, which posits that knowledge is socially constructed. The strategy of enquiry used was a case study as it supports the principles of qualitative research and social constructivism. Social constructivism views the construction of knowledge and skills as a social process (Lucas 2000). Knowledge may develop internally and it also develops from interaction between members of a social group. Members of the group are able to learn from more knowledgeable members. Social constructivism is suited to methods that require learning with others and collaborative group work is one such example. Interactive Qualitative Analysis (IQA), a novel approach to qualitative research in the domain of accounting education was used for

data-gathering and analysis. IQA as a research design falls within the ambit of social constructivism.

Students who were registered for MAF in 2011 were approached during a MAF lecture early in the first term and invited to attend an information session where the purpose of the research was explained. Fifty-two students attended the session where the essence of the WIT programme was conveyed to them. They were asked to complete a short questionnaire requesting information such as name, student number and to write two short paragraphs: why they should be considered for the WIT programme and explaining to a prospective student what the study of MAF entails. From the questionnaire responses a purposive sample of 18 participants were selected to participate in the WIT programme; participation was strictly voluntary. The participants selected were representative (Steenkamp *et al.* 2009) of the population of MAF students in terms of gender, ethnicity and academic record (O'Connor & Ruchala 1998). They comprised nine females and nine males. The ethnic composition was nine Africans, six Indians and three white participants. Of the participants, eight were enrolled in MAF for the first time and ten were repeating. The participants selected are those closest to the phenomenon under study and hence they are in the best position to negotiate meaning of their experiences of learning in a structured WIT programme. The selection of participants was based entirely on the judgement of the authors and does not necessarily represent the wider student population. With purposive sampling “researchers handpick the cases to be included in the sample” (Cohen *et al.* 2007: 114).

During the course of the WIT programme, three students withdrew from the programme. Two withdrew as they were selected to tutor other programmes that clashed with the MAF tutorials. The third student withdrew as he felt that the programme required too much extra work. This left 15 students who wrote the final examinations. While this was not a comparative study, for the record, 12 out of the 15 students passed MAF (an 80% pass rate). This was somewhat higher than the average of the mainstream tutorial students where the pass rate was 43%. Despite the higher average pass rate of the WIT students, this study is not making definitive claims with regard to the efficacy of the WIT programme as there are other factors which may have influenced this outcome.

The WIT programme intervention reported in this study was intro-

duced at the beginning of the second term of 2011 and the duration was 18 tutorial weeks until the culmination of the lectures. The tutorial sessions were aimed at creating a relaxed, non-threatening, stress-free environment where students could interact with peers to discuss and share conceptions of MAF and engage in active learning. The completion of regular written assignments encouraged students to work on a consistent basis rather than last minute ‘cramming’ for tests and examinations.

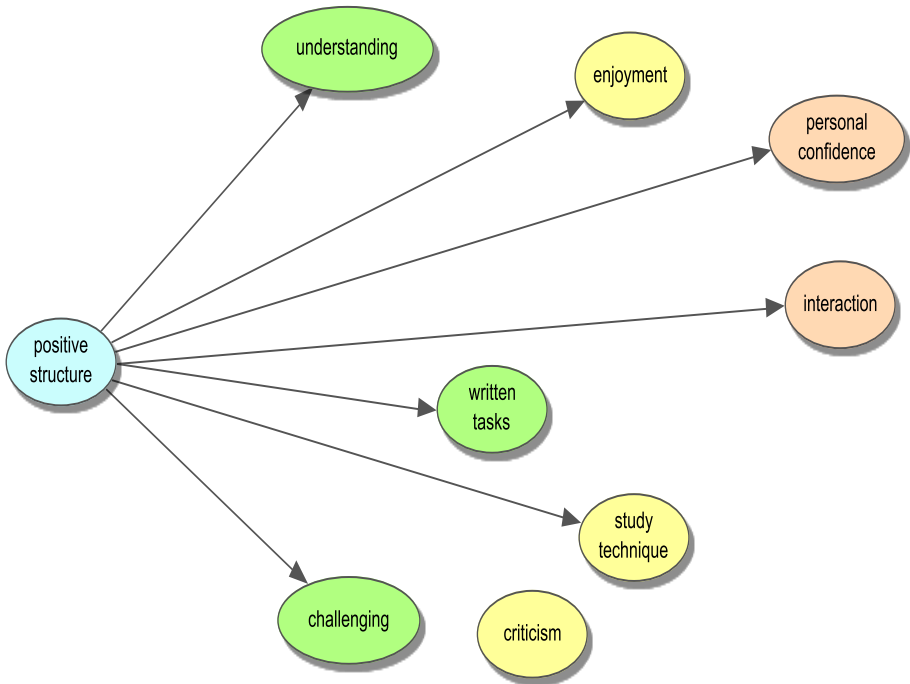
The strategy of inquiry used in this study was Interactive Qualitative Analysis (IOQ) (Northcutt & McCoy 2004). IQA is a structured approach to qualitative research design which uses focus groups to produce a systematic representation of a phenomenon from participants’ experiences of the phenomenon being studied – MAF students’ experiences of learning in a WIT programme. The basic premise of IQA is that those closest to the phenomenon are best situated to construct meaning from the data. In the early stages of the analysis, the participants’ voice is privileged over that of the researcher; consequently the analysis is not biased by the researcher’s preconceptions or meanings. Typically during IQA focus group sessions, the participants generate and analyse data developing categories of meaning, termed affinities in IQA, and interpret the cause and effect relationships between the affinities. The role of the researcher is to facilitate the process. The end product of IQA is a systems diagram which emanates from following a set of “rigorous and replicable rules for the purpose of achieving complexity, simplicity, comprehensiveness, and interpretability” (Northcutt & McCoy 2004: 41). For a more detailed explanation of IQA, refer to Northcutt and McCoy (2004).

Findings

This study forms part of a larger study in which nine affinities (key findings) were identified. However, only the main finding namely, *positive structure* will be discussed in this article. The structure of the tutorials was a primary driver of the students’ positive experiences of learning in the WIT programme. Students who were accepted onto the WIT programme perceived themselves as privileged to participate in what they considered an exclusive and valuable experience. They enjoyed the way the tutorials were structured, as a variety of pedagogic strategies were used to maintain interest and

enthusiasm. The small tutorial group size facilitated learning in a relaxed, non-threatening environment. The structure of the tutorial influenced all aspects of the students' learning experiences, as illustrated in Figure 1.

Figure 1: Positive Structure



Understanding

The students remarked that the *tutorials were well structured and this facilitated systematic and logical understanding*. The structure of the tutorial was such that students worked in small groups. Every week the students were grouped differently. A variety of tasks were assigned each week to alleviate the monotony and boredom usually associated with the mainstream tutorials.

Keeping the students focussed and interested advanced understanding of MAF concepts as articulated below.

I think that the tutorials were well structured and this created an environment which facilitated systematic and logical understanding. In MAF understanding plays a big part because there is more than one way of doing the question. The positive structure of the tutorial improved my understanding of the topics we studied. In the mainstream tutorials it becomes a bit monotonous, tedious and not very interesting to attend after a day of lectures. The tutorials are primarily dominated by the tutor and you sit there and listen to a so called lecture because they [the tutors] basically just lecture. The tutor would normally go over everything like a robot, there wasn't much understanding. You were being told what the solution is and how to get it. That doesn't help in the test because there is nobody sitting there telling you how to get to the final solution. This meant that you were almost falling asleep after 10 minutes and not really paying attention. In WIT the tutorials were well organised and the work was varied, every week this helped my understanding. It was helpful being in a smaller tutorial group. If I am struggling it is easier for the tutor to spot me and I can approach her because we have a close relationship. I didn't feel scared asking stupid questions in the tutorial. In the mainstream tutorials if you didn't understand something you will live with it but here in this tutorial my classmates and you, Mrs Bargate can explain it to me. In the WIT programme it didn't matter if you asked stupid questions.

Students appreciated the structured tutorial environment as they felt that this was a necessary condition that facilitated their systematic and logical understanding of MAF. They recognised that the tutorials had shifted their cognitive development. They clearly articulated that their understanding of the content studied was enriched as a result of the tutorials. They also acknowledged that understanding in MAF is critical as there are a myriad ways of asking questions and approaches to answering questions. The students felt strongly that the environment was energising and they were attentive in the tutorial and motivated to work harder.

Students compared the WIT tutorials to the mainstream accounting tutorials and felt that the ‘monologue method’ made the mainstream tutorials monotonous, boring and repetitive. Students struggled to concentrate in the mainstream tutorials and did not gain maximum benefit. The students said that the tutors often simply read the solution to them with little explanation of underlying concepts. There was very little student participation in mainstream tutorials. With the WIT programme a variety of tasks was set each week and students indicated that this facilitated understanding and attentiveness. The students were unanimous about the fact that the variation alleviated boredom and maintained interest and enthusiasm.

Students mentioned that they found the smaller tutorial group (15 – 18 students) non-threatening. This small group size allowed students to receive individual attention. Mainstream tutorial groups consisted of between 35 and 42 students and students found the group size too intimidating to ask questions. In the WIT tutorials, the students did not mind appearing ‘stupid’ in front of their peers because of the bond that developed between them. They were not afraid to verbalise their misunderstandings or confusions to the group. Feeling comfortable with their peers, meant that the students could ask one another without fear or favour. Being unafraid to ask meant that the students were able to interrogate the work at a deeper level instead of limiting themselves to a surface, rote learning approach.

Challenging

The students found some aspects of the WIT programme demanding but the *solid structure of the programme provided a good foundation to tackle any challenge.*

The tutorials are presented in a challenging manner while still maintaining a relaxed environment and this encouraged me to work harder. Some of the questions we did in the tutorial were challenging but because of the solid structure I was able to manage them. These questions stimulated your intelligence. I recall the capital budgeting question, the relevant costing question and the debate, those were extremely challenging. But once again going back to the way the tutorial was structured, the way we had to work through the

problems, even if the problems were challenging we were able to manage them. In the mainstream tutorial group there are no challenges. You sit there for one or two periods and just listen. It's basically just a straight forward lecture.

Students alluded to the fact that in the mainstream tutorials there were no challenges as the tutors found it easier to lecture rather than engage and interact. Students said that even though they found some of the questions in the WIT programme difficult, due to the way the tutorial was structured they were encouraged to attempt the questions. They were able to work through the questions collectively. They noted that the tutorial environment was relaxing yet stimulating which was conducive to tackling questions that formerly would have defeated them. Previously they would not have made an attempt at the question. They embraced the challenge and engaged with the work in the supportive environment provided in the tutorial.

Written Tasks

Students indicated that *as there was a good structure, we were more likely to improve in written tasks especially given that the WIT programme was mainly about learning using writing*. Written tasks were completed both in the tutorial and as homework assignments.

In the tutorial you gave us written tasks to complete; they weren't just random things. You thought about them in relation to the topics at that time and this helped us get a better understanding of that topic. Writing is a tool that is required for all stages of life and the more a person can master the skill of writing, the more it will enhance communication and productivity throughout an organisation or industry.

Students believed that the written tasks completed each week provided them with practice in MAF discourse writing and noted that the quality of the written tasks were directly relevant to concepts learnt. Students perceived that the written tasks given were closely connected to the concepts and content that they were required to learn. Because the written tasks were

embedded within the new content they became more meaningful to them. They also realised that although they were learning to write in accounting they were learning a skill valuable in other areas of life. When they entered the professional world, competence in writing would be a valuable asset.

Enjoyment

The way the tutorial was structured allowed students to enjoy it. *The tutorial was well structured (groups, interactive etc); thus we were able to participate more and enjoy the tutorial.* The time in the tutorial went by so quickly, that the students were unaware of the passage of time.

Depending on the way a tutor leads a tutorial, it can be either interesting or just plain boring. The way the WIT tutorials were structured made understanding easier, the topics became fun and we enjoyed the tutorials. You placed more emphasis on fun yet we learnt at the same time. Since I was doing MAF for the second time, I wanted to do it differently from last year and this year the tutorial has been cool and I enjoyed it. The two hours we spend with you doesn't feel like two hours and no one wanted to go home. I didn't realise how enjoyable doing a question together can be.

Students perceived the tutorials as fun and not as something that they had to do, or that was imposed on them. This was something that they constantly pointed to – learning was made fun and they benefitted from it. They did not want to miss the tutorial as they felt they would then miss out on something interesting. Students remarked that the WIT tutorials were longer than mainstream tutorials, but they were oblivious to the passage of time. Often the duration of the WIT tutorials extended beyond two hours compared with 75 minutes (often less) of the mainstream tutorials.

Students repeating the course enjoyed this new experience as it provided them with a different approach to that of the conventional mainstream tutorial. The WIT programme offered them opportunities to conceptualise the work differently to the way they did in the previous year. They felt that the WIT programme had boosted their self-confidence and provided a space where they can belong.

Study Technique and Test Preparation

The *structure* of the tutorial provided *direction* to the students which *assisted with their studying* and resulted in a change in study technique and examination preparation, to their advantage.

I think the tutorials were well structured as we can pin point our problems and address them before they get too far along. As part of our written tasks we were required to write summaries of certain sections. This helped us to identify our problems and write our own notes. Writing summaries as a study technique contributed towards our understanding and this resulted in me refining and improving my study techniques. I also changed the way I prepare for the tutorials. I do them more thoroughly and practice my technique. I used to try and do the tutorial, then study, but now I study first then do the tutorial and this has helped. The time we spend in the tutorial is productive and my understanding has improved which then reduces my study time and test preparation.

Within the accounting discipline, the assigned homework questions are referred to as ‘tutorials’ in addition to the normal use of the term. An outcome of the WIT programme was an adjustment to the students’ study technique and examination preparation. This positive change resulted in students understanding more and consequently spending less time preparing for tests and examinations. Furthermore, the students devoted greater time and effort to preparing for the tutorial which meant a more concentrated engagement with material and heightened understanding. Several of the written tasks required the students to write summary notes. This was useful as a study technique as students were able to identify and clarify areas of uncertainty well in advance of assessment. The summary notes were used by the students for revision purposes as they provided a précis that could be quickly run through prior to test. The students see themselves as shifting from uncomprehending rote learning towards a deeper approach.

They were able to identify their problems, a competence which they previously had lacked. As they were now able to identify their problem areas, they devised their own strategies to overcome the problems.

The WIT programme has helped the students to become self-critical

and to realise that they are evolving better study techniques. They admit to a new method of approaching their study of MAF. They are not seeing the tutorial as the only space where learning was happening. They are also able to see how learning in this tutorial space was influenced by their preparation of answers to the tutorial questions and their reflection after the tutorial on the work accomplished. They were able to see how they could integrate their independent study with the work of the group in a way that helped them to make meaning. Students become more efficient at mastering new concepts and content in a short period of time. This positive structure and the nature of the activities and the interaction within the programme contribute to making the students more efficient when studying. The effective, productive study techniques refined and refocused, created more time because they could now make sense of content quicker.

Personal Confidence

The tutorial was structured so that students had to present either their own work or their group's work to the class. The *solid structure facilitated a solid understanding and thus greater confidence is achieved.*

I am usually a very shy and conservative person who doesn't mind blending in a group of people and generally afraid to ask questions in the tutorial. In the mainstream tutorial I blended in very well. During the WIT tutorials we had to go up in front of the class and present our solution or present our argument as in the capital budgeting debate. I have opened up a lot. I found that speaking in front of the class improved my confidence. I am so pleased I had the opportunity to participate because the structure of the tutorial resulted in me being more confident in my work. The spot tests we had to do in class really boosted my confidence because we had to do them under exam conditions. When we wrote test 3, I knew what was required so my confidence was high. I never thought I could get such high marks in MAF. In the tutorial I may be wrong or someone else may have the wrong answer but that doesn't matter, we learn from each other.

The students indicated that the WIT programme provided them with confidence in MAF, which they acknowledged was lacking. They were motivated to achieve and even exceed their own goals. One of the repeating students commented that she could not believe that she could obtain such high marks for MAF; and this was extremely motivating for her. At certain tutorials, the students wrote previously unseen spot tests which they felt provided them with an indication of their understanding at that point. Students found that they were in fact prepared and competent to write the spot tests.

An added benefit articulated by the students was an increased confidence in their verbal communication skills. Communication with the groups was a new experience for some students. They said that in the mainstream tutorials because of the group size it is possible to blend in and not be noticed. They found the WIT tutorial self-fulfilling and affirming.

Interaction

The students were overwhelmingly in favour of the interactive structure of the WIT programme. The non-threatening small group and relaxed environment provided a context for meaningful engagement with other students. Obtaining alternative viewpoints on how to address the set work *enhances your understanding*.

The manner in which the tutorial was structured definitely made us more interactive. Working in groups was something new to me as I don't usually work in groups unless I have to. Now I realise the value of group work because expressing your views and getting someone else's view enhances your understanding. You learn more in that way. Even if you already knew the work you can get a better understanding of it or a more in depth study from someone else's perspective. In the discussions I have to think very carefully about what I am about to explain because it is important that I explain in a way my fellow students will understand. As a teacher you may teach us something and you might explain it in a way I don't understand but you find that another student understands it in a different way and when they explain it to me I understand it better so that is really

nice. Some weeks most of the class had difficulty with a question but we were able to brainstorm a solution in our small groups. Every week we were in different groups so we got an idea of the points of view of each the members of the tutorial group and this helped a lot in terms of widening our perspective in terms of understanding. All tutorials should be more like this as in my opinion it facilitates better learning.

Some students stated that prior to being on the programme they did not like working in groups. After their WIT experience they were conscious of the benefits of collaborative work. Lectures had acquainted them with the work, but once they engaged with other students they appreciated the details of practice and theory. They found they could learn from the way others were thinking. Particular areas of misunderstanding or ignorance could be embraced with help available from peers. They began to seek out peers as source of help.

The interactive arrangement meant that students in the group shared the teaching function with the tutor; students were exposed to other students' perspectives on the study material. A variety of activities were completed within the course and they were exposed to different peers weekly; students therefore learnt how different peers approached problems. When they saw themselves as teacher to group, it was not a casual engagement that they were having with their peers, but required a high level of abstract understanding for which they were responsible. This required a deep level of thinking about explicitness, depth and conceptual rigour in explanation; they were forced to rehearse this exercise in anticipation of what they were going say to their peers.

To ready themselves to speak about concepts with confidence stretched the students cognitively. They valued the group's openness and willingness to share. This would not have been possible if exposure to other students' different approaches had not been implicit in the structure. By brainstorming a question in the group, eventually a solution was arrived at and everyone benefitted from the experience. The WIT programme provided a space and opportunity for students to demonstrate their competence in a safe, secure environment that fuelled deeper learning and preparedness for the final examination.

Discussion

The structure of the programme was a move from the traditional teacher-centered tutorial towards a student-centered tutorial by incorporating active learning pedagogies encouraging student participation in the learning context. The learning context makes a significant contribution to students' motivation, learning approaches and performance (Adler *et al.* 2001; Hall *et al.* 2004). The WIT programme was well received by the students and its structure influenced their enjoyment, understanding, and study techniques, and provided them with an interactive learning environment where everyone was valued. If faculty can establish an active, positive learning environment and embed it within a received curriculum, there is a greater likelihood of students developing a deep approach to learning. When students become actively involved in the construction of knowledge rather than being passive recipients, their interest in the subject and understanding and retention of knowledge improve accordingly (Krom & Williams 2012). Changing the tutorial environment from a teacher-centered traditional tutorial to a more student-centered tutorial leads to more active participation by students in learning. Other authors who confirm the importance of learning context in contributing to students' motivation and performance and influencing students' learning experiences are Hall *et al.* (2004), Gow *et al.* (1994), Sharma (1997) and Lucas (2001).

Students may be more or less receptive to changes in the learning environment, so one cannot say that all participants benefitted equally from the innovations in this tutorial programme; changing the learning environment is only one of the factors affecting student learning (Hall *et al.* 2004). Depending upon how they *perceive* the learning environment, other factors such as motivation, intrinsic interest and previous educational experiences (Steenkamp *et al.* 2009) will also impact on how they receive the changes.

In interpreting the findings of this study, it is important to bear in mind its limitations. The study was limited to a single instructor, who was also one of their lecturers, teaching a small sample of students over a limited period of time. A variety of writing-to-learn activities were utilised (Wygall & Stout 1989; Hirsch Jr. & Collins 1988) in order to keep the students interested and preclude boredom and monotony – complaints they themselves articulated in relation to mainstream tutorials. Equally, however, the

diversity of activities they were exposed to precludes inferences about the causal effect of any one specific activity on the enhancement of learning (Baird *et al.* 1998), rather, the WIT programme needs to be considered holistically.

Conclusion

In this article we argue that the structure of higher education programmes plays a crucial role in determining success of such programmes and it also influences how students experience learning in the WIT programme. The data and analysis clearly indicated that a positive programme structure leads to deepened meaning making and understanding of what was initially perceived to be difficult concepts.

A positive structure is also one that provides students with appropriately challenging tasks and the students appreciated the element of challenge. Of note here is that the challenge should be set at an appropriate level – not too difficult and not too easy. A further key element in a good programme structure is the integration of carefully considered, appropriate and meaningful written tasks that are directly related to the programme outcomes. The participatory and interactive nature of the WIT programme lead to a sense of enjoyment from the students and this boosted the students' personal self-confidence. The analysis also revealed that a good programme structure should provide opportunities for students to develop effective assessment skills.

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The Peer Teaching/ Learning Experience Programme: An Analysis of Students' Feedback

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Abstract

Freire's views on the dialogical nature of teaching and learning inspired a group of postgraduate students who had previously been involved in facilitating Supplemental Instruction (SI) but observed low student participation. After reflecting on their own experiences the group initiated a discussion forum for first-year biology students with the aim of transforming student learning from a relatively passive experience to an active, engaging process. In contrast to the SI programme Peer Teaching/Learning Experience Programme (PTLEP) sessions were characterised by large student numbers per session (100-300), a much longer duration (up to 3 hours), and they were conducted at weekends or after hours. Furthermore sessions were offered only close to exams and tests with two sessions per test and three sessions per exam. In the PTLEP tutorials, facilitators guide the process and make comments, but only after the students themselves have made suggestions on how to answer questions correctly. Records from the attendance registers, evaluation questionnaires given to a sample of students attending the programme, and video recordings of sessions revealed that PTLEP increased attendance and active participation of the attending students. These multi-layered peer interactions mitigated the effects of the high student-lecturer-ratios observed at the University of KwaZulu-Natal and offered pedagogical benefits as competition was decreased among students and cooperation, motivation, self-confidence and self-esteem were increased. Contrary to the belief that peer teaching should be limited to peer discussion in small groups,

the students' responses to a set of questionnaires and their participation in academic workshops indicate that, in an African context, peer education involving large numbers of students creates a motivating learning environment.

Keywords: Peer Teaching, students' motivation, engagement, peer tutoring, pedagogy, collaboration

1. Introduction

Mackenzie, Evans and Jones (1970) stated that a peer student is often the least recognised, the least used and yet, the most important of all the resources that may be available to any student (Goldschmid & Goldschmid 1976; Treisman 1985). After observing the studying habits of Black American students, and comparing them with the highly successful Asian American students, Treisman (1985) hypothesized that poor performances of Black American was due to their tendencies of studying in isolation. He developed a mathematics workshop, a highly successful professional development programme at the University of California, Berkley (U.S.A.), to address such academic isolation in Black students. He then created a study network for Black American students, organising them into study groups of 5-7, after observing that it was highly successful for Asian American students. Each group was assisted by a graduate student as facilitator to stimulate discussion and to answer questions. The programme improved academic performance and retention of Black American students (Drane *et al.* 2005; Fullilove & Treisman 1990; Treisman 1985). Since then, there has been a proliferation of workshop style programmes in mathematics and other science subjects including chemistry and biology. The positive student evaluations of these programmes suggested that the workshop approach has the potential for improving the performances and retention of Black American students in science and engineering (Drane *et al.* 2005). Since the South African universities face similar challenges of retention (Letseka & Mail 2008), this type of study support might help in overcoming some of challenges faced by disadvantaged Black students in South Africa.

There have been challenges to retain and graduate disadvantaged students at South African Universities. In 1996, a proposal to transform Higher Education in South Africa was developed by the National Commission on Higher Education (Mdepa & Tshiwula 2012). The aim of this new education system was to increase the student population or enrolment of previously excluded groups in order to address equity and promote development (Mdepa & Tshiwula 2012; Badat 2009). It also aimed at increasing diversity and this required flexibility with regards to enrolment of students to Universities (Mdepa & Tshiwula 2012; Badat 2009; Van der Flier, Thijs & Zaaiman 2003). Under the new education system universities were required to enroll more Black students in order to reflect more accurately the demographic composition of the South African population (Mdepa & Tshiwula 2012).

Universities in South Africa recruit students based on their school performance (Van der Flier, Thijs & Zaaiman 2003). In Science for example, students are expected to obtain a matriculation aggregate score of 60 to 69 percent as this is regarded as necessary for a student to have an adequate chance to succeed in the university (Van der Flier, Thijs & Zaaiman 2003). It is widely acknowledged that the majority of Black students in South Africa come from poorly resourced schools, where there are often inadequate facilities, lack of sufficiently qualified teachers, and little or no career guidance (Mdepa & Tshiwula 2012; Taylor 2009). In addition, parents, siblings or closer relatives of these students usually do not have university experiences themselves and in most cases these students are the first generation to be admitted into the university (Mdepa & Tshiwula 2012). Under the new education system, in order to expand/increase the numbers of the previously disadvantaged students, universities had to change their recruiting standards and some of the Black students were admitted based on their potential rather than their performance at secondary schools (Mdepa & Tshiwula 2012; Badat 2009; Van der Flier 2003). As an example of such increased enrolment, in 1993, there were 473000 students of which 21% were Black. Between 1993 and 2008 the number of Black South African students increased by 503% from 99320 in 1993 to 599541 students in 2008 (Mdepa & Tshiwula 2012; Badat 2009).

While enrolment to higher Education by Black South African students has undoubtedly increased, the outcome in terms of successful

graduation and qualification of many of these students has been a big concern. In a cohort study by Letseka and Maile (2008), among 120000 students who enrolled for higher education, 30% dropped out in their first year and further 20% in their second and third year. While only 22% completed their three year degrees on time, 28% more were still in the system. There have been concerns over the high rate of Black South African students repeating and dropping out (Letseka & Maile 2008). The issue of high failure rate which is as high as 80% in some universities is of great concern, especially because the drop-out rate costs National Treasury R 4.5 Billion in grants and subsidies which are given to students in Higher Education and such students are never going to qualify for a degree (Letseka & Maile 2008). It seems that increasing enrolment alone has not been a sustainable way to increase the number of highly qualified Black South African students. Poor performance, high attrition and low graduation rates of highly talented but disadvantaged students (due to their previous schooling experience) resulted in the loss of some of the potentially gifted students from sciences and the loss of future leaders of the scientific community. There have been concerns that the high failure rate is a threat to the future of South Africa, especially because the country has limited resources, and special skills shortages (Letseka & Maile 2008). Universities are struggling to solve the problem of high enrolment numbers, high dropout rates and decreasing educational standards (Boughey 2010; 2007; 2005a; 2005b; Letseka & Maile 2008). Consequently, there have been proposals requesting the government to at least provide funds to deal with under-preparedness of matriculated students for Higher Education through additional academic development programmes in order to make up for the failures of the earlier education levels (Mdepa & Tshiwula 2012; Badat 2010; Boughey 2010, 2007; 2005a; 2005b). The Peer Teaching/Learning Experience Programme (PTLEP), an initiative of the School of Life Sciences in the University of KwaZulu-Natal is one of such internally instituted programmes to address the aforementioned challenges.

Among the 'post-1990 programmes', Universities have introduced academic support systems for students from sub-standard schools often assuming that the cause of poor academic performance in Black South African students lies within the individual inadequate academic preparation (Kioko 2010; Boughey 2010; 2007; 2005a, 2005b). This problem has often

been addressed by offering extra tutoring, remedial instruction, supplemental instruction, special preparation programmes, or introductory programmes especially for the ‘at risk students’ (see Kioko 2010; Boughey 2010; 2007; 2005a; 2005b; Drane *et al.* 2005; Fullilove & Treisman 1990). For example, Supplemental Instruction (SI) developed in 1973 at the University of Missouri-Kansas (USA) to respond to a change in student demographics and a sudden rise in student attrition (Arendale 2002). The SI initiative was adopted in South Africa on the national level in the year 1990 and at UKZN in the year 2008. The SI initiative aimed at providing academic support to undergraduate students with a hope of improving the pass rates (Bengesai 2011). However, the programme failed to attract students and Bengesai (2011) reported a low participation rate of 2% of students who attended most of the SI sessions and 16% of students who regularly attended the SI sessions. Similar challenges were also noted in the School of Life Sciences. Senior students (in their 3rd year to PhD level) were employed to facilitate 45 minutes SI tutorial sessions for first year biology students. However, the challenge was that students who needed this support did not attend as expected. Despite the claim that SI can create a learning space (Bengesai 2011; Paideya 2011) and although it was intended to help students improving their pass rate, it obviously was not attractive for the South African students in need of this support.

Learning from previous learning experiences, in 2010 a group of postgraduate students (including one of the authors) formed a study group as efficient means of studying initiated extra-tutorials for level one biology (Biology 101 and Biology 102) in the School of Biological and Conservation Sciences (now the School of Life Sciences) at the Pietermaritzburg campus of the UKZN. The main goal was to encourage and motivate students to learn from and teach each other. This was in line with Freire’s idea that ‘whoever teaches learns in the act of teaching and whoever learns teaches in the act of learning’ (Freire 1993:72). The success of the initiative led to the formation of a complex multi-layered peer support system where students learned from/taught each other using the Peer Teaching/Learning Experience Programme (PTLEP) (Hakizimana & Jürgens 2012).

Unlike many peer-led academic support systems working with small groups (such as SI) that cater for a small number of students (10–20 students) in a group, the PTLEP worked with a very large number (100–300 students)

in one venue. Since this approach is contrary to what is commonly recommended in terms of optimal group sizes for learning (see Wilkinson & Fung 2002) we were interested to find out whether attendance as well as active participation in relation to the previous academic support programme (Supplemental Instruction = SI) had improved. In addition we were interested to learn how students perceived the programme in terms of pedagogical as well as socio-psychological adjustments. In 2011, questionnaires were given to students participating in the PTLEP in order to get a feedback that would be used to improve the initiative. This article will therefore give an overview on PTLEP and the use of workshops to provide academic support to disadvantaged Black South African undergraduate students at the School of Life Sciences, University of KwaZulu-Natal (UKZN), South Africa. We highlight key features that differentiate PTLEP from other peer to peer led initiatives such as Supplemental Instructions, give a short review on theoretical ideas supporting the PTLEP initiative, and share what we have perceived as the success of PTLEP in terms of attendance, active participation as well as student perceptions.

Overview of the Peer Teaching/ Learning Experience Programme at UKZN

The PTLEP is a complex, multi-layered peer support system where students learn from/ teach each other (Hakizimana 2011). The initiative originated from a reflection on the experiences of a group of students who had formed a study group as an efficient means of studying from Access Programme to Master's level at UKZN. This strategy involves interaction between peers of the same educational level (co-peers) as well as peers of different groupings (junior and senior students) of higher education levels (near-peers) (Frey 1990; Goldschmid & Goldschmid 1976). These peers become a source of information for each other. The model system was comprised of four to five layers and was built on peer-based learning (peer cooperation) (Hakizimana & Jürgens 2011).

There were two major relationships depicted by the system: a symmetrical and an asymmetric relationship. The symmetrical relationship was based on peer collaboration that led to cooperative learning (Roscoe & Chi 2007). The symmetrical relationships as supported by the education

theorist Piaget in 1928, resulted from the co-peer system where peers were of equal abilities shared, discussed, challenged their own partial and incomplete knowledge. Their disagreements and agreements provided social and cognitive conflicts that served as a catalyst for understanding together (Roscoe & Chi 2007; Frey 1990; Goldschmid & Goldschmid 1976). There was also an asymmetrical relationships resulting in peer tutoring as well as reciprocal peer tutoring (Roscoe & Chi 2007). The asymmetrical relationships, as supported by the educational theorist Vygotsky (1978) resulted in the near-peer (peer tutoring as well as co-peer), where the more capable and knowledgeable students instructed, guided and managed the efforts of their peers in mastering the task, pushing them to the edge of their intellectual potential (Roscoe & Chi 2007; Frey 1990; Goldschmid & Goldschmid 1976).

Peer tutoring was done across three levels. The first level, reciprocal peer tutoring, was the most encouraged and involved a student who was more capable and understood the concept and several weaker fellow students. The second level of peer tutoring involved the junior facilitators, who were close in both age and educational level of the tutee and were fully aware of the concerns and frustrations of first year students. They explained concepts to students and based on their experiences elaborated on the best ways for learning concepts (Hakizimana & Jürgens 2012; 2011; Hakizimana 2011). Peer tutoring also involved senior facilitators. These are post graduate students, whose educational level was closer to the ones of the academics. These senior students spent most of their times in the lab and offices with their supervisors, shared tea during the break with lecturers and were fully aware of frustrations that academics faced in teaching first year students. In their explanations, these senior facilitators (Hakizimana & Jürgens 2012, 2011, Hakizimana 2011) elaborated on how to tackle questions, elaborated on concepts and advised students on what were the expectations of the lecturer and how to meet those expectations. Occasionally, academics participated in the academic workshop sessions, making the 5th layer of support (Hakizimana & Jürgens 2012; 2011; Hakizimana 2011).

Similarities and Differences between PTLEP and other SI-like Programmes

Supplemental Instruction (SI) was developed as an academic support model

at the University of Missouri-Kansas City (UMKC) in 1973 (Burmeister 1996) and is based on a wide range of learning theories (Topping & Ehly 2001). Outside of the US SI programmes were introduced under various names such as Peer Assisted Study Sessions (PASS), Peer Assisted Learning (PAL), and Problem-Based Learning (PBL) (Burmeister 1996; Topping & Ehly 2001; Neville 2009). The basic idea of SI is to provide regular review sessions in which students work collaboratively and with peer support of students ('SI leaders') that have been academically successful or did well in that course. Traditionally SI has been used for courses that are academically challenging or for first and second year courses where pass rates are lower than 60%. SI review session may include discussions, comparing notes, and group work to prepare for tests. SI operates within the classical educational framework of working in small groups that meet on a regular basis (e.g. once or twice per week) and that work for sessions that are normally 45 minutes to an hour. Although PTLEP has a similar conceptual framework than SI it differs in the way it operates and how it is structured. While SI and other peer to peer led initiatives normally run weekly PTLEP sessions were only offered before test and exam dates at week-ends or after hours but without limiting the duration of each session. Limiting the number of sessions increased apparently the student's perception of the value per sessions and gave it an 'event character'. As a result students decided to increase the duration of the PTLEP sessions to up to 3 hours. Another unique feature of PTLEP was that it operated with large student numbers (Table 1). This allowed for a multi-level facilitation process where students acted as facilitators most of the time in the presence of the junior and senior students and lectures whose main role was to moderate the process.

Implementation of PTLEP

The first PTLEP was facilitated by postgraduate students at the School of Life Sciences, UKZN. Since they had been employed for several years as tutors, mentors and demonstrators, they were aware of the challenges faced by first-year biology students. In 2010, when the initiative started, only senior facilitators were used. In 2011, students that had made remarkable contributions to the discussions during PTLEP sessions were recruited as junior facilitators. They organised academic workshops which were

voluntary and held mostly during weekends or after hours to ensure that students had no other commitments (Hakizimana *et al.* 2010). Each academic workshop session, students signed a register for each session attended and each student were required to come with questions. The main drivers of the sessions were the students who also provided their own questions and study material. The students had to answer the questions by discussing and explaining the concepts collaboratively. The facilitators asked students to set common goals and to share their learning resources. An important part of the sessions were discussions used to create a positive social interdependence and to promote cohesion and solidarity among students (see Ghaith 2002; Elffers, Oort & Karsten 2012).

The academic workshops of the PTLEP were held close to the tests and examination times because this time was considered to be the best for students to focus on their learning, and because students had started to read the study material to prepare for tests or examinations. Hence, students were familiar with their course contents and could be more active in discussions (Hakizimana *et al.* 2010). Students were also aware of the sections that they still found difficult and they paid particular attention to those concepts that they did not understand. Together with fellow students who understood those concepts they actively explored the concepts during three hour-long workshop sessions by discussing questions.

Contrary to other academic support programmes based on peer teaching, where the numbers of participants are limited, the success of the PTLEP depended on the availability of a large number of students. This was because the programme was built on the premise that students had common positive goals and achieving one's goal depended on the peer's achievement; hence each student was eager to see his or her fellow student doing well academically.

Another cornerstone for the PTLEP was the positive resource interdependence where each student was regarded as a resource needed by his/her peers. This was true, since students posed questions and at the same time other students provided answers to those questions. Hence, the larger the number was, the more learning resources were available (Hakizimana & Jürgens 2012; 2011). This made the PTLEP unique and the authors would describe it as *organised chaos* as it has been successful in accommodating as many as 300 students in a workshop session. Our approach of bringing

together a large number of students seems to have been counter-intuitive and we must admit that it was contrary to the previous teaching experiences of one of the authors (Andreas Jürgens) who had been a university lecturer for six years in Germany. It would be interesting to know whether such a programme would work in an European context since students in Europe might perceive working in such large groups as being unproductive. However, in our South African context a large group appears to be a motivating environment. This suggests that the socio-cultural background of learners has a strong effect on the success of an educational methodology as Vygotsky (1978) highlighted that human inquiry is embedded within culture (Glassman 2001). The *organised chaos* of the PTLEP made it possible for every student to receive individualised attention, as each student was a learner and at same time a peer tutor and these roles were sometimes interchangeable. When necessary, students worked as pairs but debated concepts at the same time with other groups. Similarly, students worked in small groups of six according to their seating arrangements. We were surprised how well students coped with the noise around them and how they were able to work constructively in larger numbers, in smaller groups, and even in pairs. As a result, students received individualised attention, and had opportunity to speak as well as listen to one another (Hakizimana & Jürgens 2012; 2011). This supports Goldschmid's (1976) idea of the potential of peer teaching to offer individualized instruction as well as supplementing traditional teaching approach such the use of lectures. Based on the fact that students can interchange roles and that both student teachers as well as student learners benefit from peer teaching cognitively and effectively, Goldschmid (1976:441) went further to imagine a campus where all students would be teachers and learners at different times hence facilitating social interactions and enhancing learning. Through organised chaos, PTLEP accommodates as many as 300 students in one venue and provides them with both social and cognitive benefits that enhance learning.

Theories Supporting the Idea of the Peer Teaching/ Learning Experience Programme

More than four decades ago, Mackenzie, Evans and Jones (1970) stated that a peer student is often the least recognised, the least used and yet the most

important of all the resources that may be available to any student (Goldschmid 1976; Goldschmid & Goldschmid 1976; Treisman 1985). This view was also held as early as the first century when the head of a leading school of oratory in Rome, after appreciating how much a younger child could learn from an older one in the same class, described a new learner as a best teacher, capable of making education more humane, practical, and profound (Wagner 1990:22). This idea was formulated into a teaching system 1 500 years later by a Moravian refugee, Amos Komensky, who advocated mass education and recognised the potential of peer teaching as a promising teaching technique that would make mass education a success (Roscoe & Chi 2007; Wagner 1990; Bowermaster 1978). In writing ‘He who teaches others, teaches himself’, Komensky explained that the process of teaching gives deeper insight into any subject taught (Roscoe & Chi 2007; Wagner 1990).

The use of student peers in the process of learning became more prominent through Dewey’s (1963) pronouncements on the social nature of learning. He pointed out that ‘the social nature of learning experienced in a community suggests that educative experiences includes opportunities to apply new learning and test one’s ideas against the experiences of others, in addition to one’s own experiences’ (Dewey 1963, cited in Schmidt 2010:132). This is true, since reflection is very important in education, as it may determine how we generate knowledge about teaching, how we develop teaching skills, how we link theory and practice and how previous experiences inform belief systems (McDonough 2006). Furthermore, it is acknowledged in education that, despite the assumptions that all students are learning in classrooms, many students do not appear to be learning what the lecturers claim to be teaching (Schmidt 2010). According to Dewey 1963 cited in Schmidt (2010:133)

... lecturers do not have abilities to control what students learn ...
lecturers can increase the likelihood that their students will have
educative experiences by knowing how to utilize the physical and
social surroundings that exist, so as to extract from them all that they
have to contribute to learning.

Based on this view, a system such as the PTLEP can help in not only rein-

forcing cognition but also in creating an enabling environment for successful learning.

Methodology

Data was collected from academic support programmes at the School of Life Sciences (Pietermaritzburg campus, UKZN). The sample population constituted multiple enrolments in level 1 biology over a four-year period from 2009 to 2012. Biology 101 (*Smaller Side of Life*) is offered in the first semester and covers topics related to scientific methods, biological molecules, cell biology and genetics. Biology 102 (*Life on Earth*) is offered in the second semester and covers topics related to the ecology and evolution of animals and plants. The number of students enrolling for these modules at UKZN has increased steadily over the years. In some years, the enrolment was higher than 500 students at Pietermaritzburg alone (see Table 1). Success or failure in level 1 biology modules has serious implications in terms of student progress, especially because these biology modules are a prerequisite for a number of modules from different schools such as Life Sciences, Environmental Sciences, Agriculture, Plant Science, Animal Sciences and Dietetics. These modules are also elective in some majors such as Agricultural Economics, Agri-business, Chemical Technology and Psychology.

As mentioned above, PTLEP was not initiated with a research question in mind or as a research project. Thus, to evaluate whether the initiative improved the attendance we compared the average number of students who attended academic support. The participation in the academic support programmes for level 1 biology students was compared for the years 2009 (SI), 2010 (PTLEP), 2011 (PTLEP) and 2012 (PTLEP) based on data obtained from the class register. In addition some sessions were recorded with a video camera to gain insights on the participation of students during the session. The videos were posted on the course facebook page so that students could later use them for revisions (Figure 1).

According to Seldin (1976) cited by Goldschmid (1978: 255) ‘opinions of those who eat the dinner should be considered if we want to know how it tastes’. Seldin (1976) supports the use of student questionnaires when evaluating a teaching and learning programme. Student questionnaires

have been one of the most widely used instruments in evaluating teaching programmes (Golschmid 1976; 1978). It has been shown that the ratings of students on what constitutes effective teaching are reliable indicators of how much students have learnt and that they also correlate with their achievements (Golschmid 1976; 1978). Although standard questionnaires are widely used we designed our own questionnaires to obtain feedback on specific and unique features of the PTLEP programme (Golschmid 1976; 1978). To receive a feedback on students' perceptions of the programme, questionnaires were designed (see Appendix 1, Table 1 and Figure 2). The students were asked whether the workshop sessions provided a good and comfortable learning atmosphere and if they could help with social and academic adjustment. Other questions asked whether the workshop sessions helped students to improve their interactions with fellow students, facilitators and lecturers. Students were also asked if the sessions were motivating, whether they had improved their study skills and whether material were relevant for passing the course. The questionnaires were given to the first 124 biology students in 2011 and completed anonymously thus ensuring confidentiality.

For assessing the degree to which the PTLEP had an impact on student performance and participating in PTLEP sessions, we examined four distinct periods in the history of the PTLEP based on pass rates. The first covered the year 2009, prior to the establishment of the programme. This period provided us with baseline data about the performance of pre-PTLEP. This was the period when only senior postgraduate students were recruited to run a 45-minute weekly time-tabled academic support session for first year biology students. In other words, this first period provides us with a historical control group against which to measure the subsequent performance of PTLEP students. The second period covers the year 2010, a period when the PTLEP was created and not financed. The facilitators worked on a voluntary basis (Hakizimana *et al.* 2010). The third period covered the year 2011, when the PTLEP was fully financed by the School of Biological and Conservation Sciences. In the first semester of this period, PTLEP workshop sessions were conducted concurrently with the normal 45 minutes weekly time-tabled sessions. The second semester of this period, the weekly time-tabled sessions were cancelled and replaced by a Facebook page. The full support of this initiative coincided with the short employment

of a PTLEP coordinator as the academic support coordinator, facilitating the inclusion of the PTLEP as part of the academic support programme for the school (Hakizimana & Jürgens 2012, 2011; Hakizimana 2011). The fourth period was in 2012 during the university reorganisation. Despite the desire of the College to retain the PTLEP initiative, the programme was closed down by the school with the idea to replace it with an SI programme. However, due to logistical constraints, SI was not implemented in 2012 and after four academic workshop sessions (33% of the 12 sessions planned for the first half of 2012) were conducted, the PTLEP was discontinued (Hakizimana & Jürgens 2012).

Statistical Analysis

The average number of students per session for the years 2009 to 2012 in the Biology 101 and Biology 102 modules is presented in Table 1. A Generalised Linear Model (GLM) was used to test whether there is any significant difference in mean number of students per session (Table 1). To test whether there was any significant difference in mean number of students attending academic sessions across the academic years, Bonferroni pairwise comparisons were used. The pass rates of biology students before, during and after the establishment of the PTLEP are also presented in Table 1.

Results

Attendance of the Academic Support Programme

In 2009, before the initiation of the PTLEP, an average of 8.6 out of 406 students attended an academic support session for Biology 101 (Table 1). After the initiation of the PTLEP, the number of students attending academic support sessions increased to more than 100 out of 525 (19%) students per session in 2010 and to more than 160 out of 551 (29%) students per session in 2011 when the PTLEP was at its peak (Table 1; Figures 1a & 1b). For Biology 101, the number of students attending the academic support programme in 2009 to 2012 was significantly different across the years ($X^2 = 1958.837$, $df = 2$, $P < 0.01$). A significantly higher number of students attended Biology 101 academic support sessions in 2011 (160.1 ± 4.2

students) followed by 2010 (107.9 ± 3.7) and 2012 (the year in which the PTLEP was not fully implemented for BIOL 101). The lowest number of students attended the academic support in 2009 (8.6 ± 0.5 students). Each year was significantly different ($P < 0.05$) except for 2010 and 2012. Similar trends were observed for Biology 102, with the highest number observed in 2011 (169.1 ± 3.9), followed by 2010 (93.8 ± 4.3), and the lowest number observed in the year 2009 (6.8 ± 0.6). In 2012 the PTLEP was not conducted for BIOL 102 (Table 1). Many students, irrespective of race, gender, place of residence and intended studies, attended and actively participated in the academic workshop sessions of the PTLEP in 2011 (Figures 1a & 1b)

Participation in Academic Workshops of the Peer Teaching/ Learning Experience Programme

In 2011, students attending the PTLEP responded to the questionnaires. In total 124 students participated in answering the questionnaire. Of these, 96% were Black, 3% White, and 1% Indian. There were 62% females and 32% males and the rest (6%) did not disclose their gender. While 56% of students who responded resided outside university campuses, the remaining 44% resided in university campuses. The majority (49%) of the students intended to study in the School of Agriculture, Earth and Environmental Sciences, 45% in the School of Life Sciences and 6% in the School of Chemistry and Physics. There was high attendance and 80% of students attended between 7 and 9 of the 12 planned workshop sessions in 2011, representing more than 75% of the total number of sessions.

Students' Perceptions of the Peer Teaching/ Learning Experience Programme

Student responses highlighted many benefits of the programme. The academic workshop sessions motivated students to learn, and the discussions were relevant and enabled collaborative learning as students were able to interact with their peers. Also, the sessions improved students' study skills, and provided a good learning atmosphere that enabled academic and social adjustment (Figure 2).

Academic Performance, Persistence and Retention

After 2009, the pass rate in Biology 101 increased from 61% to 65% in 2010. The highest pass rate (85%) was observed in 2011. In 2012, the pass rate decreased to 72%. Almost similar trends were observed for Biology 102: an increase in the pass rate from 65% in 2009 to 76% in both 2010 and 2011, and then a decrease in the pass rate from 76% to 40% in 2012 (Table 1).

Discussion

Contrary to many peer-led academic support systems working with small groups such as SI that caters for a small number of students in a group, the PTLEP worked with a very large number, and first-year biology students highlighted that this voluntary peer-support-based programme created a motivating learning environment. This motivating learning environment can be described as a force that energised, directed and sustained behaviour toward achieving academic goals and may have led to the tendencies observed among students who found the academic activities of the PTLEP meaningful, beneficial and worthwhile (see also Hancock 2004). This may well explain the increase in attendance, since the creation of the PTLEP (2010) and the active participation in the academic workshop sessions (Table 1; Figure 1). In addition, students benefitted from sharing relevant study materials and felt that they discussed questions in an entertaining and comfortable learning atmosphere that was conducive to social interaction, not only among themselves, but also among facilitators and lecturers, thus enabling both academic and social adjustment.

The PTLEP created an environment where all students were learners and teachers, hence facilitating social interaction that enhanced learning. This concurs with modern learning theory (e.g. Schmuck 1977) which stresses the role of active student involvement and feedback as well as the importance of playing alternative roles in peer cooperative learning since both the tutor and the tutee benefit from peer teaching, both cognitively and affectively. This two-way peer tutoring, where students of the same age and similar ability levels learn to be a tutor and to alternate tutor and tutee roles, has been described as reciprocal peer tutoring (Allen & Boraks 1978) and the process has been found to be superior to traditional peer tutoring. Using the

role playing theory, Allen & Boraks (1978) suggested that, taking on the role as a tutor is beneficial to students' academic growth, as it motivates students to understand a concept or skill personally before explaining it to peers. As a result, playing a tutor's role enhances cognitive development and the students' self-esteem may be boosted when they identify with the role of tutor. As this role is played interchangeably in the PTLEP, students playing the role of the tutor may have had different abilities and different ways of explaining certain concepts to each other better, making the programme most efficient (see Frey 1990; Allen & Boraks 1978).

A similar approach was used in a mathematics workshop for Black American students in the United States (Fullilove & Treisman 1990; Treisman 1985). After identifying the negative factors hindering academic and social adjustment to university life among Black American due to an observed pattern of cultural, social and academic isolation, Treisman (1985) assimilated the study habits observed in Chinese American students who formed informal study groups as a vehicle to help them to master mathematics and acquainting themselves with university life. The study group was composed of students with a shared purpose where members not only shared mathematical knowledge but also shared understanding of what is required by their professors and university. To help Black American students, Treisman (1985) initiated a study group network where students supported each other and were able to overcome the challenges of learning calculus. The study group also provided Black students with opportunities to combine their social and academic lives, hence abandoning their social isolation pattern. The programme improved the academic performance and retention of Black American students (Fullilove & Treisman 1990; Drane *et al.* 2005).

The positive feedback from students regarding the PTLEP can be explained further in line with the participation-identification model which explains how students identify themselves with the school and how students participate in the school's activities (Elffers, Oort & Karsten 2012). Furthermore, the results are also in line with the social support theory, where according to Tinto (1975; 1997) bonding between classmates seems to be a strong indicator of academic success. According to Ghaith (2002) and Ghaith, Shaaban & Harkous (2007) the availability of facilitators and peers is critical for academic achievement and psychosocial adjustment. Similarly, as

highlighted in the responses of our students, PTLEP as a form of cooperative learning enabled biology students to set common goals, to share resources, and to create a positive social interdependence that promoted cohesion and solidarity among students (Costen, Waller & Wozencroft 2013).

We want to point out that our main focus was to create a social learning space since both authors had the strong feeling, based on their own experiences in other countries, that this was an important component not offered to our students at UKZN. Therefore, an equally important measure for the success of the programme was, for us, the attendance as well as positive responses from the sample group. Prior to the implementation of the PTLEP, student participation in academic support programmes was low but it increased significantly with the implementation of the PTLEP approach (Table 1). The positive responses of students with regard to the overall contribution of the PTLEP to the learning process also seem to indicate that creating a social learning space considering the specific socio-cultural background of the students might be a key to releasing the hidden potential of students (Figure 2).

Conclusion

Retaining and graduating disadvantaged Black students, especially those in the fields of science and engineering, has been a challenge. The literature indicates that while Black students' enrolment in higher education in the science field has undoubtedly increased, poor performance, high attrition and low graduation rates result in the loss of some of the most gifted students from the sciences and the loss of future leaders of the scientific community. The high failure rate is a threat to the future of South Africa especially because the country faces special skills shortages.

The results of our study have shown that in contrast to previous academic support initiatives, there has been a steady increase in attendance and active participation in academic support programmes since the implementation of the PTLEP in the School of Life Sciences, UKZN. Students who participated in the research indicated that they had found the learning environment as motivating and felt that it facilitated the improvement of their study skills. Relevant materials for passing the course were discussed in a comfortable learning atmosphere and this was conducive

to social interaction between first-year biology students themselves, the facilitators, and the lecturers, thus enabling both academic and social adjustment.

By mobilising senior students to facilitate workshops, the PTLEP achieved strong cooperation among undergraduate and postgraduate students, academic staff, and support staff. The programme changed students' perceptions of their own role during the learning process where their own, active contribution to learning was an integral part of the learning process in first-year modules. The PTLEP incorporated peer collaboration and both same-age and cross-age peer tutoring, and these multi-layered peer interactions were particularly important in mitigating the effects of the high student-lecturer ratios. Student evaluations also show that the PTLEP offered pedagogical benefits, as it decreased competition among students and increased cooperation, motivation, self-confidence and self-esteem.

Similar to other universities, UKZN introduced academic support programmes to improve the pass rate of students. However, the literature has shown that, in most cases, these westernised initiatives have failed to attract Black students in need of such support. According to theorists on peer-led academic support, working in large groups is perceived as being unproductive. However, this study has shown that in our South African context, large groups are perceived as a motivating environment. This suggests that students' socio-cultural backgrounds have a strong influence on the success of any educational methodology. This is a unique contribution, especially since universities in South Africa are still undergoing transformation and home-grown initiatives like the PTLEP would go a long way in reducing failure rates among Black students.

Damon (1984) described peer education as the untapped potential. The positive responses of the sample group with regard to the overall contribution of the PTLEP to the learning process suggest that creating a social learning space that considers the specific socio-cultural background of Black students might be a key to releasing their hidden potential, thus helping to reduce the failure rate and the skills shortage in South Africa.

We think it is premature at this stage to speculate on the effect of PTLEP with respect to pass rates or student performance. Based on a synthesis of the data collected and responses of the participating students we recommend that a more detailed conceptual study should be conducted to

establish whether PTLEP has a measurable effect. Such a study should focus on a comparison between the different operational frameworks of SI and PTLEP because both programmes are similar with regard to their learning philosophy but not how they operate in terms of group size, learner numbers, timing and duration of sessions.

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Table 1: Number of registered students for two first-year biology modules at UKZN [BIOL 101 (Smaller Side of Life) and BIOL 102 (Life on Earth)], average number of students per workshop session, and pass-rate for PTLEP and non-PTLEP periods.

Year	Registered students		Number of students per session		Pass rate [%]	
	BIOL 101	BIOL 102	BIOL 101	BIOL 102	BIOL 101	BIOL 102
2009	406	249	6.8 ± 0.5^a	6.8 ± 0.6^a	61	65
2010	525	364	107.9 ± 3.7^b	93.8 ± 4.3^b	65	76
2011	551	363	160.1 ± 4.2^c	169.1 ± 3.9^c	85	76
2012*	427	309	124.5 ± 5.6^b	–	72	40

Different letters indicate a significant difference between years.

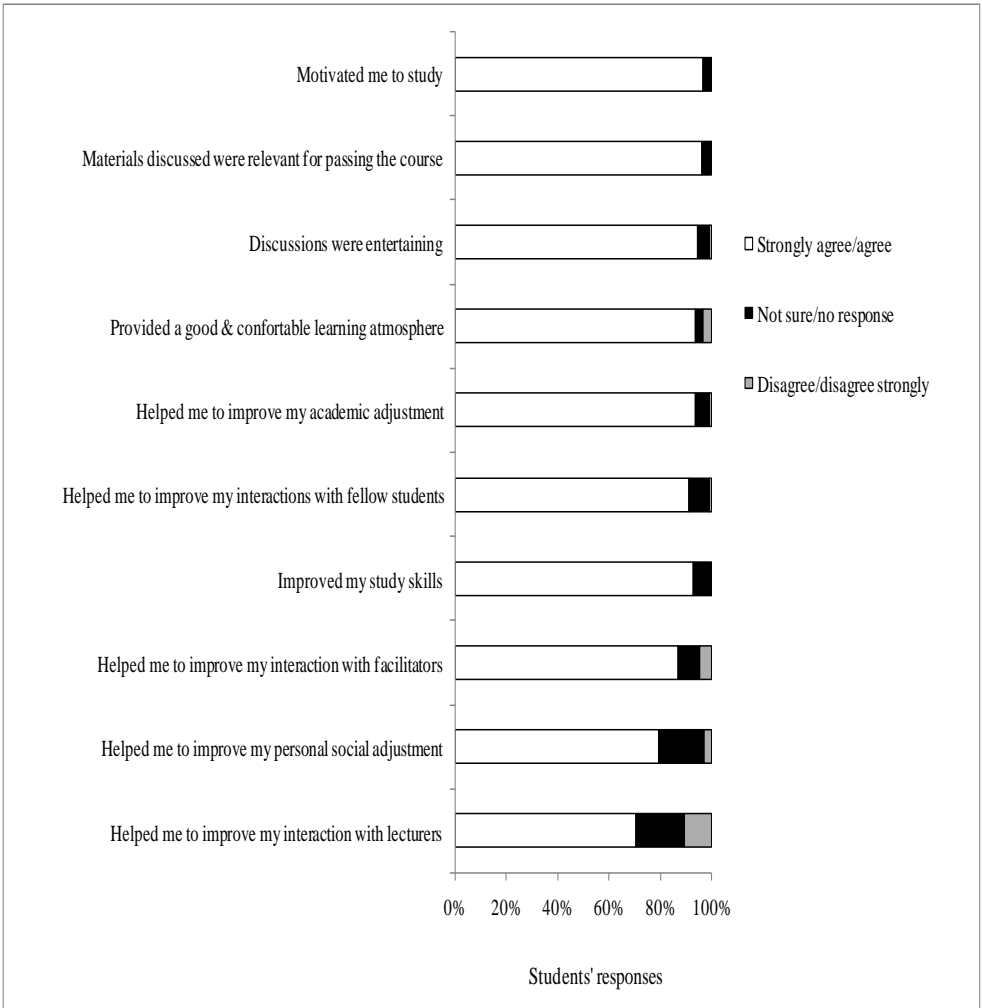
* In 2012 the PTLEP was not fully implemented for BIOL 101 and not conducted for BIOL 102.

Figure 1: Biology students actively participating in Academic workshop of the PTLEP in 2011. A = ca. 300 students on a weekend session, B = Students writing questions on the board



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Figure 2: Students' perceptions of the Peer Teaching/Learning Experience Programme (PTLEP) at UKZN, School of Life Sciences.



Appendix 1. Questionnaires

Please answer the following questions by marking a field:

I agree		x		I don't agree
---------	--	---	--	---------------

Peer Teaching/ Learning Experience Programme (PTLEP)

1. Improved my study skills

I agree				I don't agree
---------	--	--	--	---------------

2. Motivated me to study

I agree				I don't agree
---------	--	--	--	---------------

3. Helped me to improve my academic adjustment

I agree				I don't agree
---------	--	--	--	---------------

4. Helped me to improve my personal social adjustment

I agree				I don't agree
---------	--	--	--	---------------

5. Helped me to improve my interaction with lecturers

I agree				I don't agree
---------	--	--	--	---------------

6. Helped me to improve my interactions with facilitators

I agree				I don't agree
---------	--	--	--	---------------

7. Helped me to improve my interactions with fellow students

I agree				I don't agree
---------	--	--	--	---------------

8. Provided a good & comfortable learning atmosphere

I agree

I don't agree

--	--	--	--	--

9. The materials discussed in the programme were relevant for passing the course

I agree

I don't agree

--	--	--	--	--

10. The discussions were entertaining

I agree

I don't agree

--	--	--	--	--

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Teaching Sensitive Topics: Transformative Pedagogy in a Violent Society

Anthony Collins

Abstract

This article explores problems and possibilities in teaching courses that raise deep emotional issues for the participants. Two courses were developed to examine violence in South Africa, and provide social and psychological support for victims. It became clear that most of the students were themselves survivors of violence, and that the courses triggered powerful emotional reactions and shifts in self-understanding. This presented a danger that the participants would be overwhelmed by negative emotional responses to the course materials in ways that could be psychologically traumatic and also undermine the potential learning experiences offered by the courses. The challenge was thus to develop a pedagogical model which enhanced the positive potential for emotional engagement with the course materials. Here both the notions of critical pedagogy as personal transformation and empowerment, and the traditional psychotherapeutic ideas emotional containment and working through, were explored to develop a teaching practice that allowed participants to engage with the materials in a deeply personal way while maintaining a supportive environment that fostered increasing intellectual and emotional self-reflexivity.

Keywords: containment, critical pedagogy, psychotherapy, PTSD, trauma, vicarious trauma, violence

Introduction

Nosipho was a 21 year old student in her third year of university

when she explained her current crisis to me. She had been volunteering at a local community centre when an older woman approached her with a problem. This woman's son had gone missing, and she needed help tracing him. The mother had heard rumours that he had been arrested, but local police stations had no record of his arrest. While Nosipho was helping this mother, she was troubled by events at home. Her father, a police officer, was having problems at work. His colleagues had suddenly started visiting the family home late in the evening, and talking to him outside in an obviously furtive and agitated manner. As she tried to assist both her father and the mother of the missing son, things took a turn for the worse. She discovered that her father and his colleagues were implicated in the death of a prisoner in custody, and were attempting to cover it up. Finally she arrived at the ghastly realization that the missing son of the mother she was assisting had in fact been killed in custody by her own father.

Very little in my formal education and training had prepared me for the experience of having Nosipho narrate this personal experience, or for the dozens of other horrifying stories of sexual assault, intimate partner violence, suicides of friends and family, repeated exposure to violence, and experiences of traumatic loss, that students in my violence and trauma courses revealed to me. I could not only understand the feelings of powerlessness and despair that she expressed, but also felt them personally, both in relation to my increasing distress at the pervasive cruelty and suffering that was being exposed, and at my helplessness when attempting to assist my own students. How could I help Nosipho? Offer a sympathetic ear? Refer her to a few sessions at Student Counselling? These seemed woefully inadequate responses to the complexity and horror of this situation. Why had she even approached me? I was simply a lecturer in a technical area of psychology, providing students with theoretical frameworks for understanding the causes of violence and subjective responses to victimisation. I was neither a qualified psychotherapist, nor in a position to provide support services to students. It was not even clear what social or psychological support might be appropriate in this case.

This incident highlights some of the unexpected issues and challenges that emerged in the development of my psychology courses on violence and trauma¹. While the courses had been imagined as straightforward intellectual engagements with these socially significant topics, it became clear that other processes were simultaneously taking place. A wide spectrum of powerful emotional reactions started emerging in response to the courses. These ranged from students describing these courses as the most life-changing experiences of their entire education, to fears of emotional breakdown. An unexpected interaction of emotional and intellectual processes was occurring, and there was no guarantee that the outcomes would always be positive.

This article maps some personal reflections on the problems that arose in the development of those courses, and attempts to formalise a theoretical framework for understanding some of these issues. It explores the development of strategies used to enhance the positive processes taking place in the courses, while simultaneously reducing the risk of negative emotional consequences. It does not offer an overview of the subject of teaching sensitive topics, as this is available elsewhere. Much of the existing literature on teaching sensitive topics concerns the management of classroom discussions on issues such as racism, and focuses on ways of ensuring a respectful engagement with the experiences of others. At issue in these situations are questions of prejudice and the marginalisation of certain experiences. The primary risk is that those discussions could re-enact the hurtfulness of the prevailing social inequalities. Another important stream in this literature deals with socially restricted topics, and taboo issues such as how to teach safer sex practices in the context of cultural norms against the open discussion of sexuality (Lesko, Brotman, Agarwal & Quakenbush 2010;

¹ These included the third level 16 credit undergraduate course PSYC350 Understanding Violence (originally PSYC212 Psychology and Society), the Honours level 16 credit courses PSYC731 Trauma in Context (formerly PSYC317 Trauma in Context) and PSYC732 Victim Empowerment and Trauma Support, all offered in the Psychology major and Honours programmes. These courses consisted of racially diverse groups of students, somewhat skewed towards middle-class backgrounds, predominantly female, and mostly between the ages of 19 and 22.

Masinga 2009; Van Laren, Mitchell, Mudaly, Pithouse-Morgan & Singh 2013). Both those concerns did at times emerge in these courses, but they were not the primary focus. At issue, rather, was the ways in which certain ideas and theoretical frameworks could produce emotional reactions by shifting students' self-understandings and perceptions of the world, and the complexity of the lecturer's role in these situations.

Critical Pedagogy and the Transformative Power of Learning

Critical pedagogy has always stressed the transformative power of learning, but has focussed on the empowering aspects of increasing understanding of the social world, often specifically exposing systems of power and injustice in order to allow students to challenge and change them. This framework informed the creation of these courses: they were designed to offer students ways of understanding important aspects of their personal experiences and social environment, including the injustices, abuses and suffering inflicted on them by their social environment. Specifically, the courses explored the problems of violence in South Africa, including the nature and causes of violence, its psychological effects, and the interventions that might assist survivors and reduce violence throughout society. The aim was not simply to present key theories and research findings in these academic areas, but to provide the students with a coherent framework for understanding and dealing with these problems in contemporary South Africa.

The enthusiasm and challenges that soon emerged were linked to the same issue: violence and victimisation are not simply abstract social puzzles to be solved, but issues that deeply affect the lives of students and their loved ones. The threat of being attacked is a source of significant anxiety for most South Africans (CSV 2007), and the experience of being threatened, abused or assaulted produces powerful negative emotional effects. The diagnostic category of Post-Traumatic Stress Disorder (PTSD) was specifically developed to clarify the chronic debilitating psychological effects of experiencing terrifying threats of harm. It details the patterns of persistent anxiety and despair that can follow such events, identifying specific features such as extreme irritability, sudden rage, nightmares, flashbacks, social and emotional withdrawal, intense anxiety caused by any reminders of the event, and attempts to numb these painful emotions and

block out the painful memories (DSM-IV-TR 2000; Herman 1997; Van der Merwe & Gobodo-Madikizela 2008).

It is well known that South Africa is one of the most violent countries in the world (Altbeker 2007; CSVR 2007), and these courses were developed in direct response to the urgent need to produce experts who could address this social issue. At the same time, South Africa's high prevalence of violence also increased the proportion of students who had been directly affected by traumatic victimisation in comparison to most comparable institutions in the rest of the world (Kaminer & Eagle 2010). These very high levels of violence not only affect those who have personally experienced attacks, but also those who live in fear of being victimised. This is aggravated by the ways in which the media sensationalises the worst violent crimes and produces a distorted sense of risk. The concept of insidious trauma (Brown 1995) explains how members of vulnerable groups can experience chronic anticipatory fear and helplessness which is in itself traumatic, even in the absence of any personal experience of assault. Younger people are, furthermore, at higher risk of being victimized (CVR 2007), less able to protect themselves, and more vulnerable to emotional harm (Herman 1997). Thus the students in these courses are at a substantially higher risk of having already experienced, or being at immediate risk of, traumatic violence than both people in most other countries, and South Africans of other age groups.

All of these factors contribute to an ambivalent context for the courses. On the one hand, students have a deeply felt need to understand and gain practical and intellectual mastery of these problems that cause them anxiety and distress, and often feel enormous relief when learning to deal with these issues more effectively. The courses give them the ability to understand their own experiences, protect themselves, intervene in these social problems, and provide assistance to others.

On the other hand, confronting these problems is inherently risky in several ways. Firstly, becoming intellectually immersed in the range and severity of prevailing forms of violence can be emotionally overwhelming, and may leave students feeling even more vulnerable and pessimistic. Spending hours each day studying horrifying actions and hurtful experiences could create an exaggerated sense of how dangerous their social environment is, and how vulnerable they are within it. Rather than feeling empowered and

skilled by their new understandings, they could feel even more anxious and overwhelmed by the scale and horror of the challenges that need to be faced (Van der Merwe & Gobodo-Madikizela 2008).

Secondly, for the students who have already faced traumatic violence, the course materials could trigger painful memories and overwhelming emotions that they had otherwise managed to keep out of their conscious awareness. It is well known that an important aspect of post-traumatic syndromes is a heightened sensitivity to reminders of the traumatic event, a related tendency to avoid such reminders, and a risk of being overwhelmed by the traumatic recollections when these triggers do occur (Herman 1997; Sanderson 2010). Thus for students who had experienced personal assaults, or any of the other forms of victimisation explored in the course, exploring these topics could leave them flooded with anxiety and other residual emotions from their original traumatic events (Schauben & Frazier 1995).

Conscious and Unconscious Memories of Trauma Triggered by Course Content

There are significant variations in how the course contents contributed to the process of unfolding memories. The first is where the person is aware of the traumatic events behind their own reactions, and consciously tries to avoid reminders because they know how invasive and distressing their emotional recollections can be. The second, less common but considerably riskier, situation is where there is no conscious memory of the original trauma, and the course materials trigger a sudden, unexpected flood of memories and emotions. This reaction is typically more overwhelming for several reasons. The reaction is terrifying because it is unexpected, because the original experience was repressed or dissociated precisely because it was so overwhelming, and because the feelings and memories have not yet begun to be assimilated into conscious awareness where they than can be integrated and mastered (Herman 1997). This kind of reaction is often associated with early trauma which occurs at vulnerable stages of psychological development, and is thus typically associated with severe forms of child abuse (Kaminer & Eagle 2010; Terr 1995).

These reactions can be further differentiated in terms of the clarity of memories of the events. The memories can either be extremely vivid, often with a strong and specific sensory quality such as an unusually lucid visual image, sound, smell or tactile sensation. Alternatively they can be strong but confusing feelings whose origin cannot be clearly identified (Herman 1997, Sanderson 2010). For instance, when Mary was studying a section on domestic violence, she had the extremely vivid memory of the precise sound of her mother's finger breaking as her father twisted her mom's hand. She had a conscious recollection of the escalating abuse that had taken place in her home, yet this single sound coalesced all the years of violence into an emotional moment where the full horror of what was taking place became overwhelming. She was able to express and integrate the pent up fear and grief associated with this trauma, and as she increasingly developed an intellectual grasp of the causes and effects of domestic violence, and had the opportunity to explore it with others who had been through similar experiences, she increasingly moved from the emotional position of scared child to a confident and skilled professional who could assist others facing similar problems.

In another example, when Krishnee was studying child sexual abuse she started having vague but persistent feelings of anxiety, sometimes escalating into mild panic attacks and at one point burst into tears while reading the course materials. She increasingly became troubled by the idea that she might have had such an experience herself, and yet no specific memories or evidence suggested that this could have occurred. She wondered whether she might have repressed the memories of a traumatic event, or if her emotions were just empathic responses to the disturbing experiences of vulnerability and hurt that were being explored in the course. The difficulty in arriving at a clear conclusion was in itself distressing, and left her feeling anxious and uncertain. She searched the academic literature for a decisive answer, only to discover that the professionals disagreed amongst themselves about situations such as this, and that there were several competing explanations for her reactions (Hacking 1995).

Agatha, reading the same materials, had a completely different reaction. While going over a particular case study she was suddenly attacked by vivid and intense memories of childhood sexual abuse that she had not been conscious of up until that point. She could remember the specific items

in the room around her at the time, and relived fragmented aspects of the experience and her emotional reactions in precise detail. The memory was shocking and overwhelming, and she felt that it would be impossible to continue immersing herself in the course materials given her sudden emotional fragility. We discussed the situation confidentially and agreed that it was advisable to discontinue the course, but absolutely essential for her to be in personal psychotherapy until she could come to terms with her traumatic experience. The following year she returned to the course, despite having several other modules available. Later Agatha became a qualified psychotherapist herself, and described her original reactions to the course materials as a turning point in her life, where psychology shifted from being a purely academic interest to a journey of self-discovery. Because she had received appropriate support, the crisis triggered a process that clarified many of her previously troubling but incomprehensible reactions to people and situations, and gave her a new framework of lived meaning in her personal and professional life.

While Mary and Agatha developed from crisis to empowerment, there is no guarantee that all possible reactions will end well. Krishnee was left without any immediate closure, and more worryingly, Agatha's experience raises the question of what would have happened if she had not shared her difficulties and sought help. If Agatha had become socially and emotionally withdrawn, and descended into a spiral of hopelessness, she might even have completely abandoned her studies, and never come to terms with her traumatic experience. This is certainly not an acceptable outcome, and raises serious questions about the ethics of exposing students to the risks of potentially hurtful material. One reaction to this danger is simply to argue that no risk is acceptable, and unless there is complete certainty that all possible negative outcomes can be avoided, courses like this should simply not be offered at all.

This reaction is inadequate for several reasons. Even courses with completely neutral emotional content create risks. Every year some students in all disciplines are crippled by performance anxiety and self-doubt, or fall into depression and despair when their results do not match the standards that they have set for themselves. This is not evidence that education should be abolished, but that the risks should be carefully examined, effectively managed, and thoughtfully weighed against the possible benefits. In cases

where the materials may precipitate negative emotional reactions, these considerations are even more important, and the precise nature of the risks and benefits, and feasible means of managing them, warrants further analysis.

The Benefits of the Trauma and Violence Courses

Firstly, they train students to deal with some of the most pressing social problems that exist in South African society, and thus have enormous social value. Secondly, most students report that they offer an extremely important learning experience, not just in acquiring vital knowledge and skills, but in the personal transformation and empowerment they offer. Across the course evaluations, nearly all students were happy that they had taken the courses and would recommend them to other students (91%), reported that the courses had positively contributed to their study of psychology (94%) and believed that the courses had allowed them to challenge their own beliefs and assumptions, and develop deeper self-insight (97%) They described the modules as 'relevant to our everyday lives', 'very insightful' and 'the most interesting and applicable course I have ever done'. Students reported that the courses 'helped [them] to understand and make sense of both our lives and the lives of others', 'showed new realities and ways to think' and provided the opportunity to 'think critically about issues usually taken for granted'. They specifically reported on the transformative impact of the modules that 'helped on a personal level', 'had the biggest impact individually and academically', 'made me more aware', and had 'positive impact' that would 'help me take on the world' (Author 2012). Thirdly, many of the students will face the risky emotional triggers covered in the courses in later life. If they have not been prepared to deal with these issues in a symbolic and intellectual form within the structured and supported context of university courses, they are likely to face more stressful and demanding practical contexts later in life (Sommer 2008).

This is especially true of the students who continue to become professional psychotherapists. The distressing incidents and reactions that are explored in the courses are of the same kind that they will encounter in their daily work, except that in that latter situation the wellbeing of highly vulnerable clients will depend on these future professionals being able to

cope with, and respond appropriately to these crises. At that point they will have the added stress and ethical responsibility of simultaneously dealing with their own reactions and those of their clients. It is precisely because of inadequate training for these situations that professional psychology has one of the highest burnout rates of any profession in the world (Maslach Schaufeli & Leiter 2001). If the courses assist in preparing students for these future responsibilities they are certainly of enormous value, even if they produce a significant transient distress in certain cases, or alert some students to the fact that they are not in fact emotionally ready for those responsibilities. The question is less whether the courses might precipitate this distress, than whether it leads to a destructive downward spiral or initiates a process of increasing self-insight and positive transformation (Schaben & Frazier 1995; Sexton 1999).

Given the significant benefits, the real question is then how to reduce the risks and enhance the positive outcomes. Many of the proposals developed here are based on insights from psychotherapeutic models of emotional support. While useful, these models were typically developed for one-on-one encounters where the therapist offers very close and personally tailored support for each client, whereas the courses necessarily entail the simultaneous management of large numbers of students with extremely diverse experiences and reactions. It is precisely the sizes of the groups and diversity of the responses that proves challenging, as it becomes difficult to carefully monitor each individual's experience and offer different support for each particular need. This is aggravated by the external pressures on universities to increase student numbers while cutting budgets for support services. The trauma and violence courses have been faced with dramatic increases in class sizes, while the funding for qualified tutors to provide close attention and support for small groups has disappeared. Nevertheless, some simple administrative strategies have nevertheless remained viable. One tactic is to offer the modules at more advanced levels, where the students are more mature and also more likely to proceed to a career which requires the skills offered. Another important consideration is that the courses should be electives rather than compulsory core courses. The ethical principle of informed consent requires that students be fully briefed of any risks from the outset, and have the option of choosing not to participate, or withdrawing if the need arises.

A clearer conceptual articulation is necessary to understand exactly how the courses precipitate negative emotional reactions. Within the trauma studies, the problem of trigger stimuli is well known. This can be any idea, image or sensation that elicits a flood of negative emotion (Herman 1997; Wilson 2006). It is typically some specific reminder of a prior traumatic experience. Thus a student who has grown up with domestic violence might feel extremely distressed when studying this problem, as it recalls painful memories and evokes unresolved emotions. These trigger reactions primarily affect individuals who have previously had a similar experience, but have never had the opportunity to work through and integrate their distressing emotional responses. One advantage of this situation is that the trauma survivor will typically already be aware of their own triggers and have strategies for avoiding or managing them. This is why it is essential to brief students in advance of the issues covered in the courses, and to alert them to the possible triggers. As indicated earlier in the example of Agatha, however, this is more difficult when the person previously had no conscious memory of the trauma, and suddenly finds themselves overwhelmed by totally unexpected reactions.

These emotional triggers can be understood within the broad psychological concept of transference. Within psychotherapy, transference refers to the way in which a client's emotional predisposition and prior experiences shape how they experience the therapy. In the narrowest sense, it is taken to refer the ways in which the relationship with the therapist replays the client's earliest and most significant developmental relationships. Understanding the processes emerging in the relationship with the therapist thus becomes a way of developing insight into the client's formative emotional experiences. In the broadest sense, transference can refer to the way in which reactions of any current situation can be shaped by the personal meanings and feelings which the person brings to that experience as a result their personal background (Dalenberg 2000; Doukessa & Mitchell 2003). This highlights the need to pay attention to the specific reactions that individual students may have to the course materials. Ideas that are simply intellectually interesting to most students may be overwhelmingly distressing for specific individuals for whom those ideas invoke a personal traumatic meaning. Further than this, students may transfer emotions and emotional needs onto the course or the person of the lecturer. They may express the rage they were

never previously allowed to articulate towards a perpetrator, or feel a desperate need to be nurtured and protected in a way that was not provided during some previous time of distress (Herman 1997; Wilson 2006).

For the lecturer who imagines that their only role is to offer intellectual guidance, the sudden emergence of these emotions can be confusing, disruptive and distressing. While the institutional structure of the lecturer-student relationship places restraints on the expression of aggression and hostility, it actively encourages idealisation, allowing the lecturer to be imagined as an all-knowing authority figure and all-powerful caregiver. In reality the lecturer can provide little more than intellectual guidance and referral to expert care where it is required. Being the object of this idealising fantasy can be gratifying and seductive, allowing the lecturer to feel valued and appreciated. At the same time it can be highly stressful, creating a desire to help students in distress, only to foreground that inadequacy of the lecturer's skills and the limitations of the institutional framework in meeting the students' emotional needs.

Another cluster of processes that are well known in psychology are the issues of burnout, compassion fatigue and vicarious traumatisation. These refer to reactions in dealing with emotionally demanding material, even in cases where it has no particular traumatic significance for the individual (Lerias & Byrne 2003). Burnout is often used as a generic term for the negative outcomes of any highly demanding and stressful situation (Maslach Schaufeli & Leiter 2001), and here it is relevant to situations where the pressures of academic performance are made unmanageable by the addition of another layer of emotional demands. Where students are already feeling chronically stressed by the intellectual requirements of university, having to simultaneously deal with emotionally complex and demanding issues in their academic work can be the final straw that pushes them to a point of exhaustion.

Compassion fatigue (Figley 2002) occurs mainly amongst caregivers whose work entails systematic exposure to the suffering of others. They are at risk of empathically sharing this distress to a point where it becomes overwhelming. It not only undermines their personal wellbeing but also impairs their ability to continue to identify with, and care for, those in distress. Vicarious trauma extends this concept to highlight the ways in which those who work closely with survivors of traumatic experiences can

themselves come to experience a kind of traumatisation. In other words, the distressing events and emotions experienced by the clients increasingly affects the caregivers to the point where they also begin to experience anxiety attacks, helplessness, despair, nightmares, flashbacks, emotional and social withdrawal, and the other features associated with primary traumatic stress (Dalenburg 2000; Sanderson 2010; Sommer 2008).

While the violence and trauma courses do not entail students directly providing formal care for distressed individuals, they do focus on accounts of victimisation and distress. In the same way that a therapist listens to the disclosures of a client, students read case studies and imaginatively empathise with the experiences that are explained. Ironically, the therapist may be in a less psychologically vulnerable position, because they can at least intervene and provide assistance. They can identify with the clients vulnerability, but master it by being part of the solution. The empathic student feels the negative emotions but remains powerless, both because they do not yet have the skills to solve these problems, and because there is no client present to help. One of the primary emotional rewards of crisis support work, namely being able to actually help people in distress, is denied.

Traumatic Experiences and Intellectual Development

While these notions of compassion fatigue and vicarious trauma explain the emotional contagion that affects people working in this field of violence and trauma, another equally important but less clearly theorised aspect of this work is the intellectual changes that they produce. Janoff-Bulman (1995) offers a framework for understanding the cognitive effects of traumatic experiences. She shows how they can shatter several underlying cognitive assumptions: that people are reliable and benign, that the world is reasonably safe, and that we are able to protect ourselves. The loss of these assumptions leaves people feeling isolated, vulnerable and anxious. In this model the initial terrifying experience produces changes in meaning that in turn produces lingering negative emotional effects.

The violence and trauma courses raise the question of how this relationship between ideas and emotions can also work in the other direction. An intellectual exploration of the many shocking forms of brutality that people are capable of, the pervasive patterns of victimisation that exist in our

society, and the harmful effects of these on individuals, can draw students into a more negative understanding of their social world. This can undermine their underlying assumptions of the trustworthiness of others and their own taken-for-granted sense of relative safety. These changes can in turn produce feelings of helplessness, anxiety and despair. The formal theoretical analysis of social and psychological processes offered in the courses can thus precipitate changes in personal meaning and shifts in subjective emotional state. This is precisely what had not been anticipated in the initial development of the courses. I had imagined the courses purely as exercises in intellectual development which, if they had any personal emotional impact at all, would be experienced as personally empowering because of the increasing understanding they offered.

Psychotherapeutic models² not only help us to understand some of the possible negative impacts of these academic courses, they also suggest guidelines for enhancing safety, offering support, and facilitating positive transformation. They show how, in the face of overwhelming negative experiences, emotional defence mechanisms are initially protective but later become dysfunctional, either by breaking down in times of crisis or producing ongoing destructive reactions. Thus a person who has been assaulted may avoid all recollection of the upsetting event, only to find themselves having seemingly unrelated nightmares and panic attacks, or suddenly exploding into rage during minor interpersonal conflicts. Or they might protect themselves by becoming socially withdrawn, only to lose the pleasures and support that come from close relationships (Herman 1997; William & Clemens 2012). Here the psychotherapeutic process seeks to offer a safe and supportive environment where, rather than being avoided, these distressing emotions can be safely expressed, understood and integrated into everyday awareness. Through this process these emotions lose their ability to disrupt and overwhelm the individual, thus allowing for the emergence of greater autonomy and wellbeing.

² This article cannot even begin to sketch the extremely diverse range of highly developed psychotherapeutic models that exist within the field of psychology. Instead it offers no more than a grossly oversimplified caricature of a loosely psychodynamic model which is nevertheless useful in terms of articulating an explanatory framework for this specific context.

A Therapeutic Pedagogy?

Could any aspects of the processes of autonomy and wellbeing be introduced into the teaching environment? One important guideline is that while the therapeutic client should be encouraged to explore difficult material, this process must unfold at a pace appropriate to the individual, rather than being forced on them in an intrusive and threatening manner. While it is possible to carefully construct academic courses so that they move from less to gradually more emotionally challenging material, this cannot easily be tailored to individual needs given that students can experience widely differing personal responses to the same issues. General theoretical discussions can be offered before moving to more specific issues, but there is no predicting whether a particular student will be more distressed by a discussion of hijacking rather than a case study of child abuse (Sanderson 2010).

An important feature of most trauma therapies is the process of psycho-education. This entails explaining the typical reactions to an experience, so that that client can discover that their own reactions are both normal and comprehensible. While the survivor of a traumatic experience may experience their reactions as even more distressing because they seem crazy and incoherent, psycho-education assures the client that their reactions are not only understandable but in fact already understood by others. This is easy enough to introduce into studies of distressing materials, and is in fact an essential part of any course in trauma studies. In the case of the Understanding Violence course, students were introduced to the typical ways in which people react to reports of violence, ranging from deliberate avoidance of the topic to feeling shocked, overwhelmed, afraid, and vulnerable. This gave them a framework for monitoring their own reactions, and for realising that these were normal, predictable and coherent responses that were already well understood, and thus need not be experienced as chaotic or terrifying.

Related to this is the therapeutic process of learning to recognise one's own reactions and develop increasing self-insight (Herman 1997; Sanderson 2010). In the courses, this meant moving away from an exclusive focus on teaching the prescribed materials and substantially reorienting the classes towards participatory discussion. Students were increasingly offered opportunities to identify and explain their own emotional reactions to the

course materials, rather than just articulating their intellectual grasp of the material. An initial difficulty in this process is that it posed a fundamentally new type of question that was bewildering to many students. Not only was the idea of talking about personal feelings in the social and intellectual context of an academic lecture totally unexpected, but it became clear than many students had never had the opportunity to engage in this type of self-reflection at all. Despite the familiarity of Oprah-style talk show disclosure, many individuals not only felt restricted by significant taboos against this type of personal discussion, but had in fact never been in a situation that allowed or encouraged emotional introspection at all.

Seeing the lecturer talk about his own reactions, and having more outspoken classmates begin to articulate their experiences, both gave permission and provided a model for this kind of self-exploration (Dalenberg 2000). The classes quickly produced a social culture in which these questions were normal and familiar, not only enabling students to understanding their reactions to the specific course materials, but to increasingly develop the skill of emotional self-insight and the confidence to express this to others. This is itself a highly significant skill to facilitate in any person, but even more valuable to those progressing toward a career in Psychology. The modules were thus restructured to make discussion of personal reactions to emotionally challenging materials a core aspect of every lecture.

I began to open every lecture by asking the class what feelings the current readings had evoked in them. This precipitated a process that remained remarkably regular across different classes. Initially the students' responses always described the intellectual content of the work. As I repeatedly pointed out that these were all answers to a different question, the classes went into a significant phase of bewilderment. Then suddenly a flood of responses and enthusiastic debate erupted as the students re-oriented themselves to this new type of question which solicited a kind of engagement entirely different to their previous academic experiences. From that point, encouraging participation and reflection was not a problem. Rather the issue actually shifted to one of managing the vigorous and often unbounded debates.

Here the psychotherapeutic model is again useful through the concept of containment (Sanderson 2010; Wilson 2006). In therapy, the aim is not simply to allow the client to express their emotions, but to do this in an

environment which allows the feeling of those emotions to be unthreatening. It is precisely because the emotion that was previously overwhelming can now be expressed in a situation where it can be accepted and understood by another person who neither withdraws in fear nor retaliates in anger that the emotion loses its disruptive power and can thus be tolerated and integrated into the self. In exactly the same way, the student's disclosures needed to be met with understanding and acceptance rather than rejecting reactions that silence and isolate them. The real risk is that the lecturer or other students' prejudices, moralism and emotional anxiety will trigger exactly such a negative response, and that this will have a deeply damaging effect both on the individual student as well as on the class dynamic of trust and mutual support.

One significant concern is that students can express sentiments that are hurtful to their classmates. A special problem exists in areas of prejudice, where one student feels that their viewpoint is reasonable, when it in fact is violent to someone else. Interestingly, this almost never happened around issues of race, because of a consensus that racism was undesirable, but was common in discussions of gender and sexual orientation, as both sexism and homophobia were frequently seen as normal and socially acceptable. In these situations it was possible to critically analyse the social origin and psychological function of these destructive ideas, while paying close attention to their harmful effects. A useful technique was to immediately ask 'does anyone feel hurt by that statement?', and allow the victims to participate in challenging the destructive ideas. This question both gave them increasing confidence to protect themselves and helped the class to negotiate a critical social consensus that challenged prevailing prejudices.

Unlike most of the examples in the existing literature, these courses focussed on victimisation rather than prejudice, and thus raised a very specific problem. One common way in which people deal with their own emotional vulnerability is not only to deny it in themselves, but to attack it in others. This is unfortunately not only a common technique used by parents to suppress distressing emotions in their children, but at the core of much school bullying. Students who have been socialised into this emotional defence may feel tempted to humiliate classmates who share their own sensitive emotions. It is essential to manage these attacks by avoiding engaging in a counter-attack to punish this behaviour, and instead to both

show why that behaviour is harmful and thus unacceptable in this social context, and also explain that it too is an emotional defence. By articulating and supporting the emotional anxiety underneath the aggression, both the perpetrator and victim can feel understood, and there is no need to for the conflict to escalate. Instead, this analysis facilitates a process by which both the perpetrator and the victim can recognise the common vulnerability underneath both the aggression and the victimisation respectively.

Interestingly, one of the very important group dynamics that emerged was mutual support and protection. A bond between vulnerable students was quickly established, and they began to support each other whenever any of them were subject to hostility. For instance, once gender-based violence had been de-normalised through a critical analysis, the women in the class formed a strong informal support network that then challenged any further articulations of sexism. This is highly significant, not only because it protected those in the class, but because forming this kind of critical social network is exactly what has to occur if the normalised forms of violence in society are to be challenged and dismantled. By watching the lecturer simultaneously provide emotional containment for the disclosures of vulnerability, and offer an intellectual framework for challenging the dominant forms of victimisation, they quickly became empowered to do those things for themselves, and for each other. This is exactly the kind of transformative pedagogy that the courses had aspired to.

Reconciling Irreconcilable Traumas

As with all things, the practice is more complex than the theory. In one class on violence a young white woman tearfully shared how her brother had been shot dead by hijackers. She concluded her moving account with the question ‘how can I ever trust a Black person again?’ While this might be read as a serious critical attempt to challenge the way in which her personal trauma and racialising cultural background had become intertwined, it was also clear that for her predominantly Black classmates, this was a scandalous reiteration of the all too familiar and offensive racist categorisation of all Black South Africans as potentially violent criminals. The immediate challenge was to allow the social space of the class to contain and respect two seeming incompatible traumas: her inconsolable grief, and the profound

hurt that her final question caused to many of her peers³.

In this situation, it was possible to acknowledge her loss while providing a theoretical critique of the way in which states of vulnerability often trigger ostensibly protective, but socially dysfunctional, generalisations about the external world. It was also possible to frame the hurt she had naively caused her classmates in terms of the ongoing structural violence of inequality and prejudice, and their anger in terms of the persistent patterns of exclusion and denigration which affected their lives. Even in her grief, this student immediately understood and openly regretted the harm her statement caused, while her classmates embraced her grief, clearly articulating how deeply they shared her experiences of victimisation and loss in their own lives. The moment of social polarization was thus transformed into a new social solidarity around the shared experience of vulnerability by critically dismantling the antagonistic defences that the students' respective traumas had mobilised, and identifying and expressing the underlying negative emotions.

One group of students took this even further, relating a recent event in which they had been walking in a part of town notorious for drug dealing and crime. They had witnessed a crime in which the only three Whites on the street had mugged a passing Black businessman, a scene which so profoundly inverted the prevailing racist discourses that all the bystanders simply burst out laughing. While the class joined into the ostensible hilarity of this incident, it was possible to show beneath the generous embrace of this story was a real collective anxiety about both racism and criminal victimisation, and that the humour was a way of simultaneously expressing and defusing these fears. This incident showed not only how effective a little bit of critical analysis can be in defusing social and psychological tensions, but how willing the students were to actively participate in collectively caring for each other, even in the face of fear and hurt.

³ Another essential dynamic was my own anxiety about being a White South African in this situation. This includes both the treacherous minefield of being a White person claiming authority in matters of race, and perhaps my own unconscious desire to prematurely steer this encounter towards reconciliation rather than allowing the full depth of the conflict to unfold autonomously.

This, and so many similar incidents, have repeatedly demonstrated how teaching sensitive topics provides unique opportunities: to develop new methods of pedagogical engagement, to challenge social taboos and injustices, and to facilitate personal and social transformation. While it requires particularly thoughtful attention to all the things that could go wrong, it deserves an equally clear appreciation of the things that can, and do, go right.

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Is Team Teaching Learner-friendly or Teacher-centred? Mode of Delivery in a Postgraduate Module

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Abstract

This article reports on the mode of delivery utilized in a postgraduate (honours) module at a South African higher education institution. In 2011 the authors taught a module individually to their respective groups. In 2012 they used a team teaching approach for some lectures and in other lectures they taught their individual groups. Initial conversations with students indicated a sense of dissatisfaction with the team teaching approach. Using module evaluations and a focus group discussion with selected postgraduate students, this article answers the question: what are postgraduate student's experiences of the mode of delivery used in the team teaching approach? Findings indicate poor links between individual lecturers resulting in students' inability to connect one topic to another. However, a slight improvement in performance was noted when results were compared with the previous year. The argument is posited that a variation in the mode of delivery created a new discourse of transformation that challenges established notions of teaching which arguably promote learner passivity and are teacher-centred. A tension between transformative teaching and students' interest (performance) seems to be unresolved which raises the question whether team-teaching as a transformative approach is learner-friendly. Given the post-apartheid curriculum shift towards critical engagement and student participation, the dominant mode of delivery at higher education institutions is in need of transformation to increase student involvement in learning.

Keywords: Disruptive learning, mode of delivery, team teaching
transformative teaching

Introduction

Conventional expectations for successful teaching and learning calls for a well-planned and organized pedagogical approach. It is generally accepted that good teaching requires that lecturers should be unambiguous and clear in their teaching with successful student learning manifested in the final examination results. This linear model of ‘in-put’ and ‘out-put’ teaching is constantly being challenged often at the risk of uncertain learner outcomes and student anxiety. This article argues that transformational teaching is complex and potentially destabilising to student learning. However, students’ experiences and lecturers’ reflective actions and the emergence of a new discourse characterised by tensions between transformational teaching and students’ learning outcomes, reveals that teaching can also be destabilised. Given the new pedagogical framework which requires teaching to be learner-centred, we demonstrate that lecturers can transform students’ experiences of discomfort and disorientation into meaningful learning moments. This article argues that students’ experiences of team teaching were disorientating and confusing at times, and that lecturers’ were often unaware that transformative teaching was sometimes not student-friendly. It seems that there is a need to close the debilitating gap between transformational teaching intentions and student learning outcome within a context of interactive pedagogical engagements.

The context of this article is a Bachelor of Education Honours (B.Ed Hons) module which is compulsory to obtain the degree. In 2012 the mode of delivery differed from that employed in 2011. In 2012 the mode of delivery was that of smaller groups and team teaching. Students were often confused and complained about the effects of this mode of delivery on their learning experiences. In the context of this study an interesting observation was made when comparing the results of the two years. Students’ performance arguably improved when the multiple mode of delivery was employed. What can be deduced from this result is that for students’ there may not be any significant risks in the adoption of alternative methods of teaching which may be accompanied by anxiety and disorientating learning experiences. In fact the

extant literature about team teaching points towards both advantages and disadvantages for teaching and learning in higher education institutions.

In view of these contradictory findings, this article argues that although the team teaching approach adopted in 2012 was welcomed by lecturers, it resulted in a mode of delivery that appeared to be confusing, disorganised and disruptive to students' learning but, paradoxically, produced other benefits such as increased student participation, exposure to multiple teaching approaches, lecturer collaboration and a slight improvement in students' performance when compared to the previous year. Further, we argue that by identifying opportunities for intervention, meaningful learning situations could be created that have the potential to transform the experiences of students and lecturers into meaningful teaching and learning occasions. While transformative teaching is mainly determined by lecturers' concerns to promote active student participation, students' negative experiences are mostly ignored as opportunities for positive learning and transformative teaching. A closer identification and management of moments of tension as potential learning moments may increase the usefulness of transformative teaching methods. A more detailed discussion of transformative learning is provided in the literature section of this article.

The following section will briefly review the literature relevant to transformation approaches to team teaching as well as a conceptual framework which will be used to guide the data analysis to argue that the disruption of established learning patterns of students can potentially present opportunities for transformational teaching and learning. The literature review will be followed by a brief methodological note, data presentation, a discussion on the findings and a conclusion.

Literature Review

We begin by asking the question, what is team teaching, followed by some studies describing the advantages and disadvantages of team teaching for lecturers and students. A conceptual framework: 'disoriented experiences' and 'frames of reference' taken from Mezirow's Transformative Learning Theory (1990), Johnstone and Letton's (1991) concept 'signals and noises' as emerging moments of new learning and Amin and Ramrathan's (2009)

notion of ‘learning and disruptive practices’ emerged from the literature that employed the paradigm that learning is a complex human experience and occur in unexpected, paradoxical and contradictory experiences. This theoretical framework challenges dominant linear conceptions of learning and evolved out of interpretivism towards poststructuralist approaches which recognize the changing nature of context and the potential learning moments hidden in the meaning of interactional teaching and learning.

A variety of terms are used for team teaching: team teaching, collaborative teaching and co-teaching. Davis (1995) asserts that team teaching consists of two or more lecturers who collaborate in both the planning and delivery of a module. Bess (2000) concurs by describing team teaching as a process in which all teachers in the team are equally involved and responsible for teaching and assessment. While the terms used for team teaching may vary in the literature, it is acknowledged that,

There’s messiness to team teaching that presents some of its bigger challenges, but also some of its most promising opportunities. Team teaching moves beyond the familiar and predictable and creates an environment of uncertainty, dialogue, and discovery. And that is what learning is all about (Plank 2011: 2 - 3).

In view of the ‘messiness’ and ‘uncertainty’ that accompany team teaching, scholars such as Robinson and Schaible (1995) and Letterman and Dugan (2004) caution that the success of team teaching depends on the team thinking thoroughly through the content that needs to be taught, and allowing for sufficient time to prepare. The relationship between the teaching processes which involve content and pedagogy and student learning which involves participation and feedback becomes crucial in the context of team teaching. Team teaching provides different contexts of pedagogy and to this end, Friend, Reising and Cook (1993) have suggested five models of team teaching.

The first model of team teaching is referred to as the ‘lead and support’ model where an unequal relationship between a senior and junior member of staff exists. Station teaching is the second model which involves teachers working with different groups in one class and students moving to the second teacher at a later stage of the lesson. The third model is called

parallel teaching since while this model involves joint planning, the teaching occurs in separate groups. The model in which one teacher pre-teaches or supplements the learning in a small group of students while the second teacher works with the larger or main group of students is referred to as alternative teaching. The fifth model is called team teaching as there is an equal relationship among teachers who share planning and instruction. In this study with the B Ed (Hons) students a variation of the parallel teaching model of team teaching was utilised. Although lecturers had weekly planning meetings, the planning sessions did not deal constructively with student experiences. Time was spent on sharing teaching materials and students' assessment tasks. Planning sessions were concerned with lecturers' issues.

The extant literature on team teaching points to its advantages and disadvantages. Yanamandram and Noble (2006) list the following advantages of team teaching from the teachers point of view: it creates time for teachers to engage in other academic activities; it creates opportunities for teachers to develop by exchanging ideas and knowledge with other team teachers; it has the potential to steer teachers away from teaching as though students are passive recipients of knowledge. Davis (1995), Goetz (2000) and Letterman and Dugan (2000) claim that team teaching helps to create a supportive environment and overcome the isolation created by more traditional forms of teaching. The disadvantage of the team teaching approach is that it is difficult to organise (Davis 1995) and it is more time consuming to be a team member than to teach alone (Letterman & Dugan 2004).

The team teaching approach has certain potential advantages for the student. Buckley (2000) avers that team teaching creates the opportunity for students to be taught by experts in a specific area of the module. Team teaching also increases the potential for the team to cater for the various learning styles of the students (Goetz 2000; Helms, Alvis & Willis 2005). Robinson and Schaible (1995: 59) see benefits for both teaching and learning when they state,

If we preach collaboration but practice in isolation ... students get a confused message. Through learning to 'walk the talk' we can reap the double advantage of improving our teaching as well as students learning.

But team teaching is also seen as a challenge by students. According to Kulynych (1998) such students have greater confidence in one teacher in the classroom which is well organised and operates smoothly. McDaniel and Colarulli (1997:34) state that students 'find it unsettling to be confronted with alternative interpretations'. They go on to explain that students, 'struggle with ambiguity of faculty conversations when no 'right answers' or one truth is communicated which they can write in their notes (34).

Much of what has been said thus far regarding the potential benefits of team teaching is supported by data from several studies. In a study conducted in the United States of America, Hinton and Downing (1998) found that 94% of the students indicated that they prefer team teaching over the traditional teaching method. In another study conducted by Partridge and Hallam (2006) at an Australian university, students identified the following features of team teaching which they liked the best: having access to two different perspectives on the course content; greater flexibility in obtaining support and asking questions; and the enthusiasm generated by the teaching approach. In the same study, however, students also listed the following aspects of team teaching which they liked least: uncertainty as to who to speak with first regarding a question or problem; inconsistency in instruction and information provided by the different teachers; and being assessed by two teachers. Yanamandram and Noble's (2006) study showed that first year marketing students at the University of Wollongong in Australia were encouraged by the variation in teaching styles to attend lectures and felt that the variation in teaching style improved the learning environment. However, there were also students in this study who indicated that there were too many variations in teaching styles and that this was detrimental to their learning environment.

Team teaching was also found to have positive effects on personal health (Southers, Carew & Carew 2002; Blanchad, Bowles, Carew & Carew 2001). Stewart (2005) and Yuan (2009) assert that team teaching promotes interdisciplinary contact between academics. In a study conducted in Malaysia in English as Foreign Language course, 60% of the students said that they prefer the team teaching style. In the same study only 40% of the students did not enjoy seeing a new lecturer each week. The data in the above-mentioned study also showed that 88% of the students agreed that team teaching enabled them to learn from experts on the topic.

According to the literature on team teaching, there are possible links between team teaching and student performance. Johnson, Johnson and Smith (2000) declare that students who were taught through collaborative means showed higher achievement levels, greater retention rates and improved interpersonal skills. In a study conducted by Flowers, Mertens and Mulhall (2000) it was found that team teaching had a positive impact on student achievement. However, the link between team teaching and student performance is neither obvious, nor is it guaranteed, as is evident from the University of Wollongong study (Yanamandram & Noble 2006). In this study students indicated that there were, amongst other points, a poor link of individual lectures, resulting in students' inability to see the continuity between lectures.

The main lessons drawn from the literature are that team teaching presents multiple opportunities for transforming teaching and learning with advantages and disadvantages for both students and lecturers. Team teaching can be 'messy' and may result in uncertain outcomes which may cause confusion as to what may be the 'correct' answer to questions. From the lecturers' perspective, team-teaching creates a sense of common purpose and collaboration which assures mutual support for each other. For the student team teaching offers opportunities for diverse learning and interdisciplinary knowledge. As for the disadvantages, for the lecturers it demands more time to organise and plan while for the students team teaching may be experienced as confusion and ambiguous experiences when they are exposed to different teaching styles and approaches.

While the aforementioned sections presented a discussion on the team teaching approach as a mode of delivery, this study is also foregrounded by a theory of transformative learning. We propose a conceptual framework composed from various learning theories as an appropriate guide to interpret the data that we generated to answer the critical research question: what were students' experiences of the team teaching mode of delivery that was adopted during the 2012 Bachelor of Education (B.Ed) honours course?

Mezirow (1990) identified three important components of learning when students are challenged in their studies. These components have been categorised and identified as part of Transformative Learning Theory. Providing student support needs to consider these three components which

are part of any learning process: disorienting dilemmas, critical reflection and the identification of psychic assumptions. Under these three conditions the student's learning can be transformed by revisiting and interacting with his or her existing frames of reference. Transformation process happens if the student faces new and challenging situations. Students may also learn through the creation of new frames of reference that may lead to the transformation of existing habits or thinking. Mezirow (1991) reveals that students' actions or performances (construction of knowledge) are determined by the way they interpret or explain what is happening to them during the time of their interaction with their environment (disorienting dilemma). This suggest that if modes of delivery are creating disorienting dilemmas students have no choice but to transform in order to learn or pass their modules or courses. Students also experience new emotions which are associated with the learning process. According to Coll, Dalgety and Salter (2002) when students enrolled for a course they had certain structured expectations which were based on their previous experiences. They are generally motivated by a more structured organization of learning material and traditional lecture presentations. If their experiences differ from what they are used to, they look for other ways of accessing the course in order to fulfil its requirements.

Another way to view transformative learning theory is through the lens of disruptive learning experiences. A study conducted by Amin and Ramrathan (2009) reveals that positive teaching and learning can also occur when students thought patterns and expectations are disrupted, destabilised and reconstructed. This suggests that students realize that in order to pass their courses they need to learn to select what is useful to them from what is less useful. According to Johnstone and Letton (1991), any learning process has two components what they labelled as 'signals' and 'noises'. As a result the selection of significant aspects of the learning process (signal) from lesser important aspects (noise) is crucial because one's memory working area is relatively small to accommodate everything. Therefore, students learn either by assimilating or accommodating what they are learning (Mezirow 1991). Assimilation takes place when a student uses existing frames of reference to process whatever new information is given to him / her in the learning process (familiar information). Accommodation takes place when a student does not have relevant frames of reference to process what is given to

him or her or is forced to transform his or her frames to accommodate new learning. According to Johnstone and Letton (1991), students can learn if they can select the important signals from noises through either the processes of assimilation or accommodation.

The above literature explicates the complex terrain of teaching and learning and the challenges involved when employing different modes of teaching to achieve transformational objectives. Given the fluidity in teaching and learning contexts in the higher education sector, opportunities for new learning patterns become a common feature in the teaching and learning domain. It would be in the interest of the higher education teachers to recognise this innovative feature of their workplace environment and to engage with it in a critical way. In this article the experiences of students become the focus of analysis to illuminate the learning processes that accompanied the use of a team teaching approach as a means to promote transformational teaching.

Methodology

This study was undertaken to investigate the experiences of students who attended a specific compulsory module as part of their postgraduate honours degree qualification. The critical research question that provided the impetus for the research methodology was: *what are students' experiences of the mode of delivery used in a postgraduate (honours) module?* Given the post-apartheid context of a South African higher education institution, this question will assist in explaining the complex nature of pedagogical experiences of students and lectures pursuing meaningful transformational practices.

The study employed a qualitative case study design because experiences could potentially be dealt with descriptively and in an explorative and contextual way (Creswell 1994). In this study the focus was on describing students' experiences of their learning in a restricted environment – when team teaching is employed as a method of teaching. The case study design makes it possible to explore students' and lecturers experiences of team teaching in the context of a particular module.

According to Willis (2008), the case study method has 'experiential knowledge' at the heart of what it to be learnt:

Case study facilitates the conveying of experience of actors and the stakeholders as well as the experience with the case. It does this largely with narrative and situational descriptions of case activity, personal relationship, and group interpretation. While the case study allows for deep description and exploration of a phenomenon, one cannot generalize on the basis of an individual case (Willis 2008: 218).

A qualitative study aiming at an interpretation of a group experience of students does not seek to generate broad generalisations. However, this does not detract from the scientific nature of the study which intends making a contribution to existing knowledge in a field that is still relatively under-researched. The findings of a case study are often useful explanations which are repeatable and subjected to critique and debate which promotes a scientific understanding of the phenomenon.

In this case study the data collection methods were students' qualitative course evaluations, the focus group interview, lecturers' reflections, experiences and data of the previous year's (2011) mode of delivery. Data generation started with a random selection of forty-three module evaluation forms from students, where the students were providing critical feedback on their experiences of the mode of delivery that was used in the module. Over and above these forms, the students' examination results were also analysed. Students' evaluations of the course could be summarised in four clear themes which are stated in the next section. These themes also informed the focus group questions which provided an opportunity to deepen our understanding of the students' evaluations.

A focus group interview consisting of six students was conducted to get first hand responses of students on their experiences. The interview lasted for about two hours. The four knowledge themes that emerged from the analysis of the students' evaluation forms provided the questions for the semi-structured focus group discussion. The discussion was recorded on audio-tape and transcribed. The transcribed data were analysed and coded according to Creswell's (1994) recommendation on how to arrange units of meaning. The focus group discussion was also used as triangulation method to increase the trustworthiness of the data analysis of the evaluation forms. Lectures reflections and experiences were extracted in a critical discussion

after collecting the data from the students.

Keeping in mind Mezirow's (1990) notion of 'frame of references', Johnstone and Letton (1991) and Amin and Ramrathan's (2009) idea that disruptive practices may potentially lead to learning moments, the data were analysed to answer the research question. The findings are presented below as the outcome of an integrated analysis of the students' evaluation forms and the focus group transcriptions. Lecturers learning are integrated in the discussion and conclusion.

Findings and Discussion

The first data set that was analysed was the students' evaluation forms. In this section the main themes that emerged from the students' evaluation forms are presented. Four major themes emerged from the analysis. Only the qualitative section of students' evaluations was tabulated. Also, those evaluation forms with comments referring to the 'mode of delivery' were noted and analysed. There were 43 responses that referred to the mode of delivery. These responses were subjected to a method of content analysis and often repeated words, expressions and concepts were grouped into meaningful units that emerged as themes (Creswell 1994). The following thematic responses emerged from the data:

- Eleven students noted that confusion in the mode of delivery was their main objection.
- Fifteen students mentioned problems with the teaching methods adopted by different lecturers.
- Eight students complained about the frequent change of venues.
- Nine students expressed the view that the course appeared to be disorganized and a need for better organisation of materials.

The sense of confusion seems to emerge as a frequent experience of students during this course which is also supported by the Plank (2011) study who described team teaching as 'messy' and 'moves beyond the familiar and ...creates an environment of uncertainty'. These experiences of confusion

were unsettling for students but presented opportunities for transformative learning for lecturers. Mezirow (1990) explained this experience of confusion as one of the three categories of Transformative Learning Theory. According to Mezirow these students experienced confusion as a 'disorienting dilemma' which should be revisited by interaction with students' existing 'frames of reference' and make the connections between what they know and what are potentially new knowledge or new 'frames of reference'. The assumption here is that students come to the lecture with existing frames of knowledge which are constantly challenged and questioned by critical reflective teaching. By engaging students during the lecture in a critical reflective way, the lecturer forces them to recall their existing frames of references which can be either expanded or new frames created if they do not exist. In this way transformative learning takes place as an interface between the lecturers' presentation and the expansion of the students' frame of reference.

Students' experiences such as the course being 'disorganised' and produces 'uncertainty' also present opportunities for transformative learning which should be facilitated by lecturers' intervention and reflections with the group as a whole. According to Johnstone and Letton (1991), students' dissatisfaction, with lecturers who adopt different teaching styles can be reduced by improved pedagogy which lecturers should be aware of. In this study lecturers were not necessarily concerned about these students' experiences as potential learning moments as they were more focused on the delivery of the content. In paradoxical ways students are presented with learning opportunities which could only be enhanced if lecturers become aware of the complex nature of learning which may take place counter-intuitively and unexpectedly. What might appear as being disorganized and uncertain in the students' perspective may present opportunities for transformative teaching and learning to take place.

As much as these experiences of students' are arguably of a negative and unsettling nature, they can also be positively explained. For example, Coll, Dalgety and Slater (2002) assert that when students' expectations of a certain structure in a course are not fulfilled, they look for other ways of accessing the course in order to fulfil its requirements. In this regard, lecturers reported that their students often requested extra lessons and extra time to better understand a section of the work that was presented during

team teaching. These students used what Johnstone and Letton (1991) refer to as, ‘signals and noises’ to note potentially important knowledge in need of clarification.

The focus group discussion confirmed the notion that students’ experiences were that of confusion and disorganisation. Difficulty was experienced when lecturers explained the concept ‘paradigm’,

Because I think say for example if you came for a lecture and take a topic like paradigms, for example...another lecturer come and she will come in with her own view of paradigms...then I will have to go back and read and then you know that person will come and say something about paradigms and then I will get confused and then I will come to you and say, ‘Sir, I’m confused’...(focus group participant).

The above quotation illustrates that students take note of complex concepts and grapple with them but that they are burdened with the responsibility to grasp what they mean. While confusion may be a negative experience, it provides the potential for learning if pursued by the student and an attentive lecturer.

The changing of venues and lecturers contributed towards the confusion as students were trying to develop their own sense of understanding and meaning as the following excerpt demonstrates:

I must say I agree with him with the alternation...it is a bit of a problem because I want to view a specific class but then with the alternation, my view of this class changed and also the students, they have different views, for example, their lecturer told them ... and then in the exam people are confused about what to do...my lecturer told me this...my lecturer told them so and so...(focus group participant).

As mentioned before, these negative experiences can become transformed into positive learning if lecturers are more conscientious about the nature of transformative teaching and learning and prepare themselves better for team teaching occasions. If better prepared, lecturers would know

that they need to establish what preceded their lesson and connect the old with the new lesson to ensure continuity in understanding. A constructive approach would potentially reduce the confusion caused with the change of venues and lecturers during team-teaching sessions.

Experiences of students with educational technology during the course also emerged as moments that demonstrated confusion especially when lecturers referred students to learning sites in an erroneous and inaccurate way. Students also felt that lecturers were not properly informed about the use of the learning site which also caused confusion. One student commented that the lecturer was emphasising the learning site but the particulars were wrong. The view was expressed that lecturers were '*not prepared with the technological aspect of the module*'. This suggests that some students perceived the lecturers as 'digital immigrants' while they judged themselves as 'digital natives' (Khoza 2011). Students' experiences of educational technology could not be addressed and transformed which calls for serious attention and (re)skilling of lecturers in technological education.

In the focus group discussion diverse student experiences were expressed about the size of the class. Making sense of class sizes centres around issues of participation and learning in a community of practice. In smaller groups, participation is more likely to happen than in larger groups. Involvement in learning such as asking questions and debating differences come easier for some students than they do for others. However, some students claim that confusion is reduced in large groups because in team teaching contexts, possibilities for mix messages are increased.

With regard to their responses as to how the mode of delivery influenced their performance in the module, students expressed a sense of anxiety and trepidation due to the confusion around preparations for assignments and multiple choice tests which took place almost every week. The view was expressed that explanations from different lecturers on the 'paradigm' caused confusion in the examination as they observed that their understanding of 'paradigms' as given in the class was different to what the examiner wanted:

... yes, I would like to say there are many factors that have influenced my results, there is definitely the switch between, the fluctuation of lecturers, but there is also the mode of assessment, I

think if we could have beside the(focus group participant)

There appears to be some consistency between students' experiences of confusion due to the mode of delivery and the negative perception thereof on their performance in the module. Having argued that students disliked the confusion and apparent disorganisation of the module, a comparison of the 2011 and 2012 average percentages were looked at. The performance in the 2012 examination improved by six percentage points which may not seem significant supports a notion of slight improvement (Johnson, Johnson & Smith 2000).

The data generated in this project converged to support the emergence of at least four major knowledge themes which were discussed in the section above. These themes are manifestations of students' experiences of the team-teaching mode of delivery that was adopted as a case of transformative teaching and learning. While the argument was made that transformative teaching which is ostensibly aimed at shifting the focus of learning from the teacher to the student, remain largely teacher-centred while students experience transformative teaching as 'disorientated, confusing and disruptive' (Mezirow 1990; Johnson & Letton 1991; Amin and Ramrathan 2009). These experiences, we argue are demonstrably potentially transformative but requires better planning and reflective action as an on-going process of developing a new pedagogy. This article questions the linear view that students' success can only be the outcome of the 'in-put' 'out-put' model of teaching and learning and that transformative practices present opportunities for learning for both student and teacher. In the conclusion below we share our reflections on how team-teaching as a transformative approach to pedagogy could become meaningful educational practice.

Conclusion

In the presentation of this module, we discovered that the mode of delivery which some students experienced as 'confusion' and 'disorganization' produces moments of learning for both student and lecturer (Yanamandram & Noble 2006). Transformative teaching which is at the heart of the challenge facing teaching in the post-apartheid educational period may not

always take place in a smooth and organized way. This article dispels the logic inherent in established teaching approaches that students learning experiences should be organized along traditionally recognised lines of structure and content. We dispel a linear notion of learning as the only productive form for pedagogy. We argued that while transformative teaching may be driven by the lecturers, the experiences of students have been mostly neglected which strengthens the argument that transformative teaching and learning needs to become student-friendly and less lecturer-centred.

Upon reflection, the following five main transformative learning messages that emerged from this project were: the need to identify moments of confusion and uncertainty in practice as potentially transformative moments in teaching and learning; the need to plan and manage team-teaching within a transformative teaching and learning framework; to be transparent and negotiate student participation from the beginning; to do a situational analysis before assuming the new lesson to ensure continuity between lessons; and to approach transformative teaching and learning in a student-friendly manner that prepares student and lecturers to engage the lesson as a discovery of knowledge.

The moments of teaching and learning that occurred in the context of this project have pedagogical value as indicated by students and lecturers' experiences despite the instability and disorientation experienced by the students and the arguably one-sidedness of the lecturers. While disorientation and confusion may not be a positive motivation for learning, it questions the traditional linear notion as the only way that students learn and become successful. If transformative teaching and learning is to become mainstream pedagogical practice in higher education institutions, the complex nature of learning needs more experimentation and reflective action to increase diverse learning experiences.

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The Volatile Issue of Language(s) of Instruction in Foundation Phase Mathematics Teacher Education in a Multilingual Context

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Abstract

In multilingual countries, international and national studies indicate that issues around languages of instruction are challenging because of complex social, political and economic factors associated with language usage. However, the South African Language in Education Policy (1997) stipulates that foundation phase learners need to be taught in their mother tongue. Therefore, appropriate modules are required at higher education institutions to prepare foundation phase pre-service teachers for mother-tongue instruction. As mathematics teacher educator researchers, we acknowledge the challenges faced in teacher preparation for multilingual mathematics classrooms. Our findings indicate that some South African higher education institutions have responded to these challenges by using simultaneous translation methods or offering modules with an African language of instruction. We argue that it is important to identify these challenges but also to ‘start with ourselves’ to explore ways of improving foundation phase mathematics teacher preparation in our multilingual context.

Keywords: higher education, language of instruction, mathematics education, self-study

Introduction

When languages of instruction (LoIs) are debated in South Africa there is often tension about what is expected from an education system (De Klerk 2002). LoI expectations are often dependant on the particular intentions, demands and interests of the many stakeholders in the education system. Some of these stakeholders include the national education system, higher education institutions (HEIs), the schooling system, learners, learners' parents and learners' prospective employers.

Each of these stakeholders has different expectations and reasons for wanting a particular LoI, and these demands on the education system lead to tensions that have caused even violent responses (Mesthrie 2002). An example here is the 1976 Soweto uprising, when African learners rioted against use of Afrikaans as the LoI in African schools. More recently a newspaper article by Da Costa and Jansen (2012), titled, 'Afrikaans vs Zulu row brewing at schools', reported on similar tensions.

In order to explain the volatile issues related to LoIs some of the expectations and demands presented in policies governing national and teacher education systems need to be considered.

Education policies relating to LoIs are perceived as political instruments for particular political agendas. These political instruments are legislated for implementation in schools and/or HEIs. The South African policy documents directly relating to LoIs having a bearing on Foundation Phase (FP) teacher education include the Language in Education Policy (Department of Education (DoE) 1997), Language Policy Framework for South African Higher Education (CHE) 2001), and the Language in Higher Education Policy (DoE 2002).

Briefly, these policies legislate the following: maintenance of home languages and access to acquisition of an additional language in the FP (Grades 0-3); FP learners to be taught all subjects in their mother tongue; and promotion of all 11 official South African languages in HEIs. Although the aforementioned policies are conceived in the political arena, it is the schools, learners and their parents, and the HEIs who are expected to implement these policy decisions. This cascading of expectations from policy to practice in classrooms has many intersections of stakeholders with a variety of strongly held views about what is 'right' or 'best' for learners in relation to LoI. How

do these views on the LoI relate to Mathematics teaching and learning in HEIs?

There are numerous studies on the LoI in Mathematics in South Africa and elsewhere, which consider this issue from diverse perspectives. Most of the studies in South Africa focus on teaching and learning in multilingual Mathematics classrooms. For example, Adler's (1997) work focuses on the mediation of Mathematics knowledge in multilingual classrooms. In addition to researching Mathematics mediation in multilingual settings, Setati (1998a, 1998b, 2002) explores the use of code-switching (Vorster 2008) in the intermediate phase (IP) (Grades 4-6) or senior phase (SP) (Grades 7-9). Research by Naudé, Pretorius and Vandeyar (2003) in the area of FP learning programmes argues that there is a connection between the learners' proficiency in the LoI and readiness for FP Mathematics learning.

Other research related to language diversity, such as studies by Botes and Mji (2010), Van der Walt (2009), Vorster (2008) and Setati, Molefe, Duma, Nkambule, Mpalami and Langa (2007), pay attention to Mathematics vocabulary, code-switching, pedagogy for multilingual Mathematics classrooms and LoI of IP or SP learners. However, there is a dearth of research on FP Mathematics education using African languages as LoI (Green, Parker, Deacon & Hall 2011). Specifically, there is a scarcity of literature focusing on FP Mathematics teacher development where the LoI is an African language.

Furthermore, Essein (2010:33), who focuses on Mathematics teacher educators' awareness of teaching Mathematics in multilingual contexts, contends that there are:

no structured courses that attend specifically to the needs of pre-service teachers who are being prepared for teaching mathematics in multilingual classrooms of learners who are not yet proficient in the language of instruction.

It is for these reasons that we explored how HEIs are preparing FP Mathematics teachers to teach English second-language learners in their mother tongue.

More precisely, we explored the volatile issue of LoIs in teaching at South African HEIs, to seek ways to improve and assess what we offer at our

HEI. In particular, the research questions that informed the study were:

- What are the LoIs in FP Mathematics teacher education programmes at selected South African HEIs?; and
- How are FP Mathematics education students taught in an African language?

There are five sections in this article. First we review the literature that points to possible reasons why LoI is a volatile issue, and then we discuss the theoretical framework selected for this study. Thirdly, we describe our chosen methodology, and then present and discuss the findings of the study. Finally we draw conclusions after answering our research questions.

Literature Review

Why is LoI such a volatile issue? The literature points to politics, socio-economic status, culture and the hegemony of English as causing volatility (Alexander 2000; Balfour 2007; Parmegiani 2012; Setati 2005; Singh 2009; Skutnabb-Kangas & Phillipson 2010). According to Lee (2003), language, culture and identity are interconnected and it is in the early formative years that linguistic and cultural systems play an important role in socialising a child and shaping his/her perceptions and persona. Maintenance of a person's language can be considered to facilitate preservation of a person's culture. It is no wonder that Henning and Dampier (2012:102) point out that LoI literature in South Africa 'highlight the on-going conundrum of what could be reasonably considered as the optimal language for learning in early school education'.

As young children move from home to the FP school, their LoI is an important issue in the learner's burgeoning identity. The identity fostered and nurtured in the home environment may be starkly different from what is inculcated at the FP school – particularly if the home environment is dominated by a language different from that used at the school.

Wright (2012:112) points out that some African cultures – that are characteristic of communities in rural schools – do not want their languages

altered, as ‘these languages carry traditions, values and sonorities of significant cultural importance, so that many rural speakers would prefer them to be respected and preserved just as they are’. Wright gives an example of the volatile nature of language issues in describing the so-called Nhlapo-Alexander proposal, where a harmonised Nguni and Sotho standardised national language was suggested. He notes that the ‘harmonising’ of the mentioned languages met with such violence from black academics that the proposal had to be abandoned. This study explores existing and potential possibilities for developing African languages as LoIs where academics are able to play a role in promoting the use of African languages at HEIs.

Not only do tensions around LoI exist for reasons based on preservation of cultural traditions, but also because English is associated with socio-economic benefit. In South Africa, English is identified as the only *lingua franca*. According to Balfour (2010), parents choose schools where the LoI is English so that their children can maintain their middle-class status or progress from working class to middle class. In other words, deliberate choices are made by parents for perceived socio-economic benefit and higher social status (Wright 2012). Thus parents choose English as the LoI for their children for reasons that are not based on educational grounds. This means that teaching and learning in such multilingual Mathematics classrooms, where the learners’ home language is different from the school’s LoI, becomes challenging (Botes & Mji 2010).

Furthermore, according to Skutnabb-Kangas and Dunbar (2010:11), imposing a dominant language such as English as the education medium often prevents access to education because of the ‘linguistic, pedagogical and psychological barriers it creates’. This means learning in a dominant language hampers learners’ education. For the teaching and learning of Mathematics in particular, the fact that Mathematics is considered to be a ‘language’ in its own right (Usiskin 1996) further complicates learning for English second-language speakers. According to Setati (2005:448), learning Mathematics includes ‘acquiring fluency in the language of mathematics which includes words; phrases; symbols; abbreviations; and ways of speaking reading, writing, and arguing’. As a result, Botes and Mji (2010:125) state that Mathematics requires of learners yet another ‘scientific manner of writing’.

When teaching Mathematics or Mathematics Education the second-language learner is thus introduced to mathematical concepts using two ‘languages’ simultaneously, as explanations are provided in a particular LoI to clarify the specific language used for mathematical terms and concepts (Botes & Mji 2010). However, Teferra and Altbach (2004:45) indicate that when an African language is used as the LoI, learning is hampered by ‘poor vocabularies and grammatical conventions of indigenous languages that make it difficult to convey ideas and concepts’. However, the fact that indigenous languages do not have, for example, specific mathematics terms, cannot be used as a criterion to classify these languages as ‘poor’. This study, where existing translations of Mathematics terms is explored, will shed light on the use of vocabularies and grammatical conventions of indigenous languages for translation of mathematical concepts.

It is not only schools which face LoI challenges but also HEIs, because ‘English is, for better or worse, a hegemonic language’ (Balfour 2011:2) in South Africa. After surveying African higher education for the new millennium, Teferra and Altbach (2004) indicate that LoI is one of the challenges in the 21st century: ‘[I]language remains a volatile social issue in many African countries’ (45). As mentioned previously, these authors reiterate that in Africa there are ‘perceived socioeconomic benefits’ (45) that dictate the choice of LoI. Teferra and Altbach (2004) consider the development of African languages as an instructional medium in higher education to be faced with a variety of issues, listed as:

- the multiplicity of languages on the continent;
- the controversy surrounding the identification and delegation of a particular language as a medium of instruction;
- the developmental stages of languages for use in writing and publications;
- the paucity of published materials;
- a poor infrastructure for producing, publishing, translating, and developing teaching materials locally; and
- the pressures of globalization (45-46).

In addition, these authors provide examples of where language is a volatile

social issue in a number of multilingual industrialised nations outside Africa. However, often the challenges in industrialised nations are because of the two (or a few) languages used in the country. In contrast to what occurs in most industrialised countries, the challenges are compounded in South Africa because there are 11 official languages (Afrikaans, English, isiZulu, isiXhosa, isiNdebele, siSwati, Sepedi, Sesotho, Setswana, Xitsonga and Tshivenda). Furthermore, according to South African language policy documents FP learners should be taught in their mother tongue. However, from IP until Grade 12 (and beyond into higher education), the LoI is usually Afrikaans or English. In addition to the large variety of mother tongue languages of the learners, their teachers might speak a different mother tongue from that of the learners. In this case the number of combinations of second-language speakers communicating with each other in Mathematics classrooms poses a minefield of potential challenges. This implies that in these multilingual classrooms a large number of combinations of second-language speakers will be communicating with each other, using mathematical terminology, to explain, understand, apply and solve problems.

To assist learners in understanding the specific scientific language for Mathematics used in South African multilingual classrooms, a number of 'dictionaries' have been developed. For example, Botes (2008) recognises the need for a 'learner companion' for IP learners and provides diagrams and explanations of mathematical terminology in Afrikaans, English, isiZulu, isiXhosa, Setswana and Sesotho. In addition, Mathematics terminology required by Further Education and Training (FET) learners is available to assist them in understanding concepts in Mathematics if their mother tongue is Afrikaans, English, isiXhosa or isiZulu (Young, van der Vlugt, Qanya, Aldous *et al.* 2005; Young, van der Vlugt, Qanya, Abel *et al.* 2010). The Department of Arts and Culture (DAC) (2003) published a dictionary for multilingual FP and IP Mathematics classrooms in the 11 languages. In the literature, however, there appears to be limited published multilingual dictionaries available that provide mathematical terminology necessary for preparation of FP Mathematics teachers or for FP Mathematics classrooms.

Despite there being multilingual dictionaries available for school learners, translating mathematical concepts is not a quick or easy task. When some of the translations provided in the dictionaries developed for FET

learners were examined by African mother tongue Mathematics teacher educators, the translations were found to be inappropriate. For example, the isiZulu translation of ‘function’ is given as ‘*izinguqukoezincikile*’ (Young, van der Vlugt, Qanya, Abel, *et al.* 2010:140; DAC 2003:68). The English description of the function concept is given as ‘relation between variables’ (DAC 2003:68). However, the isiZulu translation does not convey this meaning. The analysis of ‘*izinguqukoezincikile*’ in terms of English meanings of the two words is: *izinguquko* meaning ‘change’ or ‘turn around’ and *ncika* meaning ‘lean on’ or ‘rely on’. As a result, combining the meanings of the isiZulu words to understand the function concept in isiZulu translates as ‘dependent change’ in English, giving no sense of the relationship between numbers. However, the isiXhosa translation, ‘*isiphumosentsebenziswanoyamanani*’ (DAC 2003:68), conveys the meaning of the function concept more accurately. The analysis of ‘*isiphumosentsebenziswanoyamanani*’ in terms of English meanings is: *isiphumo* meaning ‘results’; *sentsebenziswano* meaning ‘working together’; *yamanani* meaning ‘of values’.

Combining the meanings of the isiXhosa words to understand the function concept is closer to conveying the function meaning provided in English. Perhaps a better translation of the mathematical term ‘function’ into isiZulu would be similar to the isiXhosa translation. The isiZulu term would then be ‘*umphumelawokusebenzisanakwamanani*’. Otherwise the second option provided by Young, van der Vlugt, Qanya, Abel, *et al.* (2010:140) as an isiZulu translation, ‘*amafankishini*’, is sufficient. This translation keeps the root of the English word and does not create confusion in understanding the function concept. Furthermore, Mathematics teachers whose mother tongue is isiZulu usually speak of ‘*ama-function*’ (or ‘*fankishini*’ in isiZulu). These examples indicate that it is difficult to find accurate, universally acceptable translations of Mathematics terminology from English into an African language, and such translations need to be developed in consultation with mathematicians, Mathematics teachers, Mathematics teacher educators and linguists who are fluent in both languages.

Theoretical Framework

The theory framing this study is using the concept of ‘lingocide’ (Singh

2009). According to Singh (2009:133) lingocide is ‘a gradual process of avoidance by the affected ethnic group and of wanton and deliberate erosion of a language in favour of the language/s of domination by hegemonic forces’. Similar concepts of language erosion are described by Skutnabb-Kangas and Dunbar (2010) as ‘linguistic genocide’. In particular, Skutnabb-Kangas and Phillipson (2010) equate ‘linguicide’ to genocide. In other words, indigenous languages are ‘eradicated’ in a process that is akin to genocide. In this manner, English is viewed as a ‘killer language’ (Skutnabb-Kangas & Phillipson 2010), eroding the indigenous languages that are often seen to be of less value than English.

Several authors trace the persistent hegemony of English in post-apartheid South Africa to the ‘power of liberation and empowerment’ afforded to the English language (Singh 2009; Parmegiani 2012). In South Africa middle-class parents whose children are English second-language speakers usually prefer to send their children to English medium schools. These parents consider the ability to speak English fluently, with the ‘correct’ accent, to be important for future social and economic reasons (Balfour 2007). As Singh (2009) points out, it is these middle-class parents who contribute to the lingocide of indigenous languages. Furthermore, Parmegiani (2012) refers to this abandoning of an indigenous language and increased use of English as ‘colonisation of the mind’.

However, the promotion of indigenous languages need not be construed as an attempt at promoting domination of these languages over English. Parmegiani (2012) warns against the reversal or replacement of one dominant language by another. Instead a balanced approach is necessary, where promotion of all languages occurs. In the spirit of trying to promote African languages some HEIs have actively sought ways of counteracting the hegemony of English. These HEIs have moved from merely developing language policies for inclusion of indigenous languages in their curriculum to implementing these policies. For example, since 2010 the University of KwaZulu-Natal (UKZN) (Vithal 2013) has offered 56 modules in isiZulu across a variety of programmes. Moreover, as from 2014 UKZN intends registering all undergraduate students for a compulsory isiZulu module which they need to pass before graduating. However, this is not to say that isiZulu will be the main LoI at UKZN, it but will be developed alongside English as an academic language.

To this end, we frame our article based on the concept that English should not be a ‘killer language’ but should be promoted alongside African languages at HEIs. This development of African languages is of particular importance in preparation of teachers for the FP in multilingual contexts in South Africa.

Methodology

As a research team we wanted to know more about what other South African HEIs offer in terms of LoIs for preparation of FP Mathematics Education modules, so that we could learn more about how to prepare teachers in our province. In other words, we wanted to gain knowledge about existing possibilities in South Africa so that we can improve what is offered in pre-service teacher development, specifically for mother tongue instruction required of FP Mathematics teachers. We saw the need to interrogate the volatile language issues around teaching Mathematics through the medium of an African language, so that our HEI teacher preparation can be more appropriate for the context in our province.

For these reasons we selected a self-study methodology as we want to make a difference in the way we prepare FP Mathematics teachers. In selecting self-study we were able to identify both the phenomenon and the method. Self-study operates as a phenomenon because of its orientation based on reflective practice and operation as a method for documentation and social action. The method we chose to use to answer our research questions involved making comparisons of what LoIs are offered at four South African HEIs and how pre-service teachers are prepared for mother tongue instruction in Mathematics.

Self-study

For the past two decades self-study has been successfully used in educational research as a means for improving teaching and discovering knowledge (Louie, Drevdahl, Purdy & Stackman 2003:151). The underlying principles of self-study methodology have particular characteristics, procedures and guidelines that have been developed by self-study leaders such as Loughran

(2004), LaBoskey (2004) and Samaras (2011). Even though there are particular procedures and characteristics that define self-study methodology, the methods or strategies that are available to the self-study researcher can be adapted to suit the context in which he/she wishes to achieve the major goal of self-study research. This goal is to gain pragmatic knowledge to improve and assess teaching (Samaras 2011). Furthermore, when making use of self-study to seek ways of improving teaching offered at an HEI, benefits beyond those that accrue to individual researchers are facilitated (Louie *et al.* 2003).

Often self-study research is criticised for being a ‘navel gazing’ activity where the knowledge gained through research only benefits the researcher by only allowing for changes in the researcher’s practice. To address this concern the benefits of collaborative self-study, where a research team undertakes a study, have been well documented (see, e.g. Coia & Taylor 2009; Lunenberg & Samaras 2011; Pithouse-Morgan & Van Laren 2012). According to Louie *et al.* (2003) there are many benefits to collaborative self-study, including the social support permitted by collaborative self-study through dialogue between researchers that allows for critiquing findings in a constructive manner. In addition, collaborative self-study enhances ‘validation of self-study research’ (Louie *et al.* 2003:157) as various interpretations and actions to improve teaching can be continuously negotiated before, during and after the research process.

Research Design, Data Selection and Analysis

The data presented in this article came from a larger research project supported by the Department of Higher Education and Training and the European Union as part of the Primary Education Sector Policy Support programme. The methods selected for our self-study consisted of exploring what is offered at four HEIs. As a collaborative research team we acknowledge that our analysis of the data is influenced by our own lived experiences as second-language Mathematics teacher educators. Our mother tongues are not English, but for more than 20 years each of us has been a Mathematics teacher educator or Mathematics teacher. Thus we are interested and keen to make a difference in the area of LoIs in the teaching and learning of Mathematics.

We selected faculties/schools of education at HEIs where we could locate FP Mathematics Education lecturers who were willing to be interviewed at their respective campuses. Each of the four HEIs is situated in a different province in South Africa and serves a community where the main languages of the pre-service teachers comprise a different selection of the 11 official languages. We collected data at these HEIs in 2011. We conducted face-to-face semi-structured interviews with academics at three of the HEIs and at the fourth HEI we conducted focus group interviews with 16 pre-service teachers registered for the Mathematics Education module that was offered through the medium of isiZulu. These participants were purposefully selected from the cohort of 58 pre-service teachers who completed the Postgraduate Certificate in Education (PCGE) Numeracy module. Of the 58 students, 25 were taught through the medium of isiZulu and 33 in English. These twenty five students gained their undergraduate degrees at South African HEIs where the LoI is English, but registered to study for a pre-service qualification where the LoI was isiZulu. The focus group discussions were conducted mainly in isiZulu but the participants could, according to their preference, respond in isiZulu or English. Table 1 provides a summary of the participants selected for this study.

Table 1: Participants interviewed at the four HEIs

HEI	Academics	Pre-service teachers
A	2	
B		16
C	2	
D	2	

Before we conducted any interviews with Mathematics teacher educators or students during focus group discussions, we obtained ethical clearance for our research. In addition, consent was requested from each participant to audio-record and to use his/her responses for research purposes.

The focus group discussions were transcribed verbatim and, where necessary, an isiZulu translator translated the transcriptions into English. We were guided by the research questions and the reviewed literature to gain knowledge that would assist us in attaining the goal of our self-study. Our

research focused on exploring how preparation of FP pre-service Mathematics teachers could be improved in the South African multilingual context. Specifically we looked at how our self-initiated, self-focused research that used multiple qualitative methods (LaBoskey 2004) could assist in responding to volatile issues related to LoIs at HEIs.

Analysis of the Data: Answering our Research Questions

We address the question ‘What are the LoIs in FP mathematics teacher education programmes at selected South African HEIs?’ by analysing the interview data from the four selected HEIs. In order to understand the LoI in teaching FP Mathematics Education modules in these HEIs we discuss the language(s) used in the lectures, assessment activities, and learning materials. First we describe the main languages spoken in the area where each HEI is situated.

Languages of Instruction, Assessment Activities and Learning Materials at HEI A

The main languages spoken by the students at HEI A are Afrikaans, English and Setswana. This HEI’s language policy ‘acknowledges the use of English, Afrikaans and Setswana as official languages for the institution as a whole’ (CHE 2010:20). The LoI in the FP Mathematics Education modules is generally Afrikaans. However, while the LoI is Afrikaans, there are translators in the lecture venue translating simultaneously into English and Setswana. The translators whisper interpretations using interpreting equipment which students listen to using earphones. The choice of using the simultaneous interpreting system facility during lectures rests with the student. If the student chooses to use this facility, he/she selects the earphones tuned to the relevant Setswana or English channel at the commencement of the lecture. This participant at HEI A explained how simultaneous interpreting is facilitated during lectures:

Interviewee 2: ...what we do is that the lecture just continues in Afrikaans and in that class we have the simultaneous interpreting. We use the whispering microphone and the students have the headsets (HEI A:55).

Simultaneous interpreting is not code-switching, where the lecturer explains concepts in two different languages while teaching. Instead, the lecturer teaches in one language (English or Afrikaans) while interpreters simultaneously translate into Setswana, English or Afrikaans depending on the students' academic needs. According to the Council for Higher Education (CHE) (2010:20) audited report for HEI A, 'the interpreting services are well researched, training is offered and implementation is monitored'. In addition, the languages used for assessment in the FP Mathematics Education modules are Afrikaans and English, whereas the printed teaching and learning materials used in these modules are translated into the three acknowledged languages used at HEI A. One of the academic participants, Interviewee 1, indicated that:

In the foundation phase [the simultaneous interpreters] also translate the study guides into Setswana (HEI A:13).

To summarise, at HEI A all pre-service teachers registered for FP Mathematics Education modules are accommodated in one venue but opportunities to learn in any one of the three acknowledged languages are provided during lectures. Languages used for assessment are Afrikaans and English, and translated materials are provided in Setswana, English and Afrikaans.

Languages of Instruction, Assessment Activities and Learning Materials at HEI B

The students' main spoken languages at HEI B are English and isiZulu. The School of Education chose to offer the PGCE FP Mathematics Education modules in two separate groups: one where the LoI is English, and another where the LoI is isiZulu. Contrary to HEI A, these two groups are segregated

and their assessments are in English and isiZulu respectively. The same lecturer, who is an isiZulu mother tongue speaker, taught each group during different timetabled lectures. There was an attempt at providing students with learning materials in isiZulu.

However, the PGCE students felt that the materials were only partly translated into isiZulu. For example, in the focus group discussion the following information about the learning materials was shared:

Participant 1: ...we found it very useful; we had sufficient notes in IsiZulu although we would get some parts written in English. For example, we would get some of the methods written in English ... (HEI B:16).

Participant 2: ... more content should be added to what we already have (HEI B:12).

Participant 3: ...we have not received some of our materials. (HEI B:7).

To summarise, at HEI B the students registered for FP Mathematics Education modules are separated into two groups according to the LoI. Languages used for assessment are either isiZulu or English, depending on the LoI. Translated materials are provided in English and partly in isiZulu.

Languages of Instruction, Assessment Activities and Learning Materials at HEI C

The main spoken languages at HEI C are Afrikaans, English and Sesotho. However, LoIs for the FP Mathematics Education modules are Afrikaans and English. Students are offered FP Mathematics Education modules in two separate groups, one where the LoI is Afrikaans and another where the LoI is English. Assessments for the one group are in Afrikaans, while in the other they are in English. If a student is required to repeat an FP Mathematics Education module then he/she is required to attend the module in the LoI offered at the particular time – either Afrikaans or English. HEI C offers

translation services to its academic community to facilitate translations between the two LoIs.

To summarise, at HEI C the students registered for FP Mathematics Education modules are separated into two groups according to the LoI. Languages used for assessment are either Afrikaans or English, depending on the LoI. Translated materials are provided in Afrikaans and English.

Languages of Instruction, Assessment Activities and Learning Materials at HEI D

The student population at HEI D is from diverse language backgrounds that include Tshivenda, Xitsonga, Sepedi and siSwati. However, the LoI in FP Mathematics Education modules is English – but during teaching practice at local schools the students are expected to teach learners in their mother tongue. The participants indicated that they struggled to choose an appropriate LoI because of the diverse languages spoken by the students and the lecturers.

Table 2 summarises the spectrum of LoIs of FP Mathematics Education modules offered at the four HEIs.

Table 2. Summary of the LoIs at the four HEIs

HEI	A	B	C	D
Main languages of students	Afrikaans, English, Setswana	English, isiZulu	Afrikaans, English, Sesotho	Tshivenda, Xitsonga, Sepedi, siSwati
LoIs in FP Mathematics module	Afrikaans, English, Setswana	English, isiZulu	Afrikaans, English	English
Strategies implemented	Teaching one group simultaneously interpreting from Afrikaans to Setswana and English	Teaching two separate groups in English and isiZulu	Teaching two separate groups in Afrikaans and English	Teaching one group in English

We answered the second research question, ‘How are FP Mathematics Education students taught in an African language?’, by analysing the interview data and other documents provided by participants from HEI A and HEI B. We chose these two HEIs because the Mathematics Education modules were taught in an African language. Our analysis focused on how communication occurred in the FP Mathematics Education modules. We also explored translations of selected Mathematics academic concepts into African languages. The data set used was the interview data from HEI A and HEI B as well as documents obtained during HEI visits.

The LoI at HEI A, as discussed previously, is Afrikaans with simultaneous interpreting of Afrikaans into English and Setswana. Setting up the simultaneous interpreting system does not take up any of the lecture time allocated to Mathematics Education. When Interviewee 1 was asked ‘does it not affect the amount of work you need to cover in a particular module?’ she responded:

Sometimes it does but not in general. I think here at the university we are so in it that it does not take much time. Because when I walk into the lecture theatre I unlock it- the lecture venues are locked because of all the equipment. So I will go and fetch the key and I will unlock it and the simultaneous translator will walk with me and she will go and set up her equipment. The students will come in and those who would like to make use of the interpreter will just pick up an earphone. (HEI A: 31)

The simultaneous interpreting system is costly for HEI A but the participants considered it to be important for the students to be taught in their mother tongue since the students are required to teach in their mother tongue. Interviewee 1 noted the financial implications as follows:

We always have a translator. It costs the university a lot of money but it is very good if the [students make use of this facility]. They know the English terminology but it is translated for them in the students’ mother tongue because our foundation phase teachers go back to the rural [homeland] and they teach Grades R to 3 in Setswana. (HEI A: 6)

According to a participant at HEI A, most students attended schools where the LoI was English. As a result some students are not familiar with

Mathematics terminology in Setswana. Learning FP Mathematics Education modules in Setswana assists in preparing the students for teaching practice in schools where Setswana is the LoI. The reason for using Setswana in Mathematics Education is provided by Interviewee 2 as follows:

Some of the students want to go to rural areas to teach in Setswana again – so that is why we have to promote their own Setswana during lectures. As you might know, a lot of these students come from private schools or ex-Model C schools and their Setswana is almost gone (HEI A: 56).

It is interesting to note how HEI A developed Mathematics terminology for concepts in Setswana. According to the participants mathematical concepts in Setswana were developed by working with the practising Mathematics teachers, using the DAC (2003) dictionaries in conjunction with relevant websites. One of the interviewees at HEI A is a simultaneous interpreter, and he explained that at HEI A they,

do group work to coin some of the [mathematics] terms ... if [he] cannot find it in any of the available material, then [he] has to coin a word for that (HEI A:57).

Table 3 shows examples of terminology developed through this process for mathematical content and pedagogical concepts.

Table 3. Examples of terminology developed by HEI A academics with practising teachers

Concepts	English	Setswana
Mathematical pedagogy	Inductive reasoning	<i>Go batlamabakakakakanyo</i>
	Levels of reasoning/thinking	<i>Dikgatotsakakanyo</i>
	Investigation	<i>Batlisisa</i>
	Proof	<i>Bopaki</i>
	Theory	<i>Tiori</i>

Mathematical concepts	Circle	<i>Sediko</i>
	Triangle	<i>Khutlotharo</i>
	Equilateral triangle	<i>Dikhutlotharotekano</i>
	Rectangle	<i>Khutlonnetsepa</i>
	Square	<i>Sekwere</i>

When reading through the list of translated words, there is evidence of an effort to coin words in Setswana rather than keeping the English root for the Setswana word. An example of keeping the English root is in translation of the English word ‘theory’ as ‘*tiori*’ in Setswana. Another example of such a translation is ‘*sekwere*’, that is directly translated from the English word ‘square’. If one compares the translation of ‘rectangle’ (‘*khutlonnetsepa*’), this fits more accurately than the translation provided for a ‘square’. Analysis of the word ‘*khutlonnetsepa*’ in terms of English meanings is *khutlo* meaning ‘shape’; *nne* meaning ‘four’ and *tsepa* meaning ‘equal’. Combining these words would then mean ‘a shape with four equal sides’. However, the rectangle does not have four equal sides, but rather two pairs of opposite sides that are equal. Instead a rectangle should be translated as *khutlonne*. Yet this too is an incorrect translation, as it does not exclude other regular or irregular quadrilaterals. Nonetheless, these translations are a starting point for exploring possible translations of mathematical terms into Setswana.

In addition, the academics at HEI A encourage students and other academics to publish research articles in an African language. This is a bold move, as English is the *lingua franca* worldwide. Students and academics who publish Mathematics Education research in an African language run the risk of not having their articles accepted for journal publication. When asked ‘How do you write a whole paper in Setswana?’, Interviewee 2 responded:

... we are telling them to publish papers in an African language because some people think you cannot write scientifically in African languages. So we want to prove that you can actually do that. And we want to be published as proof that it can be done When you write in the local language, the journal generally says you will have to write a long abstract in English to accompany and explain what the article in Setswana is about so that people understand The

[HEI A]’s language directorate want to prove to the public that it can be done – you can publish in an African language and that African languages can become scientific media for writing and researching. Just recently we published an article on Computer Science in Setswana (HEI A:59–60).

At HEI B the LoI for the FP Mathematics Education module in the PGCE programme is English or isiZulu. In 2011, 25 students were registered for the module where isiZulu was the LoI. The LoI was mainly isiZulu and included some English words that did not have isiZulu equivalent translations. The students had mixed feelings about learning FP Mathematics modules in isiZulu. On the one hand, it was beneficial for them to improve their vocabulary of mathematical concepts in isiZulu in preparation for teaching practice and for better understanding. On the other hand, the students struggled with reading both English and isiZulu materials and being assessed in isiZulu. One of the participants indicated the difficulties experienced when translating from English into isiZulu, as follows:

... we do end up trying to translate the books from English to isiZulu but when we now have to write on paper I would completely lose the meaning because now I am trying to translate and end up not getting the meaning ... For example, ... when I write ... for instance I have to write the word ‘improve’ I end up writing ‘*impuruve*’ when I have to write it in isiZulu because I don’t remember the actual isiZulu word and because we normally use English words while speaking isiZulu, for example, we say: ‘*haw ngizo-improve*’. You use it like that but it does not fit in correctly (HEI B:3).

The participant probably realised that a translation of ‘improve’ exists; ‘*thuthuka/ enzangcono*’ is the isiZulu translation of ‘improve’, but is infrequently used. This means that much time and effort is required on the part of the students when they need to complete assignments and tests in isiZulu, because the everyday isiZulu language spoken often makes use of words where the English root is ‘translated’ into isiZulu, and the correct isiZulu translation is not used frequently in everyday conversations.

Discussion and Conclusion

How do the findings presented in this study add to the volatile issue of LoI? First, two of the four HEIs visited are working towards a ‘starting with themselves’ approach in making a difference to the way in which FP Mathematics teachers are developed through the programme structures they designed in their BEd or PGCE programmes. These HEIs have implemented approaches where cognizance is taken of the LoI required for their particular South African multilingual context. It must be noted, however, that all of the academics interviewed at the four HEIs were interested and keen to learn more about possibilities for taking on the issue of LoI for FP Mathematics teachers at their respective HEIs.

Secondly, initiatives implemented by the two HEIs that use an African language as a LoI required substantial additional funding and commitment from the institutions. These resources are costly if one takes into account the current worldwide financial meltdown. For example, the use of simultaneous translators employed at HEIs requires additional funding for one or more translators for each venue in which Mathematics Education modules are offered. In addition, equipment for the translation process to be facilitated is essential.

Furthermore, the availability of quick, efficient translation facilities at an HEI appears to be a factor in promoting the use of an African language as a LoI. This too, however, requires setting up of appropriate HEI structures that can be effectively managed across disciplines and campuses. If, for example, Mathematics Education modules are offered in separate venues in isiZulu as well as in English, then additional, appropriately qualified Mathematics teacher educators also need to be appointed, and this too has financial implications for the HEI.

Thirdly, the securing of the services of appropriately qualified Mathematics teacher educators and simultaneous translators also requires careful consideration. The translation of many mathematical terms provided in ‘dictionaries’ currently available needs to be scrutinised by African language linguists in conjunction with teachers, Mathematics teacher educators and mathematicians. The definitions of mathematical terms are particularly important in Mathematics. For example, in Geometry one cannot define a square as a shape with four equal sides; both squares and rhombuses satisfy this condition. Sometimes linguists may be unaware of the specific

requirements of mathematical definitions, and need to consult with mathematicians.

Fourthly, there is a general shortage of Mathematics teachers in South Africa, and they are generally qualified to teach Mathematics in English as their Mathematics qualifications are gained through the medium of English. The high status of FET Mathematics teachers, who mainly use English as the LoI, would make it difficult to convince students to take up an FP Mathematics teacher education qualification offered in an African language. The canvassing of able, interested FP Mathematics teachers would require a concerted effort and possible incentive funding for these candidates to be secured for the important task of teaching Mathematics to young learners. This implies further costs to HEIs, as at present they are not preparing enough FP Mathematics teachers. This means that urgent interventions are necessary if FP teaching and learning of Mathematics is to be prioritised.

Fifthly, the separation of students into two separate groups according to LoI for teaching Mathematics Education may be construed as yet another way of dividing or separating people on the basis of a language. Perhaps this could be likened to what occurred in the Apartheid era? The fact that English is the *lingua franca* in South Africa cannot be ignored, so the Mathematics Education students who opt for an African LoI may not be considered for more lucrative teaching posts where English is the LoI. They may be required to teach in less affluent rural and township areas.

Sixthly, the publication possibilities in peer-reviewed Mathematics Education journals in African languages are limiting. The fact that terminology in Mathematics is not available cannot be seen as a deterrent for publishing in an African language. New terms and words are constantly being incorporated into all languages worldwide. For example, in recent years a whole new set of terminology has been developed around computer and other digital communication systems. By agreeing on particular mathematical terminology in an African language it should be possible to contribute to knowledge production in Mathematics Education through the medium of an African language.

Despite all the volatile issues relating to financial constraints, availability of qualified Mathematics teacher educators and separation of students according to their LoI, there are academics at HEIs that are

passionate about implementing the South African language policy requirements. Furthermore, there are sound educational reasons offered for the need to teach young learners in their mother tongue.

Two HEIs described in this study took the initiative in starting with themselves to support promotion of mother tongue teaching in FP Mathematics classrooms. These HEIs have employed strategies that seek to achieve a balanced approach in developing teaching and learning of an African language and English/Afrikaans to counteract the ‘killing’ (Parmegiani 2012; Singh 2009, Skutnabb-Kangas & Phillipson 2010) of one language by another. This development of African languages is of particular importance in the preparation of teachers for the multilingual FP contexts in South Africa.

The methods employed by these HEIs to promote the use of African languages have provided models that can be mimicked and improved upon at any HEI. No doubt the two HEIs will continue to extend their expertise in the area of mother tongue instruction, but it is up to each HEI to start with themselves to seek and design appropriate strategies that recognise the critical need to prepare FP teachers for teaching Mathematics in our South African multilingual context.

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Challenges in Developing and Implementing Strategies to Facilitate Completion of their Research by Postgraduate Students in the Discipline of Public Health Medicine

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Abstract

Many students have successfully completed the required course work modules but not the research required for the Masters in Public Health (MPH) at the University of KwaZulu-Natal. The aim of this project was to support, mentor and motivate the students to complete the dissertation. This paper discusses and analyses a teaching and learning project to assist these students with academic writing skills. Using action research students were contacted to assess their academic needs through a questionnaire. Students were then contacted individually, mentored and assisted with administrative procedures. After further discussions with students and staff, a series of workshops were held on academic writing, data analysis, and writing manuscripts, and in the next phase, these were evaluated. Data indicates that MPH students appreciated the mentoring, encouragement and the workshops set up. Constraints included the challenge of accommodating students who work in different districts of KwaZulu-Natal and have to travel long distances to attend, and who also have to work and meet family commitments. The number of students completing their dissertations was less positive and indicated that despite interest expressed, and their participation and positive feedback in the workshops, few students completed their dissertations in 2012. A more structured process providing

both academic and peer support may be helpful and assist students to complete their dissertations and papers, facilitated by additional staff through a cohort-based programme.

Keywords: Masters in Public Health, Mature students, mentorship, skills training, supervision

Introduction

South Africa, similar to many other developing countries, experiences a shortage of qualified health personnel, and this is of particular concern due to the high prevalence of infectious and chronic diseases (Ijsselmulden, 2007). Currently, nurses form the backbone of the healthcare services and they provide the clinical and managerial support for the health system. There has also been an effort since the establishment of the democratic government in 1994 to recognise students' prior learning and experience and to also to offer career progression opportunities to personnel with other types of training in the health sciences, such as environmental health officers, pharmacists and physiotherapists. These health practitioners often lack expertise in a public health perspective, and require further training.

Recognising this need, the UKZN Graduate Programme in Public Health (GPPH) aims to produce health professionals who could possibly be change agents in the field of public health. This programme offers a number of qualifications (Postgraduate Diploma in Public Health, Master of Public Health, Master of Medical Science and PhD degrees). All offerings mentioned emphasise competence in and the application of public health skills and knowledge in the work place. Ultimately, this programme intends to contribute and improve the public health system in South Africa. Ijsselmulden et al., (2013) emphasise the importance of enabling Africa to train its own leaders in public health. To achieve the enrolment target, the Department of Public Health Medicine, UKZN was awarded a grant to support students in the post graduate programme with their research, and in particular, to address the needs of students experiencing difficulty with the completion of their research report. To this end, a programme was

implemented in 2011/2012 which included individual support, group support and skills' training and development.

The challenge of offering the Master of Public Health (MPH) component of the GPPH is that it has had and continues to have insufficient full-time staff to focus both on the academic programme and the other needs of part-time mature students. The dearth of staff has to be considered in the light of research findings. For example, Brown and Holloway (2008) describe the transition to postgraduate studies as including challenges both at a personal-emotional level, at a social transition level where the availability of institutional support mechanisms are critical, and an academic transitional level, since many students have not studied for a while. Many universities, both local and international, have taken cognisance of such challenges and have developed strategies to address postgraduate students' needs (Hoffman and Julie, 2006). This is not unsurprising considering that universities are attempting to facilitate postgraduate studies to contribute to skills' building. A search of local websites of South African universities offering postgraduate public health training in different provinces indicates the efforts being made by South African institutions to build capacity within the existing health service.

Although there is emphasis on attracting students to public health study, less attention has been paid to date on analysing the reasons for students not completing their studies in this field. In his review of factors influencing student completion rates Martinez (2001) notes that students who do not complete are less satisfied than completing students with their institutional experiences. He suggests that student progress needs to be monitored and that under-performing students should receive additional support. Furthermore, he suggests that action research can play a useful role in identifying the needs of students.

Other factors associated with timely completion of studies relate to student competency and personal situation, the quality of supervision received by the student and availability of research infrastructure (Jiranek, 2010, Myers & Earthman, 1999). Almost two decades ago, Shannon (1995) emphasised the importance of communication between supervisor and student and the role of mentor that supervision entails, which still holds true in contemporary times as confirmed by Wong and Wong's study in 2010. They emphasised the need for support from the supervisor, as well as family

and friends, and the students' ability to access resources. They reported that factors hindering student progress included "difficult data related processes" and a lack of understanding about thesis writing.

The reasons for the urgent need for informed public health practitioners in the health sphere arise from the epidemics faced by the country from both infectious and chronic diseases. Beaglehole and Dai Poz (2003) highlight the challenges facing public health as a result of these epidemics in the 21st century. Further, the approach of 2015 and the achievement gap between South Africa's national goals and the Millenium Development Goals, also emphasise the vital role of public health and the need for adequately trained public health practitioners who can contribute to strategic thinking and improving the health of communities. The approach adopted by the Discipline of Public Health Medicine (DPHM), at UKZN to provide training to persons already employed by the health department offers opportunities to increase the influence of public health initiatives in the health sector.

To meet the needs of the students who are mostly working in full-time positions, and who also are often not resident in Durban where the medical school is situated, the MPH coursework programme is run on a modular basis. In addition to attendance at lectures over a five day period, students complete assignments, working both individually and in groups. There is, thus, a fair amount of flexibility to try and address the part-time adult students' realities in respect of time management. Since the initiation of the MPH, which offers a different kind of learning opportunity from the traditional lectures in medical training, many problems have been identified that prevent postgraduate students either completing their MPH degree, or of completing the degree within the required time period. The course work is usually undertaken over a two year period and it is expected that this should be completed prior to the initiation of the research component. To assist students, the building blocks that prepare them to implement their research are undertaken during the coursework training. These include two modules studying health measurement, and a module on research methods. During the latter-mentioned modules, the students receive training in developing research protocols and obtaining ethical clearance to conduct research. Despite offering these preparatory modules, many MPH students have not completed their dissertations, and the result is a high dropout rate. This has

also been the experience of other South African universities (Hoffman and Julie, 2012).

In 2010, in an attempt to address this difficulty, we applied for and received a grant to run an academic writing and research methods' training course based on students' needs. The broad objectives of the course were to improve the students' understanding of the research process, to support and develop research writing of peer reviewed manuscripts, to provide mentoring and supervision support, to encourage students to share experiences and to learn from fellow students, and to network with relevant people and resources.

This paper explores the challenges of implementing such a course in response to the difficulties articulated by the students of doing an academic research project, the response from the discipline of Public Health Medicine (DPHM) to address and support such students, and constraints on these efforts. The paper then discusses possible future strategies to facilitate students' timely completion of their degree.

Research Methods

Using a mixed methods descriptive design we engaged in action research which has been shown to be a useful methodology to obtain information about the practices and to identify and clarify the problems being experienced by students in order to contribute to their progress (Elliott, 1991). A mixed methods approach allows identification of common issues across the programmes and specific issue that individuals have. Likewise, it allowed an overall evaluation of the programme and individual experiences of the programme.

The target group for the study was a diverse group of students who participated in the MPH programme over a twelve year period. The range of backgrounds they came from was broad. In addition, with support from the National Department of Health the student included hospital managers from different provinces including KwaZulu-Natal, Eastern Cape and Mpumalanga. The MPH thus attracted mature students, many of whom were intent on furthering their careers in the Department of Health, which supported their training. The sample in the study was the masters' group that had not progressed well over the years in the DPHM. Many of these students

had a demanding work schedule as they were working in the public health sector and had completed most of their postgraduate coursework programmes some years ago.

In the first phase of the action research to plan the intervention programme, the initial task was to question those students who had not completed their degrees to identify the type of assistance they required. We generated a list of MPH students who had not graduated in the expected time period during the previous five years with the intention of making contact with them.

The first problem was the difficulty in making and then maintaining contact with inactive former students since the initial email (53 students) that was sent out explaining the programme found that over 50% were undelivered. This was followed by use of “sms” and phone calls to update the students’ email addresses. There were many students who could not be contacted. During this process four students requested procedures for converting to the diploma programme.

Questionnaires were sent to students requesting information about their progress and the areas where assistance was needed in order for them to complete their research and dissertation. Each student was emailed by the course facilitator, whom the students knew from their previous contact with the DPHM, and this was followed by a personal telephone call using a semi-structured interview schedule by the same course facilitator if there was no reply, or if further clarification was required.

The student questionnaire explored the needs of the MPH students with regard to a range of topics including mentorship, administrative issues concerning registration, ethical clearance, implementation of the research process, computer skills, and English writing skills and whether they would participate in facilitated workshops. The questionnaire also asked students to list their problems and identify topics where further tuition would assist them to complete their dissertations. To obtain the required information, both open and closed questions were used and students were asked to explain the areas of the research process where they experienced challenges. Students were informed that the purpose was to address their needs and that their responses were confidential.

For phase 2 a programme was developed and dates scheduled for seminars, workshops and small group discussions as requested by the

students. Students were contacted to confirm that the arrangements (date, time, content) of the proposed programme were suitable and in accordance with their requests for assistance and support. In addition the course facilitator offered mentorship and where administrative problems were reported by the students, she attempted to address these. Based on the information obtained from staff, the feedback from students and the objectives of the grant proposal, a work plan was developed (see Table 1).

Ethical Issues

The information provided in this paper is anonymous and the confidentiality of respondents has been maintained. The potential benefits to students of improving the support offered through the MPH programme may be considered to be in accordance with the ethical principle of beneficence.

Findings

The results of our attempts to address the needs of MPH students who had completed their coursework but not their dissertation are presented. The focus in this paper has been on MPH students since there are fewer M Med Sci and PhD students and the findings were based on the triangulated results of Phase 1 (questionnaires, telephonic interviews with students and discussions with staff).

Findings from the Questionnaire

The survey highlighted a range of concerns and students' perceptions of the impediments that hindered their academic progress. Students identified their areas of difficulty which comprised personal issues, supervision and mentorship and research infrastructure issues. Constraints identified included the fact that many students worked in different districts of KwaZulu-Natal and had long distances to travel to attend lectures and seminars, with the added burdens of work and family commitments. Regarding personal skills, students emphasised their need for academic writing skills and many older

students lacked proficiency in the technical skills required for computer use. They also highlighted the challenges that they had experienced with the administrative procedures of re-registering and their difficulties in engaging with the university bureaucracy from a distance since most of them worked in different parts of the province. The semi-structured telephone interviews following up on the questionnaires highlighted the need for mentoring and support, and their frustration with the bureaucratic processes. Many students were not in regular contact with the supervisors who had been appointed. Students reported variable progress with their research and were pleased to discuss their situation. The discussions with staff confirmed the relevance of a focus on academic writing skills, and suggested topics for workshops for supervisors. Based on these results, a programme was developed as described below.

Phase Two: Programme Development, Implementation and Evaluation

The students were divided into different cohort groups as follows:

a) About 31 students who registered for their research project for the MPH between 2006 and 2009, the Masters 1 Group. (Students from 2010 were completing their course work and did not participate). Many students within this Masters 1 Group had made poor progress over the previous two years. As students within this group were at different stages of the research process, interventions were planned on an individual or group basis (students who were at a similar level of progress were grouped together). One-on-one or group sessions were held accordingly with facilitators from the DPHM. Students from this cohort were also invited to attend the workshops as described below.

b) Publication cohort – this comprised ten of the students who had graduated with either a MPH or M Med Sci degree but had not published a paper based on their project.

Strategies to Facilitate Postgraduate Research Completion

c) In addition to these two student cohorts, based on the discussions with academic staff in the discipline supervisor groups were planned to offer supervisors the support they needed to provide the students with competent supervision.

MPH Student Support Programme

The MPH Support programme that was developed aimed to address the needs of students at different stages in their research comprised the following as listed in Table 1:

Table 1. Components of the 2011/2012 MPH Student Support Programme for students who had registered but had not graduated

PERSONAL ISSUES	Administrative assistance	Assisting with problems with registration / re-registration
	Computer training	Basic and Intermediate Word
	Academic Writing Skills	Seminars were held to address difficulties in scientific writing and common errors in writing English
	Writing for peer reviewed publication	One day workshops were held to encourage students who had completed dissertations to publish these results
	Mentorship	Regular contact to monitor progress Workshops were planned to bring supervisors from different disciplines together to discuss roles and responsibilities
RESEARCH	Protocol development	Students offered assistance / communication with supervisors established
	Ethical clearance	Following up on the receipt of Ethical Clearance and Re-certification
	Data analysis and interpretation	Students were assisted: a) Training in SPSS Statistical package b) To meet with the UKZN statisticians
SUPER-VISION	Supervisor workshops	Personal telephone calls to monitor progress

The topics that comprised the content of the planned programme are described in more detail below and the rationale for their inclusion is explained as well. Initiation of the implementation of the MPH student support programme was delayed due to difficulties at the medical school to access the funding. Once that hurdle was partially overcome, the programme was initiated as described below.

Academic Writing Skills

Many students were not first language English speakers, and as mature students had not been engaged in academic writing for many years. They appreciated guidance in developing the format for protocols, reports and their theses, and in developing their style and avoiding common grammatical mistakes. The ‘Research Writing and Structuring’ workshops were well attended and students completed a post-workshop written evaluation and found these to be most useful. The sessions were structured to ensure that individual as well as group needs were met. Students attended all three full-day Saturday sessions and found this useful and requested that this be ongoing.

Drafting a Manuscript for a Peer Reviewed Journal

Students had progressed at different rates over the years and some students who had completed a dissertation and graduated had yet to publish their results. The one-day workshop developed by an experienced lecturer provided a format for the development of a manuscript using their thesis as the foundation. Students were enthused and three of the ten students who attended subsequently submitted articles, two of which have, to date, been published.

Administration

Ongoing individual email or telephonic contact with all students resulted in various administrative queries concerning registration and financial issues being corrected during this process. From the questionnaire many students

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(11) needed assistance with the bureaucratic challenges. Some had forgotten to reregister as they had not received a reminder. Others were engaged in corrections to their protocols, or were having difficulties with the process of obtaining ethical clearance. The UKZN administration had been restructured and dealing with new personnel, now situated in different offices/buildings and campuses had proved a formidable challenge for many students,. Students did not know who to contact for assistance since their emails and phone calls were unanswered due to the new structures being implemented. They all complained about the lack of clarity with respect to the procedures due to the restructuring at UKZN (anecdotal follow-up after the questionnaire phase). The new contact details and procedures were then sent out to all the students, and they were offered assistance in moving forward. Students needing new supervisors were also assisted as were those who needed to re-register.

Mentorship

Regular phone calls to students to enquire about their progress were found to be a more important component than originally predicted. Students expressed feelings of isolation and perceived disinterest on the part of the university. Since the completion of the coursework, they claimed that there had been no follow-up from DPHM and /or their supervisors. They were, therefore, very appreciative of the contact and being able to obtain advice and to discuss their progress and how they could engage with this new initiative. An ongoing relationship was established between the facilitator and students who commented on how good it was to have someone who understood and cared about them and their studies. The role of the supervisor in this regard did not appear to suffice. The importance of this aspect was not originally considered and the evidence was not documented systematically and is thus anecdotal.

Protocol Development

Although students had previously developed a protocol as part of the “Research Methods” module, when their circumstances changed as a result

of a new job or portfolio, the envisaged research project was no longer feasible, and they had lacked support to embark on the changes that were required (this information was obtained from the workshop attendance). Furthermore, their supervisors had been selected for that specific project, and for their expertise in that content matter and they were often not from DPHM and were not able to assist with a different topic. A new supervisor thus needed to be appointed, and the initiation of a new protocol was required. The activities for the Masters 1 group included assisting students with clearly conceptualizing their new research topic. Sessions were held with students on an individual basis and the students thus assisted completed their protocols and submitted these to their supervisors for marking, so that they could be corrected and submitted to the UKZN postgraduate office.

Three full day group sessions were held with a group of ten students, all from the class of 2007 and at a similar stage in their research process, who had not completed their dissertations. The activities included strategic planning, time management, a recap of the research process, and discussing their progress to date on an individual basis and planning a way forward.

Ethical Clearance for Students' Research

The Biomedical Research Ethics' Committee (BREC) at UKZN relies on the voluntary contributions of reviewers and the Chairperson of BREC also works on a part-time basis. The procedure of submission to BREC has changed over the past decade in order to improve efficiency, but the data showed that students had experienced difficulties in the process of obtaining ethical clearance, and they needed assistance overcome these impediments.

Data Analysis and Interpretation

Students undertaking the MPH have a varied history but few are well versed in statistical analysis, and although there is training during the MPH, students expressed a need to hone their skills. Formal training in the use of computer packages such as SPSS to undertake the analysis was also requested. Workshops on SPSS were thus arranged initially to introduce the students to the package, but it was found that several days were required for

students to learn how to use the package. The students explained that aspects such as accessing the computer packages which they required and to which as students they were entitled, were also difficult because of their lack of computer skills (as identified by the questionnaire responses). Thus a series of workshops was held to address these needs.

Requests Fulfilled for Additional Training

Students attending these workshops requested additional training and the following sessions were arranged.

- Methodology planning and writing
- How to structure a master's report
- Computer training - basic and intermediate word
- Publication search and Endnote

Supervisors' Workshops

The student support programme envisaged workshops where supervisors could come together to discuss strategies to optimize throughput of students and to identify the gaps in students' skills that further specific training could address. The supervisors selected for the students were from a range of disciplines as explained above and finding a convenient time was difficult. Further, the supervisors from other disciplines did not consider this a priority, as they had their own workload. Thus despite students' requests we were unable to bring supervisors together to agree on a common strategy.

The student workshops that were held on the topics described above in Table 1 were well attended (number of students attending averaged 10-15) and from the students' evaluation were found to be very useful. Most sessions were held over the weekend usually on a Saturday. Telephonic contact was maintained with a further ten students since the plan was to have some form of contact with all; this was an on-going process. However, students who lived in distant rural areas experienced difficulties in travelling to the workshops.

Unmet Needs

There were however, many other topics that had been suggested and which were not provided for. This is the list of topics identified and unmet in the programme from the staff and student questionnaires:

- Research writing / English writing
- Skype connection
- Intermediate word
- Using Drop Box
- Tracking – use and function
- Referencing / electronic referencing /data searches
- Statistics / data analysis
- Moodle site for research project

Evaluation of the Process

This was not a formal evaluation but followed Phases 1 and 2 (the student completion of the questionnaires, the telephonic interviews, discussions with staff and the student workshop evaluations). The GPPH lacks sufficient staff and this intervention highlighted the importance of regular contact with the part-time students. We were surprised at the extent of the positive responses from students and how much they appreciated the individual contact and concern about their progress. The time frame that we used with most activities in the second semester was not optimal, and this support, the data shows, needs to be better structured throughout the year. This intervention project was managed on a part-time basis and indicates the need for a more sustained process to address the needs of students.

Completion Rate

The outcomes of the MPH Mentorship and support programme to date have been disappointing with just a few additional graduates. However, the programme has encouraged some students to work on the different stages of their research. Ten students, who had registered many years ago, are currently engaged in registering their protocols, collecting data and writing

up the results. Four students have submitted their dissertations to be examined and as noted above a further two are now the authors of peer reviewed and published manuscripts. Many students (11) who expressed interest and mentioned that the mentoring was appreciated, have not done anything about their research citing pressures of work and family commitments.

Discussion

Improving the student throughput and successful completion of their degrees is of academic and institutional concern. This action research provided information on the challenges experienced by MPH students who have completed their course work but not the dissertation necessary for a Master's degree. In the first phase of this project these students confirmed the results of other studies that have identified contributory factors as comprising students' personal issues, supervision and tuition and the availability of infrastructure to support their research (Jiranek, 2010).

As reported in other studies personal issues affected students' progress and this study confirmed Myers and Earthman's account (1999) of barriers to completion, which found that time, professional obligations and personal reasons and not financial issues influenced non-completion. Most of the MPH students were from KwaZulu-Natal and worked in the different health districts where they intended to undertake their research. Many held senior positions and in these areas there was no academic support, supervision or encouragement to complete their studies. Additionally, the daily pressures of work overtook their research plans.

Prior to this action research approach, we had not prioritised the importance of mentorship but the students highlighted both in the telephonic conversations and when they attended the workshops, how much they appreciated the personal interest. The students live and work in outlying areas most of which lack academic input and this may have also increased their feelings of isolation. The students' lack of progress and lack of contact with their supervisors indicated that a more formal, structured process is required, where a minimum number of supervisory sessions are planned and implemented and that more regular monitoring reports on the students'

progress are undertaken followed by quick action to address relevant concerns.

Many of the students were based in health institutions which should have assisted them to develop research questions and facilitate the research process. Further, the advances in technology and the upgrading of the UKZN web-based facility offered students access to scientific literature and information to complete the dissertations. Not completing means that in some way students were not prepared for working on research once they left campus or how to recognise research interests that emerge in the workplace.

In the second phase of this project to meet their identified needs a programme of workshops and individual facilitation was developed, implemented and evaluated. The workshops that we initiated to encourage students were well attended and found to be beneficial by the students. The need to support students through the research process was once again highlighted. Providing them with basic skills was deemed very useful by the students in their evaluation.

In our action research students complained about the difficult administrative procedures at the institution. Martinez (2001) explains that we need to understand what causes students to complete or withdraw, what makes the difference and what institutions should do to make improvements. He explains that student satisfaction is an important factor affecting completion rates and from our action research there is thus a need to streamline the administrative requirements to assist students.

Wong and Wong (2010) reported the difficulties students experience in undertaking the research and the importance of support regarding their problems with scientific writing. These concerns were also identified by the MPH students in our study.

To date both the Postgraduate Diploma and Masters' Degree have been offered. The timetable is also student centred, in that students can engage in distance learning and complete assignments at home to limit the contact time that they are obliged to spend at university and away from work. This has the advantage that the time frame is more feasible for adult learners, but also has the disadvantage that without a structured follow-up programme it is easy for students to fall behind. Ijsellmulden et al. (2013), emphasise that training in Africa in the field of public health is undertaken by small units at universities, and they comment that such approaches lack the

capacity to develop the critical mass of public health experts required both in South Africa and the continent. In comparison a developing country such as Brazil has adopted a very different approach to the training of public health practitioners and this has paid dividends in their health outcomes (Rowe et al., 2005). Their large public health sector has a powerful voice in society and Brazil was one of the first countries to manufacture its own antiretroviral drugs and to provide this treatment to patients in need (Galvao, 2002). Ijsselmulden et al also comment on the progress that is being made in increasing the availability of public health training, and this is the rationale behind our efforts to assist our students to achieve their public health qualification. A more qualified health workforce trained in public health can make a significant contribution to the many challenges faced by South Africa and the rest of Africa. An example is the recent decrease in transmission of HIV from mother to child in KwaZulu-Natal which has been reduced from over 21 percent in 2009 to 3.5 percent as at September 2012 (KZN DoH, 2012). This was achieved by improving the systems employed onsite to ensure that all pregnant women were tested for HIV, and that they then received antiretroviral medication if found to be HIV positive.

It is thus important to develop strategies to improve the competencies of health officials through postgraduate training in order to improve health outcomes in South Africa. It is, however, not only a local but also a national concern. Hoffman and Julie (2012) explain in their study of masters' students at the University of the Western Cape, that despite increasing enrolments in postgraduate studies, the transition from undergraduate to postgraduate education is proving a challenge in that many post graduate students fail to graduate. It is an ongoing concern – in 2001 the South African government through The National Plan for Higher Education South Africa (NPHESA) aimed to provide institutions with the support required to increase the rate of graduation (DoE, 2001), but progress has been slow.

The challenges are thus both those faced by universities throughout the world in engaging with postgraduate students, but also very local problems relating to the educational background and skills of the current workforce from whom we need to draw our students. At the local level our programme identified a strong need for additional training, mentorship and support. This has been recognized by other institutions and, for example, the University of Witwatersrand has a Postgraduate Student Mentorship

programme (University of Witwatersrand). The University of Melbourne offers “10 tips for mature age learners” which includes time management, a topic that was addressed in our communication with the MPH students, and found to be helpful. It is not usually included as part of the MPH programme, but learning from the students’ experiences we need to adapt the MPH to include such topics to assist students (University of Melbourne). Another tip from the University of Melbourne is to embrace technology and we need to ensure that our students improve their skills in this regard, since many of our older students lack competence in using the available information technology.

Mentorship may assist in facilitating students’ progress but a study noted the difficulties in maintaining contact between mentors and mentees, and in their study this difficulty was expressed by both parties (Butterworth, Hates and Zimmerman, 2011). It may be more practical in our MPH to have course mentors from the Discipline of Public Health Medicine who can assist students, identify needs and facilitate access to the additional academic support that is required. This is not to denigrate the critical role of the supervisor. James and Baldwin (1999) describe the “Eleven practices of effective postgraduate supervision” and emphasised that the partnership needs to be right for the project and that regular contact and feedback is essential. However, our experience is that students need a link with someone who can facilitate contact between the student and supervisor and monitor the extent of the supervision that occurs. With the proposed increase in the number of MPH students that is envisaged by UKZN these are important considerations. The University of St Andrews on their website explain to students the procedure if they feel that that they are not receiving adequate supervision (University of St Andrews, accessed 4 January 2013), and this is another possible strategy to follow.

Trigwell & Dunbar-Goddet (2005) in their report on the postgraduate research environment experienced by students at the University of Oxford list the requirements of postgraduate research programmes as defined by The Quality Assurance Agency for Higher Education, 2004. These are an “environment where high quality research is occurring, clear and equitable admissions systems, effective supervision, progress, review, feedback and complaints and appeals mechanisms, opportunities for students to develop research and other skills, and clear, fair and accessible assessment criteria”.

(Trigwell & Dunbar-Goddet, 2005). Our survey of MPH students' needs did not evaluate many of these aspects, but as the information obtained in our survey from MPH students does indicate, there are many aspects that need to be addressed, including a more structured approach to supervision, focused attention on student training needs, improved administrative procedures and additional mentorship and support. Mentorship and the workshops that were arranged make a contribution but more of these activities need to be built into the MPH programme.

Another suggestion is to encourage a cohort system of student researchers so that they can assist and support one another (Samuel and Vithal, 2013). The UKZN School of Education has been active in developing a "collaborative cohort model" as compared to the "apprentice master model" and this appears to encourage collaborative learning and improve throughput (Govender & Dhunpath, 2013).

Limitations of the Study

Although it was only five years later since students left the university, we were unable to contact many of the targeted students who had registered for an MPH but not completed their dissertation. The data collected and the workshop evaluations were thus from the more limited number of students who participated. It is not known whether these students had similar issues to those who could not be contacted.

Validity

Credibility is the validity construct for this study. The data sources were triangulated and included the questionnaires, semi-structured telephone interviews, staff discussions, and workshop evaluations. At each stage of the process the authors (staff member and facilitator) reflected on the data collected and reviewed the reliability of the information.

Conclusion

Assisting postgraduate students to complete their research has proved

challenging. Our experiences these past two years has improved our understanding of students' needs and will require innovative and continuing approaches to assist them meet their goals. This action research has provided a better understanding about students' personal and administrative problems, and their difficulties with supervision and implementation of their research. A more structured process providing both academic and peer support may be helpful and assist students to complete their dissertations and papers, facilitated by additional staff through a cohort-based programme.

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Harmony and Conflict in a PhD Cohort Supervision Model

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Abstract

Doctoral supervision has experienced an evolution from the traditional one-on-one master-apprentice model to the cohort supervision model which draws on the collective expertise of experienced and novice supervisors and student peers. An earlier exploratory study (Govender & Dhunpath 2011) which appraised student experiences and the key principles of collaboration and collegiality revealed two significant trends that seemed to characterise the cohort model. First, the relevance of cohort supervision in the post-proposal generation phase was of variable relevance to candidates and second, the challenge students experience in reconciling support from cohort supervisors and appointed supervisors; and between principal and co-supervisors undermined the model. In this article, we document the analysis of data derived from a follow-up study. We subject the two trends to further scrutiny, presenting the diversity of experiences framed by theoretical and conceptual understandings of collaboration, experiential learning and peer-partnership inquiry. Based on further evidence generated, we argue that the post-proposal supervision is as valuable as the proposal generation phase and that the cohort model cultivates greater academic maturity and intellectual autonomy; enabling students to mediate the conflicting perspectives offered by supervisors. The article concludes with some reflections on the methodological framings of the initial and subsequent studies, signalling how researcher positionalities predispose them to particular analytical frames, stances and conclusions.

Keywords: collaboration and collegiality; supervision conflict; academic maturity; conflict and harmony

Introduction

Pemberton and Akkary (2010) describe educational cohorts as purposefully grouped students entering and pursuing a programme of study together, characterised by social and cultural processes, shared experiences and interactions, collective efforts, and mutual commitment to an educational goal. The PhD by Cohort emerged in response to poor retention, poor throughput and protracted completion of doctoral degrees internationally, which have been and still are a cause for concern (Burnett 1999; Lewis *et al.* 2010; Denecke & Frasier 2005; Golde 2005). Additionally, the unsatisfactory quality of research supervision stemming partly from traditional supervision practices has prompted an evolutionary shift from the traditional one-on-one master-apprentice model to cohort supervision of doctoral candidates. Several studies have documented significant benefits generated from the cohort model in post graduate studies (Mandzuk *et al.* 2003; Norris & Barnett 1994; Lewis *et al.* 2010; Saltiel & Russo 2001; Pemberton & Akkary 2010).

In an attempt to increase doctoral throughput, the University of KwaZulu-Natal (UKZN) School of Education has intensified support for its doctoral candidates through the cohort model of PhD supervision. The model supplements the one-to-one master-apprentice supervision with the collective expertise of a group of experienced and novice supervisors and student peers working collaboratively. Cohorts comprising approximately between 10 and 15 PhD students and their supervisors meet over 6 weekends a year (from Friday afternoon to Sunday afternoon) to support the work in progress of PhD candidates. Weekend sessions comprise critique of student presentations by cohort supervisors and student peers, as well as plenaries involving presentations by visiting academics/researchers.

The model has already been documented as effective in reducing attrition rates, elevating the quality of doctoral degrees and significantly increasing throughput rates. The exploratory study (Govender & Dhunpath 2011) which appraised student experiences of the UKZN cohort model

revealed that the cohort provided opportunities for deep research learning, superseding those provided by the traditional mentorship model alone. In addition, the key principles of collaboration and collegiality which underpin the model were reflected in interaction among students and between students and cohort supervisors as well as among cohort supervisors.

Despite the benefits reported in the 2011 study, two significant trends were observed. Firstly, students reported that the proposal generation phase was optimally useful in terms of the quality and relevance of input and support received from cohort supervisors and student peers. However, the value and relevance of the support appeared to diminish in subsequent cohort phases. Secondly, students reported tensions between cohort and appointed supervisors and principal and co-supervisors which in some instances compromised student performance. Consequently, some students found it difficult to reconcile support from cohort supervisors and appointed supervisors; and between principal and co-supervisors.

Since this data emerged from an exploratory investigation, the authors were reluctant to make any definitive conclusions. It was therefore necessary to extend the findings drawn from the initial study by generating evidence from a more focused follow-up study to interrogate the model and to establish whether the two emerging trends persist across other cohorts. The new sample of cohorts, also 2nd and 3rd year cohorts, does not differ markedly from the previous sample with the exception that one of the cohorts comprises entirely higher education candidates drawn from the academic staff from various disciplines across UKZN. The differences firstly are that the foci of the follow-up study are the two emerging trends rather than general student experiences of cohort learning. Secondly, the analysis of the data is guided by the new foci but more especially the authors concede that upon reflection the analysis of the data in the previous study privileged more heavily the value of harmony in cohorts rather than conflict. Consequently, analysis of the new data is additionally informed by theories underpinning the value of ‘disruptive’ pedagogy in advancing deep research learning.

Collaboration and Contestation in Postgraduate Studies

Our review of the literature (Govender & Dhunpath 2011) revealed that the cohort model has academic, affective and interpersonal benefits which

include the promotion of greater solidarity within cohorts by generating mutual support and protection, improved graduation rates, reduced attrition and the creation of intellectually stimulating environments within which research learning is facilitated. Among the limitations of the model, our review revealed that there is potential for discord among students in the cohort, pressures on instructors, and without purposeful faculty nurturance, departmental collaboration and administrative guidance, the cohort model simply becomes a convenient administrative tool without addressing students' individual needs.

Pemberton and Akkary's (2010:181) comprehensive review of the benefits and drawbacks of the cohort model similarly reveal that cohort candidates experienced improved academic performance related to enhanced feelings of support and connection and increased exposure to diverse ideas and perspectives. However, they noted the perceived or actual threat to faculty members of 'overly empowered' students, the negative impact of personal issues on group morale and performance, tensions between cohort groups, and pressures on cohort students to be productive. While Imel (2002) contends that an effective cohort creates a context which encourages mutual respect, fosters critical reflection, and stimulates the development of multiple perspectives, Slemp (2005) observed the proliferation of groupthink, ostracism of individuals from the cohort and mean spiritedness to instructors unpopular with the students. Perhaps most relevant to this article is Tietel's (1997) observation that a cohort model is a potential source of tension on existing structures related to the traditional teaching and learning processes, the role of Faculty/School members, and the purposes of the education programme. However, Saltiel and Russo (2001) suggest that cohort programmes will not supplant traditional programmes in institutions but will instead complement them by bringing in students and resources that probably would not have come to a traditional programme.

Literature on the cohort model, while documenting several benefits and drawbacks of the model, is limited in terms of documenting the value or otherwise of collaborative supervision over the use of an individual supervisor. The search was therefore broadened to review different schemes of doctoral supervision and not necessarily confined to those encompassed within a cohort programme. The consequent literature search (Powell & Green 2007; Davis 2004; Mahlapuu 2011) revealed some ambivalence

regarding the value of collaborative supervision versus the use of a single supervisor. Davis (2004) stresses the value of doctoral consortia where students present their work at various stages of development and receive feedback from senior researchers and students. As a counterpoint, Mahlapuu (2011) found that despite the advocacy of joint supervision on the basis that it provides efficient support and acts as a 'safety net', her study revealed that the benefits of joint supervision remained scarce when measured against the drawbacks including tensions caused by supervisors disagreeing with each other or increased distance between student and supervisor(s).

Powell and Green (2007) assessing the value of supervision by team versus individual supervisors found that their own experiences and perceptions of working in teams revealed benefits for supervisors in terms of broadening their view of the subject material and possible ways of exploring it. However, they argue that there is no compelling empirical evidence from their study to support these claims. In addition, they concede that their study does not present evidence of the benefits for students of collaborative supervision although they presume that students will make use of various kinds of methodological expertise that different supervisors bring.

Significant for this article is Powell and Green's (2007) observation of the danger of imposing team supervision on academics who are accustomed to supervising alone and the greater danger when roles within team supervision are not clarified but obfuscated. This, they contend, may lead to academics wrestling with ill-defined social structures than supervising students, and students finding themselves in academic relationships with individuals offering potentially conflicting views of their roles and conflicting views on the project in hand that remain unresolved.

Literature on the cohort model reviewed in the foregoing section while conceding the value of dissenting voices and conflicting views in some cases nevertheless privileges harmony in cohorts rather than contestation. Underpinning the views about the cohort model is a presumption that the process of learning must be seamless, harmonious and non-disruptive, a 'happy pedagogy' that insulates participants from the ravages of contestation. Ironically, perhaps, this conception of supervisor is antithetical to the very purpose of what doctoral education is aiming to provide: opportunities for extending the boundaries of knowledge, not simply confirming or expanding them within 'restricted parameters' defined and confined by the powerful

experts in the cohort. Noting that supervision of higher degrees research is a pedagogical activity, perhaps the most advanced level of teaching in our educational system (Connel 1985), and noting also that disputation is key to learning within a cohort, this literature search has been widened to include the cultural politics of pedagogic practice (Giroux 1997).

Giroux (1997) believed that if the social nature of conflict and scepticism was removed from pedagogical encounters, it would promote inert ideas and produce tunnel vision. He contends further that if pedagogy fails to encourage self-reflection and communicative interaction, it promotes manipulation and denies opportunities for critical reflection, arguing that any progressive notion of learning must be accompanied by pedagogical relationships marked by dialogues, questioning and communication. In a similar vein, the pedagogical encounter within post graduate seminars (and by implication the UKZN cohort seminar sessions) is a highly contested but a deeply enriching learning experience as so astutely articulated by Green and Lee (1995:41):

The seminar is a powerful means whereby what counts as academic-intellectual work is represented and authorised. This does not just involve the presentation itself, whether a virtuoso performance or simply the spectacle of intellection, thought thinking itself, but crucially also the exchange afterwards, in the manner in which individuals of varying authority and expertise engage with the presenter or with each other and the manner in which the presenter responds to and transacts with others in the session. It is for students a matter often of watching and learning how to be, how to interact and intervene, how to introduce and develop a commentary however attenuated it might need to be in the circumstances, [and] how to work with difference and disputation.

Theoretical Framing

Drawing on existing literature on collaborative work and reflection arising from experiential learning as well as the value of student engagement with conflicting views in cohorts particularly with regards to the academic benefits of cohorts, we interrogate cohort support in different phases of the

doctoral research endeavour. Our study is thus framed by theoretical and conceptual understandings of knowledge generation through collaboration and experiential learning (Wenger 1998; Kolb 1985; Kolb & Fry 1975; Boud *et al.* 1985). Additionally we use differing discourses of supervisory relationships (Grant 2005), and peer partnership inquiry to improve PhD supervisory relationships (McMorland 2003) as lenses to view the data. To explore the value of contestation, disputation and contradictory positions which impel critical reflection in cohorts, the data is viewed through the lenses of critical pedagogy (Giroux 1997).

Lave and Wenger's (1991) model of situated learning proposed that learning involved participation in a community of practice whose members are engaged in the sustained pursuit of a shared enterprise. Members are brought together by joining in common activities and by what they have learned through their mutual engagement in these activities (Wenger 1998). The shared learning experiences of both students and cohort supervisors within a context of collaboration, mutual support and reciprocal intellectual stimulation are subjected to interrogation framed by Lave and Wenger's (1991) constructs of situated, peripheral learning. Additionally, the wide range of activities within cohorts calling for learning through reflecting on 1st and 2nd hand research experiences are interpreted within the frame of experiential learning, and reflection which is a critical facet of learning from experience. Cohort activities resonate with the activities that Kolb and Fry (1975), Kolb (1984), Jarvis (1995) and Boud *et al.* (1985) consider to be linked to reflection. These include the following activities: making sense of experiences we have had, comparing notes, round-table discussions, carrying out post-mortems (metaphorically speaking), and having informal discussions.

The study is also framed by peer-partnership inquiry (McMorland *et al.* 2003) which encourages dialogue among PhD candidates, supervisors and other faculty members in a reflexive mode to enhance the practice of supervisory relationships. Conversations about research and supervisory relationships are directed at developing skills in peer learning and peer engagement and strengthening a culture of learning across multiple role relationships. Peer-partnership inquiry is used to interrogate the multiple relationships existing within cohorts and the possible tensions associated with these relationships. These include relationships among students within a

cohort, between students and cohort supervisors, among cohort supervisors, between cohort supervisors and appointed supervisors, between students and appointed supervisors, and between principal and co-supervisors.

To extend understanding of relationships between students and their appointed supervisors, these relationships are interpreted within the frame of the four main discourses of supervisory relationships. The four discourses of supervisory relationships are: *psychological-supervisor/student disclosure* – the psychological supervisor is primarily a caring professional offering personal support and guiding the student to maturity as an independent researcher, *traditional academic-supervisor/student relations* - this type of supervision is seen as intellectual apprenticeship and marked by formality and distance, *techno-scientific-supervisor/student relations*– this type of supervision is marked by close monitoring of the efforts of the student, who must be schooled in the right methods of research, *neo-liberal supervisor/student relations* - here the student is an autonomous chooser, a consumer of services provided by the supervisor, with both parties having certified rights and responsibilities (Grant 2005).

The theoretical positions underpinning the models of communities of practice, experiential learning and peer partnership inquiry celebrate the agency of the individuals as co-operating and collaborating with each other in a communal, shared and common enterprise. This presumes that harmony rather than contestation is the ingredient for activating learning. While harmony can and does facilitate learning, it can also cultivate sterile learning, reaffirming existing, uncontested and potentially flawed positions. Furthermore, the community of practice is not a neutral, happy, safe or uncontested space. It embeds power relations and hierarchies and the shared enterprise is one which should recognise the degrees of dissension even if it evinces a communal character. In addition, dissension and conflict as conceptualised in a critical pedagogy can and does produce new and empowering knowledge. Therefore in designing programmes that are genuinely emancipatory, conflict must be rescued from its pejorative connotation (Vithal 2003:343). Vithal contends that a pedagogy of conflict and dialogue is as a key an ingredient for self-development, as dialogue is. Vithal views the pedagogy of conflict and dialogue in its antagonistic or conflictual character together with its co-operative or dialogic nature as a complementarity. While the value of conflict within cohorts is used as a lens

to view the data, the issue of threshold levels of disruption and the need to support students to cope with the degrees of disruption has to be a key design element, as raised by Vithal (2003:343) who cautions that learning how to critique becomes extremely important if a pedagogy of conflict is to be productive rather than damaging.

Methodology

The data was drawn from questionnaire responses to open-ended questions, telephonic interviews to clarify responses in some cases, and individual face-to-face interviews. Participants comprised 12 doctoral candidates from 2nd and 3rd year cohorts. The data focused on the quality and usefulness of cohort support in the various phases of the research project, viz. data generation, data production and analysis, and writing up the thesis. In addition, data collection covered the area of collaborative supervision and its impact on traditional supervision particularly possible tensions, conflicting advice and consequent effects on students. Informed consent to participate was elicited from all participants prior to data generation. Additional data was drawn from evaluation reports of seminar sessions culled from evaluation forms completed by students.

Analysis

The data was subjected to content analysis framed by theoretical and conceptual underpinnings of the study. The analysis is anchored by a scrutiny of the two themes selected from the initial study.

Usefulness of Cohort Support in the Three Phases

Findings from the initial study revealed that cohort support in the first phase, proposal generation, was most useful, with waning relevance in the post-proposal generation phase. The data from the follow-up study reaffirms the perceived value of cohort support in the proposal generation phase but also suggests that the post proposal phase provides useful support to students of a qualitatively different kind with different learning outcomes for candidates.

As was raised earlier in the article, the positionality of the authors which privileged harmony in cohorts rather than conflict may have influenced analysis in the earlier study to produce findings that the post proposal phase was counter-productive or increasingly irrelevant to the PhD candidates.

Proposal Generation Phase

The majority of the respondents confirmed findings from the initial study that the proposal generation phase was indeed the most useful in terms of cohort support from both student peers and cohort supervisors. The general perception was that the proposal generating phase was critical to all the other phases and there was clear, focused and generic support for constructing a proposal that would stand up to rigorous critique in the proposal defence and provide an anchor for subsequent phases of the research project. The following responses suggest the significance of the proposal generation phase:

- This is a very difficult phase of the PhD as not only is there the difficulty of understanding research methodologies but there is the confusion around exactly what the research phenomenon and ultimately the research question is. The cohort provided support on multiple levels...research methodology, philosophical perspectives ... also provided a valuable forum for presenting and discussing our thinking around the development of our proposals.
Most useful is the proposal generation phase...firstly this is when there is the most confusion, secondly everyone is essentially doing the same thing, just in different areas. This means that the ‘teaching’ is generally appropriate to everyone.

Despite the general consensus that the proposal generation phase was most useful, there were two respondents who indicated that cohort support during this phase was counterproductive. One of the respondents felt this was because cohort supervisors who operated outside of her discipline ‘had not read [her] entire proposal’; were not familiar with the discourse of her discipline and relied heavily on her inputs which compromised her progress particularly in Phase 1 of the cohort programme. The lack of discipline specific knowledge by cohort members and especially the cohort supervisors

was also raised by the second respondent who similarly found cohort support in the proposal generation phase counterproductive. He stated: ‘There was a disconnect between my thinking and [the cohort supervisors’]...we were not on the same page because of our differing disciplinary knowledge bases’.

The proposal generation phase is preoccupied with generic research issues cross-cutting various disciplines. Hence, the candidate here may not be experiencing a disconnect because of lack of disciplinary knowledge by peers and cohort supervisors but by his disconnect with the worldviews which were perhaps different from his disciplinary home traditions and rituals of research methodology. This may be particularly so when students are crossing disciplinary/ field boundaries such as when they are entering into the discipline of Higher Education from *outside*, e.g. from Management Studies or Computer Science. The orientation and substance of Educational discourses may be alienating and disempowering to some rather than emancipatory, in the initial states at least.

Notwithstanding what the candidate found frustrating and limiting, the prospect of deepening his scholarship and disciplinary knowledge was compromised as he was required to constantly orientate and re-orientate his cohort peers and supervisors to his discipline. This respondent admitted that during his proposal defence he ‘threw out everything’ suggested by the cohort in earlier sessions and reverted to substance of his original proposal on which his application to the programme had been based. He added that he experienced an epiphany which affirmed his intellectual worth when one of the cohort supervisors who was at the proposal defence conceded that he finally understood the intent of the research project.

These findings ostensibly conflict with the literature which documents benefits for cohort members such as development of critical thinking skills (Chairs *et al.* 2002), development of an enhanced knowledge base (Norris & Barnett 1994), motivation to learn more (Brooks 1998), and changes in perspectives on their own and others’ learning (Lawrence 1997). However, the literature also reflects that advancing disciplinary scholarship is the domain of the master cast in the role of discipline expert as contemplated in the traditional academic-supervisor/student discourse (Grant 2005) while team supervision benefits students by affording them a range of methodological expertise and generic research support (Powell & Green 2007). The use of the cohort model alongside traditional supervision at the

UKZN School of Education allows PhD candidates access to discipline experts as well as methodological expertise and generic research support.

Additionally, the epiphany the candidate (cited above) had experienced is perhaps suggesting that ‘research learning’ within the doctoral supervision process is not a *one way street*, i.e. that the student imbibes the supervisors’ knowledge. Instead, research learning is a *multi-tracked highway* of opposing and competing directional forces, i.e. that opportunities for ‘research learning’ for supervisors is what renders the model emancipatory, especially since supervisors may be credited with having supervised research, but are not necessarily generic discipline experts.

In addition to lack of discipline-specific knowledge, the too rigid and inflexible cohort structure, particularly (but not solely) in the proposal generation phase, was raised by a respondent as a drawback. The following response captures that position:

- I had a challenge meeting the rigid timelines for the deliverables while trying to do life. I used to feel inadequate and frustrated and I used to resent the cohort weekend – not being able to keep in sync with others who had been making good progress while I appeared to be falling behind I am an organic intellectual and I don’t think the cohort provides a space for that kind of individual.

However, other respondents appreciated the tight deadlines as this kept them on task. The literature also speaks of the drawbacks of structural and organisational rigidity of closed cohorts prompting Pemberton and Akkary (2010:202) to recommend an open and flexible model, wherein connection opportunities are facilitated via proximity and mutuality of purpose, absent rigid group admissions/enrolments and course sequencing requirements. However, unlike the lock-step model that Burnett *et al.* (2000) refer to, the UKZN cohort model allows for structured flexibility of movement across phases depending on the progress of individual students. Hence, the model is characterised by ‘democratic teaching/learning participation’, ‘structured scaffolding’, ‘Ubuntu’ and ‘serendipity’ (see Samuel & Vithal 2011). Additionally, candidates effectively determine the focus and content of cohort sessions within a broad developmental curriculum framework.

Post-proposal Generation Phase

While the proposal generation phase was generally regarded as most valuable in their research journeys, the respondents also underscored the value of cohort support during the data production and analysis phase. The writing phase was regarded as an independent activity requiring own effort although there was a suggestion that students be allowed more time to interact and share their experiences of writing-up together. The following comment attempts to correct a persisting misperception:

- One may be tempted to think that the cohort has less value once we all enter our various analysis modes - as we diverge in philosophy, methodology, etc. However, I must say that I learnt from every single person's presentation and the feedback they received. There is amazing value in engaging in conversations with colleagues at this stage.

All of the respondents who had progressed to Phase 2 (Data Collection and Analysis) or further in the cohort programme agreed that support in the post proposal generation phase was useful. The respondents referred to a range of support including meaningful inputs from cohort supervisors and visiting academics during the Friday night plenaries on research methodology, from peer presentations, and from cohort supervisor and peers' comments on their work in progress. The following responses reflect this position:

- In this phase (Data Generation) I have felt the advice invaluable and more constructive. There has been a lot of assistance with theory development and methodologies.
- I really valued the process of listening to other people's analysis of their data. I feel that one of the big problems at this stage of the PhD is knowing how to approach the analysis and then how to undertake the analysis. By observing other students undertaking their analysis, it gives a great insight into possibilities and pitfalls. This is extremely valuable and something that moves from the theory to the practice of analysis.

- I am only just entering this phase, but again have found the cohort to be extremely helpful. At our last cohort I presented some of my initial thoughts around the analysis of the data. This phase echoes with sentiments of confusion and drowning last felt in the proposal phase. The cohort was very valuable in providing useful insights that are often hidden from us.

These responses are indicative of sustained engagement with and commitment to cohort work and a high degree of cohort cohesiveness. One of the respondents stated: ‘in this phase [data generation]...the group is more familiar with each other and their research topics. I am also more comfortable with the cohort supervisors’. This was not evident in the findings from the initial study, where more than one respondent indicated the irrelevance for their study of the second and subsequent year seminar sessions and their desire to break away from their cohorts and work with students in similar research areas (Govender & Dhunpath 2011:92). It was evident that there was a lack of cohesiveness in the cohorts to which these respondents belonged, and the lack of commitment of these respondents to their cohorts perpetuated the weakening of these cohorts. Group cohesiveness and group support are integral to the success of cohorts, especially where there is a high degree of cohort cohesiveness; friendships that outlast the completion of the degree are forged (Potthof *et al.* 2001).

Apart from the greater cohesiveness of cohorts to which respondents in the follow-up study belonged, there was also evidence of greater academic maturity among several of the respondents which may also account for their sustained engagement with cohort work beyond the proposal generation phase. The majority of the respondents are academic staff members with six of the eleven PhD candidates belonging to the Higher Education cohort engaged in advancing scholarship and knowledge generation in their disciplines. While being an academic does not guarantee academic maturity, the reality that many of these candidates are pursuing their PhDs for purposes of ‘deepening scholarship in a discipline’ would probably translate into sustained and deeper, more meaningful engagement in their cohorts, beyond the proposal generation phase. Evidence of deep and meaningful engagement in the cohort in all the phases is apparent in the openness to a range of diverse comments and suggestions from cohort supervisors and

peers, commitment to working collaboratively, articulation of a need to constantly reflect on cohort learning, and an acknowledgement of student growth by students.

A comment captured in an evaluation report on the 4th Higher Education Cohort Seminar for 2012 read: ‘It was interesting to note how the level of comments coming from cohort members has definitely risen to being far more perceptive, confident and useful’. This suggests a shifting quest for autonomy and independence and support and dependence over different stages of their research learning process. It is not a linear or stage developmental model of learning, but a shifting and re-interpreting of the goals of the learning and teaching environment.

Many of the respondents welcomed ‘fresh opinions and viewpoints’, found it ‘useful to bounce ideas off other students’ and appreciated the value of divergence manifested as ‘people collect data in different...but extremely useful [ways]’. One of the respondents noted:

- The cohort provides a vantage point to engage with a complexity of ideas and positions and often the ideas are a product of serendipity – one little snippet offered by someone fundamentally changes your thinking...I am able to draw on these multiple sources of expertise to enrich [my study].

This response attests to the value of collaborative work in enriching learning experiences and improving academic performance through exposure to diverse ideas and perspectives (Barnett & Muse 1993) and which engenders shared learning through mutual engagement in common activities (Wenger 1998). Other responses, suggesting deep research learning triggered by reflection arising from comparing notes with peers, making sense of own and others’ experiences and engaging in informal discussions (Kolb & Fry 1975; Kolb 1984; Jarvis 1995; Boud *et al.* 1985), are captured in the following quotes:

- The critique of others assisted me to consider my own research in more critical ways.
- Allowed me to think more laterally, and anticipate possible critiques of my work.

- As the phases progress there is need for more individual reflection...more time should be built in for ‘quiet time’ where students spend an hour working on what they have just heard while having ready/easy access to the cohort leaders for advice.

The quality of cohort supervision and the enthusiasm of cohort supervisors are also critical to sustaining meaningful student engagement in the cohorts beyond the proposal defence. Lawrence (2002:84) argues that when commitment is high and contributions from all members are valued, communities have the potential to co-create knowledge, make effective decisions, and effect change. Norris and Barnett (1994) contend that a cohort is more than an administrative arrangement; cohorts must be purposefully formed and structured if they are to succeed as environments that foster learning and development. Much of this purposeful structure and encouragement of collective commitment emanates from the instructors, facilitators or cohort supervisors. The following responses suggest that high quality cohort supervision was a factor in sustaining cohort participation beyond year one:

- I am truly grateful for the level of commitment and sacrifice (of cohort supervisors) which was at the highest level which is inspirational.
- I find supervisor X to be particularly provocative and stimulating and able to push students into innovative directions. Her constant revision/revisiting of each of these aspects clarified several confusing issues. It can be seen that she takes much time to prepare all this work, and on a personal basis that also has provided inspiration to me, which is a vital aspect of support.

Supervisory Support - Cohort Supervisors, Principal Supervisors and Co-supervisors

The data revealed interesting dynamics regarding relationships between students and supervisors and among supervisors within cohorts and at the interface of the cohort programme and traditional supervision. The issues of

power differentials, power plays (McMorland *et al.* 2003) and the potential tensions exerted by collaborative supervision on traditional teaching and learning processes (Teitel 1997) were illuminated.

Positioning of Cohort Supervisors

The data revealed that the position the cohort supervisors adopt in respect of students and fellow cohort supervisors impacts significantly on students' emotional states and invariably on their receptiveness to cohort learning. While the data revealed that there is a high degree of collaboration among cohort supervisors which supports the learning and development of PhD candidates, there is also evidence of what one respondent labels 'academic swagger'. By this she is referring to cohort supervisors showing off 'their wealth of knowledge and experience which can be helpful and a positive thing'. However, she adds:

- We, the students, are not so experienced or well-versed in all areas of the discipline to engage at that level. Our area of 'expertise' at this point is in our study. Perhaps later in the 3rd phase we can engage more on debates in the discipline. At this point we are just concentrating on moving ahead, with the least amount of disruption.

The reported consequences of 'academic swagger' are that sessions tend to lose focus and time limits are not adhered to. A similar finding was revealed in the initial study where one of the respondents asserted that he was at the mercy of academics that were intent on showcasing what each knew instead of assisting him. Pothoff *et al.* (2001) and Tareilo (2007) contend that cohorts should be sites of intellectually stimulating discussions and debates and incisive inputs from professors and other senior scholars. However, students' capacity to engage meaningfully with such input is also critical to research learning and what is pejoratively labelled as 'swagger' might be an articulation of students' insecurities about their knowledge as revealed in: 'The cohort has often made me feel insecure about my abilities – it has often forced me to contemplate whether the problem was actually linked to my own arrogance'. It may be argued that supervisors are expected to 'profess' and demonstrate their repertoire, to disrupt candidates'

‘arrogance’ and to elevate the quality of debate, moving candidates from the superficial to the profound.

Perhaps of greater significance than the ‘academic swagger’ of cohort supervisors are the power relations prevalent within cohorts between students and cohort supervisors. One of the respondents asserted:

- Power relations between [cohort] supervisors and myself is certainly an issue I’ve had to deal with – despite what I said about having a ‘teachable spirit’. I sometimes feel that my expertise and experiences as an academic are not acknowledged and affirmed as important and significant to my research endeavour – there’s something about the power dynamics of the cohort space that I don’t experience with my supervisor.

This sentiment was echoed by another respondent who stated: ‘One of the cohort supervisors really got to me in a serious way. I found myself frequently trying to prove myself to the supervisor – and to the cohort’. Evidently, the power differentials within cohorts favour the cohort supervisors, some of whom are cast in the role of experienced researchers, rather than the PhD candidates who are conscious of their novice researcher status.

Other respondents commented on the lack of sensitivity of cohort supervisors when critiquing students’ work in progress. One of the respondents stated: ‘At times the approach when advising students was intimidating and demotivating’. Although she conceded that ‘such powerful criticism has made us resilient and spurred us on to persevere’, she added that early cohort sessions are crucial to the emotional wellbeing of most PhD students. She advised: ‘Supervisors need to be circumspect in these early PhD weeks regarding the manner in which their vital support is articulated. Often, negative criticism is well received when the tone and manner of articulation is not condescending or demeaning’. A similar comment was made by another respondent:

- While care and critique are both borne out of interest in the student, and critique is care, the manner in which that is delivered to the student must be carefully considered. It may not have happened in

my group, but to hear that some cohort supervisors use personal, derogatory criticism is not acceptable.

Instructive for the debate around student/supervisors and supervisor/supervisor relationships within cohorts, are the findings from peer-partnership inquiry to enhance PhD relationships (McMorland *et al.* 2003:25). Reflexive inquiry involving both supervisors and supervisees revealed the following:

- One of the PhD students gained insight into the complexities of her co-supervisory panel and how to understand and better ‘manage’ the relationships between supervisors with hugely differing areas of expertise, methodology and understandings of supervision.
- The other has built on an existing strong supervisory relationship to initiate future research inquiry into the significance of power underpinning voice and silence in collaborative groups.

McMorland *et al.* (2003) suggest that more attention should be paid to the multiple and complex relationships that exist among students, staff and institution if the PhD endeavour is to be a fulfilling and creative enterprise for all. However, as was captured earlier in the article, this does not imply that a challenging disruptive pedagogy will not yield a fulfilling and creative enterprise. The goal is not to create harmonious emotionally supportive climates; the goal is to produce opportunities for producing new knowledge.

Principal and Co-Supervisors – Complementary Roles

Unlike the tensions that existed between some of the principal and co-supervisors in the initial study, data from the follow-up study revealed that where students had two supervisors they complemented each other. Each had strengths that were brought into the supervisory relationship to enhance the quality and depth of supervision. The teamwork and effective collaboration demonstrated by principal and co-supervisors are alluded to in the following responses:

- My supervisors work in unison with one another... one supervisor is very practical and gives clear, workable advice. The other supervisor is very strong academically and provides a clear critical perspective that is very useful.
- We work as a team ... [Where there are differences] we talk it through - one is an educator cum applied linguist and the other one is an educator public health practitioner - it's sometimes quite emotionally exhausting - but it makes me think things through.

It is evident from the responses that the principal and co-supervisors are able to work in unison when their roles are well defined, and often they play differing but complementary roles. Additionally, and contrary to an earlier assertion by the authors, students are not pulled in different directions, nor is there increasing distance between student and supervisors (Mahlapuu 2011). Here we are reminded of Powell and Green's (2007) caution that roles within team supervision should be clarified to obviate academics wrestling with ill-defined social structures instead of advising students.

In spelling out the role played by appointed (principal and co-) supervisors compared to cohort supervisors, respondents commented not only on the increasingly important function they served after the proposal defence but also their attention to detail and their preoccupation with keeping students on task constantly. Appointed supervisors did not only play an academic role but also a caring, nurturing role according to the respondents. In terms of the four main discourses of supervisor-student relationships, the data revealed that appointed supervisors emerged increasingly as the psychological supervisor. According to Grant (2005), psychological supervisors are caring professionals who offer personal support, act as a source of motivation and encouragement and guide the student to maturity as an independent researcher. The roles played by appointed supervisors and the relationships between students and appointed supervisors are captured in the following responses:

- My supervisor has provided appropriate guidance without taking ownership of the study. She allows me to have enough freedom, while also providing adequate support.

- My supervisor presented me with many opportunities. She is prompt and gets back to me weekly about my progress. But she is also helping me develop in other ways, with her words of wisdom, support and concern.
- During the proposal generation stage the continual engagement with the cohort was the main support. However, my supervisor support needs are beginning to increase ... I now see [my supervisor] becoming more of a key resource in advising me and reading drafts of chapters, etc.

Appointed and Cohort Supervisors – Conflicting Advice

The data reinforces findings from the initial study of conflicting advice from cohort supervisors and appointed supervisors, which, in some instances, had generated tensions. Conflicting, unresolved views can be potentially dangerous (Powell & Green 2007) as illustrated by the case of one respondent. When the cohort supervisors' 'advice conflicted with [her] appointed supervisor's, it threw [her] off course and [she] had to defend [her proposal] twice.' However, the more academically mature the student becomes, the more easily can the contradictory advice be mediated. Not surprisingly, some of the respondents thrived on conflicting and contradictory views, arguing that 'multiple independent perspectives are more useful than consensus' and that this is what defines doctoral studies. The following responses underscore conflicting support from cohort and appointed supervisors:

- In the first year I did get mixed signals from the cohort and my supervisor and that was a source of frustration - until I changed my attitude. I resented it initially, until I accepted that I had the power to assess the validity of the multiple sources and derive what I thought was valuable... it's not easy to deal with this conflicting situation but you learn to see the bigger picture and learn how this is a source of enrichment.
- I don't think contradictory support and suggestions should be limited or eradicated. This is vital to the process, especially at a PhD level.

- There is no single way, or depending on philosophical paradigm - single 'truth'.
- Why would you want to eradicate [contradictory advice]? It's part of what I enjoy about the cohort model. Contradiction and paradox are central to themes in my study, so why should this be a problem for me in the supervision?

Despite some respondents recognising the value of contradictory and conflicting perspectives, there was, nevertheless, ample evidence that students wished to bridge the perceived or real divide between cohort and appointed supervisors. More than one respondent suggested ways of bridging this divide. One suggested inviting appointed supervisors to the cohort. Since several appointed supervisors also act as cohort supervisors, it might be correct to assume that the respondent is referring to inviting appointed supervisors to witness their students' presentations in the cohort. Another respondent considered the pros and cons of inviting appointed supervisors to their students' cohorts:

- Absence of the primary supervisor from the cohort frees the candidate to speak and present confidently without the apprehension of contradicting the primary supervisor. Of course the downside is that the supervisor does not get the benefit of the critique.

Some respondents suggested encouraging greater dialogue between cohort and appointed supervisors so that they could reach common ground:

- Both groups of supervisors must meet and be aware of what the other says to their students.
- I think at least one of the supervisors should also be a cohort supervisor so that there is a greater understanding of how the cohort could work to enhance the study and help the student to finish the study on time.

- Co-supervisors must meet with each other and understand each other's perspectives. Given the nature of academic discourse, supervisors must remain open to differing viewpoints. Then together they can try to assist the student. An appreciation of each other's contribution will help the student.

The literature also recommends greater dialogue among supervisors, not to silence conflicting and contradictory views, but to enhance supervisory relationships through peer partnerships and reflexivity (McMorland *et al.* 2003). Perhaps the following comment from McMorland *et al.* (2003:3) sums up the need to rethink relationships in collaborative supervision:

It is only by seeing supervision and research collaboration as relationship as well as a project, that intellectual intimacy, reflexive practice and creative inquiry can be fostered and enhanced.

Findings and Emerging Insights

Some of the more noteworthy findings and insights that emerged from the study include:

- The proposal generation phase of the cohort programme was still perceived by students to be very significant and offering the most useful and important support. Students considered proposal generation to be integral to the entire research enterprise. While quality input and focused support in this phase made it an effective learning and development phase, issues of inflexible structuring of the cohort model and the challenges of a limited discipline-specific knowledge base in cohorts compromised students.
- Contrary to previous findings, the post-proposal generation phase was perceived as being extremely useful as well. The high degree of cohort cohesiveness, greater academic maturity of students and high quality cohort supervision were critical to maintaining meaningful student engagement in the cohort beyond the proposal-generation phase. Opportunities to enhance cohort supervision and invariably to

enhance student participation in cohorts should be exploited through appropriate supervision training.

- As opposed to previous findings, there was evidence to suggest that principal and co-supervisors complemented each other, which impacted positively on the supervision experience for students. Critical to the complementary roles played by dual supervisors is the clear demarcation of roles, which is advisable to negotiate and document officially at the commencement of the research project.
- There was ample evidence of conflicting and contradictory advice from cohort and appointed supervisors which in some instances compromised students. However, in the main, with greater academic maturity, students are able to mediate the differing perspectives offered by the supervisors.
- Students recommended greater dialogue between appointed and cohort supervisors to bridge perceived gaps between cohort and traditional supervision. Dialoguing and reflection among supervisors and students are critical to enhancing supervisory relationships and not necessarily to silence disparate views.

Concluding Comments

This article has attempted to document, more objectively, findings from a follow-up to an earlier study which interrogated the cohort model of PhD supervision used in the School of Education (Edgewood Campus: UKZN). Two claims identified in the earlier study were interrogated to test their veracity, namely: relevance of the post-proposal generation support of the cohort programme, and the perceived tensions among cohort, principal and co-supervisors emanating from conflicting advice given to students. The findings from the follow-up study confirms that the proposal generation phase is still considered by students to be the most critical for their research studies, and the contradictory advice from the different supervisors do impact on the relevance and quality of supervision support.

However, the findings from the subsequent study reveal that the post-proposal generation phase is also useful and its relevance does not wane

in subsequent years. In addition, while students suggested bridging the perceived or real divide between cohort and appointed supervisors, students welcomed differing perspectives as these multiple perspectives enriched their own understandings, allowing them to affirm their own voices. Notwithstanding the positive elements identified by doctoral candidates, perhaps of greater significance, is the suggested need for dialogue and reflection involving all supervisors and PhD candidates in a peer partnership mode to enhance supervisory relationships while not silencing conflict and contestation in these relationships either in cohort sessions or one-to-one sessions between candidate and appointed supervisor.

A question which requires some attention before we conclude this article is what accounts for the discrepancy in findings between the initial and subsequent studies. One explanation is that the limited size of the initial sample generated a partial view of a limited number of participants. However, a more plausible explanation relates to how and why the initial analysis and conclusions were framed, particularly the reported tensions between cohort and appointed supervisors and principal and co-supervisors, which the authors identified as compromising student performance. That the tensions did indeed 'compromise' the learning experience for some of the respondents in the initial study is beyond dispute. What is under scrutiny is why the authors hastened to generalise this conclusion. Perhaps this may be attributed to the positionality of the authors, one of whom is a cohort supervisor. In concluding that the supervisor tensions were potentially disruptive, the authors de-valued the importance of a disruptive pedagogy in doctoral education and by implication, were advocating a 'confirmatory pedagogy'. Upon critical reflection, it is abundantly clear, that the doctoral education project should never strive to propagate 'harmonious happy families' or endeavour to achieve 'pedagogies of consensus'. In the words of Samuel (2009) we should aspire 'beyond the Garden of Eden' where a disruptive harmony is valued while recognising the importance of balancing thresholds of harmony and conflict in higher education pedagogy.

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Harmony and Conflict in a PhD Cohort Supervision Model

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Food Security Status and Academic Performance of Students on Financial Aid: The Case of University of KwaZulu-Natal

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Abstract

Universities are required to improve access and facilitate academic success for students from economically disadvantaged backgrounds. However, tertiary education is costly and inadequate student financial support undermines academic interventions by contributing to high drop-out and low graduation rates. The prevalence of food insecurity (FI) under the local student community is high. However the extent to which FI affects academic performance is under researched. A cross-sectional descriptive survey was conducted on a random sample of local university students (n=269) on financial aid to try and contribute to the filling of this research gap. Anthropometric measurements, food security status, coping mechanisms, monthly food expenditure, dietary diversity, academic performance and nutritional knowledge were measured using standardised methods and questionnaires. The findings indicated that more than half of the participants (53.1%) reported to be moderately food insecure. No significant relationship between academic performance, determined by the Combined Performance Index (CPI), and level of FI was found. However, it was evident that all participants in this study under-performed with a CPI of less than 90 (a CPI below 120 is considered below average). The findings point to the need for further research into the financial aid received by underprivileged students as

it is evident from the study that almost all students on financial aid, whether they reported to be food secure or insecure, under-performed academically.

Keywords: food security status, food insecurity, academic performance, university students, financial aid, combined performance index

Introduction

A substantial increase in student enrolments has occurred in South African universities over the past decade. Overall government education spending and funding to higher education has also sharply risen over the years (Letseka & Maile 2008; Cloete & Moja 2005). Increased university access to students from previously disadvantaged communities introduced new levels of socio-economic disparities within the student community (Council of Higher Education 2010; Petersen, Louw & Dumont 2009; Letseka & Maile 2008), as a larger percentage of students do not have sufficient finances to cover their study and living expenses. In fact, in countries such as Australia, students on financial aid are classified as at risk, as financial aid is offered exclusively to those of a socio-economic status of 20-39% below the poverty line (Hughes, Serebryanikova, Donaldson & Leveritt 2011).

The South African Government provides financial aid to students through the National Student Financial Aid Scheme (NSFAS) (Letseka & Maile 2008) and aims to make a difference by providing a sustainable financial aid system for study loans and bursaries. It is therefore intended to enable students to complete their undergraduate studies, which in turn, will improve their employment prospects and consequently result in economic independence, including food security (Innes-Hughes, Bowers, King, Chapman & Eden 2010). However, in a report issued by the Department of Higher Education and Training (2011), every Vice Chancellor and Deputy Vice Chancellor, as well as the majority of student leaders interviewed, indicated that the NSFAS is inadequate to fund student fees, accommodation and food.

Subsequently, it has been documented that large numbers of South African students experience great financial difficulty (Department of Higher Education & Training 2011; Petersen *et al.* 2009). The cost of food is

substantial for those with limited financial resources. These limited funds dictate what students on financial aid are able to purchase and how they allocate their disposable income (Hughes *et al.* 2011). In a sample of Australian students, students who were food insecure were more likely to rent, board or share accommodation and their coping strategies included having a part time job and borrowing money and food (Hughes *et al.* 2011). Research conducted by Munro, Quayle, Simpson, and Barnsley (in press) at the University of KwaZulu-Natal (UKZN) confirmed that students on financial aid are significantly more vulnerable to FI when compared to those that are not receiving financial aid.

Poor nutrition is experienced by the food insecure student population as a result of an inadequate diet which is of a poor quality and lacks dietary diversity. In addition, in situations of FI, food intake becomes erratic (Hughes *et al.* 2011; Hodinott & Yohannes 2002; Maunder, Matji & Hlatshwayo-Molea 2001). Paradoxically, individuals that suffer from FI also often suffer from overweight and obesity (WHO 2012; Wilde & Peterman 2006) which increases the risk for non-communicable diseases of lifestyle (Adams, Grummer-Strawn, Chavez 2003; Vozoris & Tarasuk 2003; Steyn, Senekal, Britz & Nel 2000). The reason for this phenomenon is related to the fact that more affordable food options have a higher energy density (kilojoule content) and a low nutrient density. Foods such as fruit and vegetables with a higher nutrient density, are often more expensive (Oldewage-Theron & Egal 2010; Temple, Steyn, Myburgh & Nel 2006). Gooding, Walls, and Richmond (2011) reported that food insecure young adult women had a higher BMI when compared to their food secure counterparts. Wilde and Peterman (2006) also reported that both men and women from food insecure households were more obese and also gained more weight over a twelve month period when compared to their peers from food secure households. This was also observed in food insecure American women (Brown 2008; Adams *et al.* 2003). The above studies therefore confirm a negative relationship between food security and BMI. It is therefore not surprising that students who are food insecure tend to report a poor health status (Hughes *et al.* 2011; Newton & Turale 2000). What has not been adequately documented is the effect of FI and students' academic performance in a tertiary education context.

Relationship between Food Insecurity and Academic Performance: The Literature

Food Insecurity (FI) has a documented negative impact on academic outcomes, including attention span and school attendance (Hughes *et al.* 2011; Hoyland, Dye & Lawton 2009; Florence, Asbridge & Veugelers 2008; Cooke 2007; Taras 2005). Florence *et al.* (2008) also reported that apart from an association between malnutrition and academic performance, there also exists an association between dietary quality, variety and academic performance. However studies were only conducted on school-aged children. Yet, the authors propose a similar relationship between nutrition, diet and academic performance in students enrolled for tertiary education.

A paucity of published scientific literature exploring the possible relationship between food insecurity and academic performance among university students is therefore evident. Research conducted by Munro *et al.* (in press), on UKZN students, documents that hunger has a significant impact on the ability to concentrate. Just over 11% of the sample reported that this occurred ‘often’ or ‘almost always’, while just over a fifth (20%) indicated that it happened ‘sometimes’. When asked whether hunger affected their energy levels, the trend for fatigue was similar to that of concentration in that 12.2% of the sample reported feeling tired ‘often’ or ‘sometimes’ in relation to hunger. Although the impact of the students’ food security status on academic performance was not measured, the association between chronic malnutrition, acute starvation and impaired cognitive function is well recognised.

Poor nutrition knowledge has also been documented as a contributing factor to poor dietary habits (Steyn *et al.* 2001). Effective food utilisation depends on the individual’s knowledge of food storage and basic nutrition principles (Riely, Mock, Gogili, Bailey & Fenefik 1999). Park and Kim (2005) reported that after nutrition education was given to Chinese students, meals were consumed more regularly. In addition, local studies reported that poor nutrition knowledge leads to a low consumption of calcium, iron and zinc among rural and urban black South African students (Steyn *et al.* 2001). It should be noted though, that extrapolating between groups of students and different country populations at large should be undertaken with care (Temple *et al.* 2006; Cleland, Worsley & Crawford

2004). Conversely, a study conducted among black students at the Durban University of Technology found that even though the nutrition knowledge of students ranged from average to poor, it did not have an impact on dietary adequacy (Ntuli 2005). This was echoed by Oldewage-Theron, and Egal (2010) who reported that nutrition knowledge did not have an impact on the food choices made by a food insecure community in Qwa-Qwa (possibly due to the fact that high fat- and low micronutrient dense foods were the most affordable).

As tertiary education is expensive, UKZN has adopted a policy in 2013 whereby at least 15% of all student enrolments should come from previously disadvantaged communities, with a low socio-economic background (i.e. quintile 1 and 2 schools). As an institution of higher education, it is the responsibility of academics towards these students to investigate the factors such as food security that have an impact on their academic performance in order to plan appropriate intervention strategies.

Methods

A cross sectional, descriptive survey was conducted on students on financial aid from April to May 2012 to determine the following: (i) food security status; (ii) monthly food budget; (iii) dietary diversity; (iv) nutritional knowledge; (v) body mass index (BMI); (vi) academic performance and (vii) food insecurity coping strategies.

Participants

A random sample (n=269) of second to fourth year students on financial aid at the Pietermaritzburg campus of UKZN were recruited using student email addresses, posters on campus and word of mouth. A list of all recipients of financial aid was obtained from the data management information system (DMI) of UKZN. This list was used for cross-reference purposes when students arrived for screening at the data collection venue. First year students on financial aid were excluded from the study sample as it was assumed that they did not have sufficient experience with food insecurity at the time of data collection.

Procedure

A pilot study was conducted on a sample of 15 students with similar inclusion criteria to that of the main study sample. The pilot study was used to standardise the self-administered questionnaires and determine whether any questions posed were ambiguous or misleading. In addition it was also used for training purposes of field workers. Pilot testing revealed that questions were easily understood by subjects. As a result, no subsequent changes were made to any of the questionnaires.

Nutritional status of subjects was determined by means of participant BMI (calculated as weight (kg)/height (m)² and interpreted according to WHO (2004) standards). Weight and height were measured by trained fieldworkers after subjects, dressed in light indoor clothing, removed their shoes. Weight was measured three times with a calibrated digital floor scale to two decimal places, while height was measured three times using a stadiometer with a sliding headboard and recorded to the nearest 0.1cm. The mean of the two closest values recorded for weight and height were used for calculation of subjects' BMI.

All subjects completed the self-administered questionnaires in a quiet venue where they were free from distractions. Trained fieldworkers were available on site to assist subjects where needed. The questionnaires included (i) a socio-demographic status questionnaire (developed for the purpose of this study in accordance with personal communication with staff from student counselling and the financial aid office); (ii) questions regarding coping strategies related to food insecurity; (iii) an adapted version of the Household Food Insecurity Access Scale (HFIAS) (Swindale & Bilinsky 2006); (iv) a non-quantified food frequency questionnaire adapted for the study sample as a measure of dietary diversity; and (v) an abbreviated version of the nutrition knowledge questionnaire developed for urban South African adolescents as part of the 'Birth-to-Twenty' study (based on the South African Food-Based Dietary Guidelines) (Whati 2005) as a measure of nutritional knowledge. Academic performance was determined in accordance with the CPI, a single index used to track student performance over the course of their studies. As the questions posed in the original version of the HFIAS referred to 'you or any of your household members' it was reworded for the purpose of this study to 'you', where relevant.

Ethics

Ethics approval for this study was obtained from the Humanities and Social Science Research Ethics Committee (Protocol Reference Number HSS/0150/012M of the University of KwaZulu-Natal). Prior to participation, all subjects signed an informed consent form, after they were informed of the nature and scope of the study, to ensure that participation was voluntary and that confidentiality and anonymity in reporting the study findings would be ensured. Individual data sets could not be traced back to specific participants, as they could only be identified by a participant code.

Results

The socio-demographic background and BMI of the study sample is presented in table 1.

Table 1: Socio-demographic variables and nutritional status of the study sample (N= 269):

Variable	Percentage/mean	p-value
Gender:		
Male	41.6% (n=112)	
Female	58.4% (n=157)	
Mean age (years)	18.1 (±7.1)	
Mean BMI (kg/m ²):	23.3 (±8.7)	0.00*
Male	22.3 (±3.2)	
Female	25.6 (±5.3)	
Monthly food expenditure (Rand):	487.90 (±270.90)	0.172§
Male	514.99 (±301.42)	
Female	469.01 (±246.76)	
Majority of monthly expenses:		
Food	73.8% (n=222)	
Clothes	7.0% (n=21)	
Travelling	3.0% (n=9)	
Study extras	23.0% (n=6)	
Social events	1.7% (n=5)	

Residency:		
Home	5.6% (n=15)	
UKZN residence	78.4% (n=211)	
Off-campus	16.0% (n=43)	

* Independent samples t-test

§ Chi-square test

From the above it is evident that the gender distribution in the study sample was not equal. This is aligned with the UKZN intake of students by gender, whereby female student enrolment represented an average of 58.5% of the overall student body over the previous three years (2011; 2012; and 2013). In accordance with WHO standards (WHO, 2004), the mean subject BMI fell within the normal range. However, apart from being classified as obese, the mean female BMI was significantly higher (by 3.3 kg/m² on the average) compared to that of their male counterparts. The mean monthly food expenditure of R487.90 (±270.90) for the group as a whole, amounts to R16.26 per individual per day. The majority of students in the study population resided in UKZN student residence accommodation. These residences are self-catering. This implies that food preparation and purchasing is the responsibility of the student.

The food security status and related factors of the study sample are reported in table 2.

Table 2: Food security status and related factors of study sample (N=269)

Variable	Percentage	p-value
HFIAS score:	10.7 (±7.3)*	
Male	11.9 (±6.7)	
Female	12.0 (±6.8)	
Food security status:		
Food secure	34.4% (n=92)	
Moderately food insecure	53.1% (n=143)	
Food insecure	12.5% (n=34)	

When most hungry:		
Beginning of semester	26.6% (n=91)	
End of semester	66.1% (n=178)	
Longest time without food (days)	2.8 (± 4.1)	0.700
Male	2.7 (± 4.2)	
Female	2.9 (± 4.0)	
Coping strategies:		
Borrow money from friends	45.5% (n=137)	
Borrow money from family	16.3% (n=49)	
Drinking fluids	10.6% (n=32)	
Self-distraction	6.6% (n=20)	

* Score of 9 = food secure, score of 36 = food insecure

More than half of the study sample could be classified as moderately food insecure, whereas 12.5% could be classified as food insecure. Two thirds of the sample reported to be the hungriest at the end of the semester, a period that coincides with examination time. The average time that students reported to have gone without a substantial meal was almost three days (2.8 ± 4.1 days). However, this value varied drastically. Of the numerous coping strategies employed by participants, borrowing money from friends was preferred, followed by borrowing money from family members. In the group as a whole, the food security status and nutritional knowledge score correlated significantly with the BMI of the study sample (Table 3).

Table 3: Correlation between BMI, HFIAS and the nutrition knowledge score.

Correlation with BMI	r ²	p value
HFIAS	0.455	0.000
Nutrition knowledge	1.36	0.026

In Table 4, subject nutrition knowledge score is reported after completion of 18 multiple choice questions based on the South African Food Based Dietary Guidelines (Whati 2005). Dietary diversity is reported in relation to the completion of a non-quantified food frequency questionnaire.

Table 4: Subject nutrition knowledge score and dietary diversity (FFQ) (n=269)

Variable	Percentage/mean
Nutrition knowledge score:	58.2% (± 12.2)
• Male	55.7% (± 13.1)
• Female	60.4% (± 10.7)
Dietary diversity (daily portions):	
• Milk	0.7 (± 0.6)
• Other milk products	0.4 (± 0.5)
• Breakfast cereal/porridge	0.8 (± 0.5)
• Bread, rice, potato, samp	1.5 (± 0.6)
• Beans	0.4 (± 0.5)
• Meat, fish, poultry	0.8 (± 0.6)
• Processed meat	0.6 (± 0.6)
• Eggs	0.7 (± 0.6)
• Vegetables	0.7 (± 0.7)
• Fruit	0.8 (± 0.7)
• Cooking oil, margarine, mayonnaise	1.2 (± 0.7)
• Cakes, biscuits, doughnuts, sweets	0.9 (± 0.7)
• Salty snacks e.g. chips	0.7 (± 0.6)
• Fizzy drinks	0.5 (± 0.6)
• Coffee, tea	1.1 (± 0.8)
• Pizza, pies, fast foods	0.4 (± 0.4)

Participants had a satisfactory nutrition knowledge score as the mean test score was nearly 60%. The consumption of staples such as bread, rice, potato, samp, breakfast cereal and porridge was the highest, while similar mean consumptions were found for fruit, vegetables and milk. The high fat content of the diet was evident from the consumption of cooking oil, margarine, mayonnaise, cakes, biscuits, doughnuts and sweets, as well as salty snacks like potato chips and processed meat. Of interest was the fact that the consumption of expensive protein-rich foods such as meat, fish and poultry was higher than that of more affordable options such as beans and soya products. The frequency of consuming coffee and tea was the highest when compared to other food categories.

Table 5: Level of Food Insecurity in relation to some of the measured variables

	Food Secure	Moderately Food Insecure	Food Insecure
BMI/ (kg/m²)	23.5±4.9	23.2±4.7	25.3±4.4
Money Spent on Food/ (Rands per month)	578.53±217.34	560.90±207.16	564.40±153.35
Days gone without food	4.4±13.9	4.5±6.3	6.6±9.0
CPI 2011*	85.9±10.4	86.9±13.3	83.8±8.5

*The maximum CPI a student can achieve is 140. A student with a CPI below 120 is considered academically weak

The study population was categorised according to different levels of Food Security, based on the Household Food Insecurity Access Scale (HFIAS). Results show a non-significant increase in BMI in the Food Insecure group, when compared to the group that is Food Secure, as well as the Moderately Food Insecure group. Interestingly enough, the Food Secure group only reported spending about R20.00 per month more on food when compared to the Moderately Food Insecure and Food Insecure groups. The Food Insecure group also reported to go much longer without food, compared to any of the other groups. The Food Insecure group also had the lowest CPI score of all three groups, even though the difference was not statistically significant.

Discussion

The mean subject BMI of the study sample fell within that of the healthy ‘general’ population. However, the mean BMI for female subjects fell within a range which could classify them as overweight (WHO 2004). Research conducted by Reddy, Resnicow, James, Kambaran, Omardien and Mbewu (2008) amongst adolescents 14 – 19 years of age, showed that a significantly higher percentage of females were overweight and obese by age 18,

compared to their male counterparts. In addition, Racette, Deusinger, Strube, Highstein & Deusinger (2005) report that female college students tend to eat more fatty foods than male students, even though their fruit and vegetable consumption tends to remain similar. Numerous authors have reported that food insecure individuals often consume a diet that contributes to the development of overweight and obesity (WHO 2012; Gooding *et al.* 2011; Brown 2008; Wilde & Peterman 2006; Adams *et al.* 2003) due to the fact that more affordable food options have a higher energy density (kilojoule content) and a low nutrient density, while foods such as fruit and vegetables with a higher nutrient density are often more expensive (Oldewage-Theron & Egal 2010; Temple *et al.* 2006). Results from this study confirm these findings. The Food Insecure student population had a BMI of almost 2 kg/m² units higher compared to that of the food secure students, which, in an average person of 175 cm, amounts to almost 4 kg more in body weight. The average difference in food expenditure between those reported to be food insecure, and those to be food secure, was less than R14 per month. The study findings as a whole should therefore be put into perspective, as based on these findings, there was a very narrow band of overall variance between the two groups. However, it is important to recognise that all the study participants received financial aid, which does not allow for much variance in the availability of cash within the group as a whole. Having a similar budget to spend, the difference in BMI as well as the fact that some students reported to be food insecure, and others not, indicate mainly a difference in the nutritional quality of food purchased. The majority of students that participated in this study resided in UKZN self-catering student residences and are therefore responsible for their own food preparation, and purchasing. According to UKZN student funding (<http://studentfunding.ukzn.ac.za/Policy.aspx>), in 2011 UKZN students on financial aid received an annual meal allowance to the value of R5 026, which is paid out in eight instalments of R628.24. This gives each student access to R20.85 per day to spend on food, and therefore just under R7/meal. Munro *et al.* (in press) explains that it is possible that many students on financial aid use their meal allowance to supplement textbook allowances, pay for stationery, photocopying and other study expenses, cover travel costs, fund food for family members where the student is the head of the household and supplement living expenses for family members in cases of unemployment.

More than half of the study population could be classified as moderately food insecure, with 12.5% of the population classified as food insecure. In addition, almost two thirds of the entire sample reported to be the hungriest at the end of the semester, a period that coincides with examination time. Authors such as Florence *et al.* (2008) and Taras (2005) have emphasized the fact that effective study and exam preparation behaviours rely strongly on sound nutrition. The longest time that students reported to have gone without a substantial meal was in some cases almost 7 days (6.64 ± 9.01 days). Results confirm a tendency towards weaker academic performance in the Food Insecure student group, even though the difference when compared to academic performance in the food secure group was not statistically significant. This phenomenon could be ascribed to a number of factors, which could be of psychological or physiological nature, or both. A CPI score of less than 120 is considered as weak academic performance, and an indication of a student who has already failed some modules.

Conclusion and Recommendations

A national investigation into the financial aid received by underprivileged students is vital, as it is evident from this study that almost all students, whether they reported to be food secure or insecure, under-perform academically. The inclusion of a group of students that come from high socio-economic backgrounds may also be helpful for comparative purposes. In addition, further investigation into food security status of UKZN students that are stratified according to campus and study major is also recommended as it could shed more light on confounding factors that affect academic performance. Although knowledge is not a guarantee that student eating- and purchasing practices would facilitate more nutritious food choices, it is recommended that the orientation of first year students should include aspects related to budgeting and the acquisition of basic nutrition knowledge to facilitate appropriate food purchases. Topics such as weight maintenance and /or weight loss should also be addressed. In addition, it is recommended that government reconsider the amount available to students on financial aid, in order to improve their capacity to afford more wholesome and nutritious foods that promote a feeling of mental wellbeing and physical health which,

in turn, could improve academic performance in students from previously disadvantaged backgrounds. Nutrition intervention should therefore target all students on financial aid.

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Service Learning and Community Engagement in South African Universities: Towards an 'Adaptive Engagement' Approach

Julia Preece

Abstract

This is a concept article which develops the argument posited by Mahlomaholo & Matobako (2006) in an earlier *Alternation* publication that university community engagement through service learning fails to impact on community change because insufficient attention is paid to genuine engagement (listening to the community; enhancing local resources, critiquing power relations, reciprocity). The article traces the evolutionary nature of the terms community service, community engagement and service learning, particularly over the last six years. It briefly reviews the focus of recent studies on this topic and highlights some current concerns in the community engagement and service learning literature with mutidisciplinarity, the production of knowledge and sustainable community engagement. It reflects on the paucity of literature which links service learning and community engagement with community development theories and concludes with recommendations for more multidisciplinary service learning initiatives which focus on community engagement that leads service learning rather than the other way round. In so doing the article draws attention to the advantages of framing community engagement within asset-based community development theory (Ferriera & Ebersöhn 2012) and the concept of 'adaptive leadership' as discussed in a recent article by Stephenson (2011) from the US and offers a new concept of 'adaptive engagement'. The article concludes by suggesting there is a need for more

research which examines the implications for applying service learning through a community development lens.

Keywords: adaptive engagement, community development, community engagement, service learning,

Introduction

Higher education should create mutually beneficial partnerships with communities and civil societies to facilitate the sharing and transmission of appropriate knowledge (UNESCO 2009:6).

On a global scale universities are realigning their teaching and research missions to embrace ‘community service’ or ‘community engagement’. Other associated terms include ‘service learning’, which focuses on assessing university students’ analysis of how they learn from community activities, and ‘regional engagement’ which addresses university regional partnerships for development.

The interest in the way universities contribute to regional, as well as national and international development needs, is reflected in higher education policy recommendations (World Bank 2000; 2009), academic literature (Waghid 1999; Fourie 2003; Inman & Schuetze 2010) and international initiatives to stimulate ‘engagement’ (OECD 2007; PURE 2010) or service learning (Hatcher & Erasmus 2008).

While much of the international policy literature reflects an economic focus on building partnerships it has been argued in the African context that engagement must embrace broader social development partners (Subotsky 1999; Kotecha 2011) such as civil society. This is based on two reasons. On the one hand economic partners in developing countries are fewer and less well positioned to establish economically based relations with their universities. On the other hand the continent’s range of social development needs are complex and require a multidimensional approach to development (Kruss *et al.* 2011).

The South African government has enshrined community engage-

ment in higher education policy, with a particular focus on service learning as the mechanism for community engagement at local levels (DoE 1997; 2001). The introduction of a service learning (SL) dimension, specifically to nurture a sense of civic responsibility in students, is an attempt to encourage a more mutual relationship between university and community. But it is also a strategy to embed community engagement in the curriculum whereby students are assessed on their own documented learning as a result of contributing to community needs (Perold 1998).

However, the theory and practice of SL and community engagement (CE) have commanded much scrutiny, particularly in South Africa.

A primary focus of debate is the extent to which CE simply represents a philanthropic exercise by the university towards its disadvantaged neighbours and the extent to which university SL engages with its communities and regions as a mutual learning project and resource for knowledge production (Jansen 2002; Fourie 2003; Naido & Devnarain 2009; Erasmus 2011; Van Schalkwyck & Erasmus 2011). An article in *Alternation* by Mahlomaholo and Matobako (2006) highlights how Community SL rarely emanates from the community, draws on local resources or is controlled by the community; moreover the time limited contribution of SL programmes has little impact on real change.

This article takes Mahlomaholo and Matobako's concern with community ownership as its starting point. It begins with a brief review of the evolutionary relationship between Community Service, CE and SL with particular reference to African contexts. It draws attention to recent concerns about multidisciplinary and the production of knowledge, as well as sustainable CE, and reflects on literature which links SL and CE with community development theory, particularly on the African continent.

After a discussion of different community development lenses the article concludes with recommendations for more multi-disciplinary initiatives which focus on CE that leads SL, rather than the other way around. It draws attention to the advantages of framing CE within community development theory, offering the term 'adaptive engagement' to reflect the combination of an asset based approach as outlined by Ferriera and Ebersöhn (2012) in a South African context, and 'adaptive leadership' as articulated by Heifetz (1994) and interpreted by Stephenson (2011) in the context of the US.

Community Service

Community service has been the traditional term for university engagement as the university's third mission. There is an incremental trend in the way this term has been conceptualised and applied.

Community service, for instance, has been associated with volunteering and philanthropy (Perold 1998), implying a uni-directional approach from the university to the community. In this respect Perold suggests there can be two types of community service activities – one which is addressing a humanitarian need but not necessarily changing the conditions surrounding that need, and a second type which is more focused on radical change or community empowerment, although Mahlomaholo and Matobako (2006) suggest there are three types (charity, project and 'of the community'). Citing the South African White Paper on higher education Perold emphasises that the aim is to demonstrate social responsibility and a commitment to the common good by making available university expertise and infrastructure for community service (CS) programmes. However Mahlomaholo and Matobako (2006) go further to state that the university's relationship with its communities must focus on a larger sense of mission so that communities have more control over the relationship in order to address real issues that can potentially change the quality of life in those communities.

The concept of CS has gone through several conceptual evolutions as researchers have explored its value and approach in a variety of contexts. There is an increasing literature base which explores the notion of collaboration and partnership in relation to universities and their community service activities. This has evolved from the realization that community service should not be a one-way process and there are mutual learning gains from this kind of work (Nampota 2011; Preece 2011a). It is now seen as a means of contributing to the knowledge society, where students and staff can apply and adapt theoretical knowledge to specific local contexts (O'Brien 2009). So, for Africa, CS is also a way of contributing to the development of indigenous knowledge systems to acquire a better understanding of local knowledge for knowledge production that is relevant to African contexts (Oyewole 2010). However, for wider Africa there are few empirical studies and literature on this topic is limited, often either descriptive or speculative in nature (Preece, Ntseane, Modise & Osborne 2012).

As a result the term ‘engagement’ rather than ‘service’ has become a way of conceptualizing the university’s third mission work. Although Laredo (2007: 442), among others, discusses the changing notion of this third mission in terms of engagement as entrepreneurship research – whereby the university is expected to connect to ‘external economic and social worlds’ – the focus in this article is on the social purpose element of engagement.

Community Engagement

Since Mahlomaholo and Matobako’s article, various models, types and processes for CE have been offered, usually in an effort to promote the notion of integration. The discourse changes for CE are outlined succinctly by Lazarus *et al.* (2008) who suggest it was a relatively unknown descriptor in South Africa until the late 1990s when CE became embedded in higher education policy as a response to redressing the evils of apartheid. They track the shift in terminology across South African policy documents over a period of ten years from ‘community service’ to ‘knowledge based community service’ to ‘community engagement’ and now to a ‘scholarship of community engagement’ (2008:61). These shifts reflect a continuing attempt to both embed the work within academic scholarship as well as orientate involvement in communities as a collective endeavour between the communities and their higher education institutions. The aim is to secure greater recognition of the work itself and its outcomes within higher education. The discursive shift, therefore, is from one of *outreach* to one of *learning* and *knowledge creation*. This is particularly important in African contexts where indigenous and local knowledge have often been suppressed in favour of external agendas for development and this issue is discussed separately below.

Ostander (2004), cited in Brukardt *et al.* (2006:7), suggests that this discursive journey is the result of three potentially different visions; one being a vision for transformation of purpose in the new century, a second which is closely aligned to the South African context of a desire for higher education to support community building and civic work, and a third belief that a different form of teaching (‘engaged pedagogy’) can contribute to institutional and social change for a more just society.

Percy *et al.* (2006) and others (for example Council on Higher Education (CHE) 2009) list different categories of CE – ranging from community development, technical assistance, and life skills training to graduate students providing professional services. The CHE (2009) offers three models. These range from the *silo* approach (separating CE from the core missions of teaching and research) to an *intersecting* model (with some overlaps between the core functions of the university) and finally to the *infusion* model (where CE is institutionally embedded and cross cutting with teaching and research).

Although there may be as many descriptions as there are institutions, Hall (2010) describes CE as a:

Process of creating a shared vision among the community (especially disadvantaged) and partners (local, provincial, national government, NGOs, higher education institutions, business, donors) in society, as equal partners, that results in a long term collaborative programme of action with outcomes that benefit the whole community equitably’ (Hall 2010:25).

Schuetze (2010) refers to three major types of engagement that embrace either knowledge transfer, continuing education or service teaching, and community based research. There is no shortage of definitions. Schuetze (2010:25), for instance, suggests that:

Community engagement is defined broadly, namely as the collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity.

‘Engagement’ in this interpretation therefore implies a partnership relationship that can involve a range of agencies within and around communities. Types of community partner may include government and other public bodies as well as private, industry or civil society organisations. The latter is a particular concern of South African universities where writers have argued the need to recognise the specific development contexts of

Africa which require a range of stakeholders (Kruss *et al.* 2011).

Even research is collaborative. Schuetze emphasises that community based research is research with, rather than on, communities. It is a distinctive feature of the associative concepts of CE.

Lall (2010) supports this notion, stating that such research entails the co-creation of knowledge through examining community issues in all their complexity as an inter-related research exercise. To achieve this relationship many emphasise that CE requires a community, needs-led approach, starting from where the community is at rather than imposing ideas from above (Bender 2008; Preece 2011b; Erasmus 2011). Bender (2008:87-89) for instance offers a conceptual framework for CE drawing on the CHE's three models. Bender emphasises that all models involve different 'levels of power flows' (89), but stresses the need for institutional cultures to change if engagement is to be a two way relationship. Partnership, dialogue and reciprocity are therefore key words associated with *engagement*, rather than *service*, with associated concepts such as 'multidisciplinarity', 'collaboration', 'sustainability' and 'community building' (Wallis *et al.* 2005:4).

The listed beneficiaries of engagement are multiple, demonstrating social, research and economic gains (Naidoo & Devnarain 2009; Oyewole 2010). So community members gain in terms of self-esteem, trust, skills acquisition, confidence and problem solving skills; students achieve professional development, enhanced learning, the opportunity to link theory and practice, with increased awareness and reflection; while the academic institution and staff increase their networks, pedagogical skills, curriculum relevance, research possibilities and recognition in the community. These outcomes, however do not reflect Mahlomaolo & Matobako's (2006) concern with collaboration for change or social transformation.

There are, at the same time, calls for clearer articulation of the essential features of CE to guide institutional practice (CHE 2009), particularly in relation to service learning (Bender 2008a; O'Brien 2009; Kruss *et al.* 2011).

Service Learning (SL)

Although many South African universities provide their own definition of

SL, most derive from the one by Bringle and Hatcher (1995), who describe SL as a:

Course-based, credit-bearing educational experience in which students (a) participate in an organised service activity that meets identified community needs and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility (Bringle & Hatcher 1995:112).

Bringle and Hatcher (2007) claim that by including SL as part of CE activities the purpose extends beyond the purely civic engagement focus of the community service mission.

From a process perspective Bender and Jordaan (2007:634) describe it as an activity:

Where students learn and develop through active participation in thoughtfully organised service that is ... conducted in and meets the needs of the community, is coordinated with an institution of higher education and service agencies, includes structured time and guidelines for students to reflect in written and oral format on the experience.

From a social purpose perspective it is justified as giving a 'broader appreciation of the discipline' (Bender & Jordaan 2007:634) and helping to foster social responsibility. The four ideological perspectives are 'civic responsibility', 'moral development', the promotion of 'social justice' and 'political activism' (Imperial *et al.* 2007:232-233), with the aim of giving greater relevance to the curriculum (Hall 2010).

Whilst the earlier aims in South African policy focused on fostering civic responsibility (Department of Education 1997), this concept, too, has evolved in an effort to gain credibility within the core functions of teaching and research in higher education. The academic literature has focused on theorising SL as a typology, a pedagogical philosophy, and a contribution to new forms of knowledge.

The most commonly cited **typology** of SL originates from Furco (1996) which is cited in Nduna (2006) in the form of four variations, each of which places a different emphasis on the way the words ‘service’ or ‘learning’ are written. However, the preferred ideology reflects his fourth position, written as SERVICE-LEARNING which denotes a strong focus on ensuring a reciprocal relationship between all partners.

The **pedagogical** philosophy draws on the experiential teaching and learning theories of Dewey, Schoen and Kolb (cited in Bender & Jordaan 2007), whereby students undergo a cyclical, practice-based learning process of concrete experience, reflective observation, conceptualisation and active experimentation. Lantis *et al.* (2010) bracket SL within experiential learning approaches which link theory to practice. In this way, SL becomes more than mere community involvement. It has a specific teaching purpose to link practice with a course curriculum and which contributes to student assessment. Other theoretical explorations include Hlengwa’s (2010) application of Bernstein’s theory of vertical and horizontal discourses to embed SL into the curriculum, while Petersen and Henning (2010) explore SL in relation to pre-service teacher education designs. Ebersöhn *et al.* (2010) evaluate student experiences of SL in an education psychology course.

The use of the word ‘service’ does suggest, however that the activity may still be operating, albeit unintentionally, within an ideological perspective that aligns itself more to the original concept of community service, rather than engagement. Indeed the most commonly cited objective for SL is to change the attitude of the service participant – the learner (Imperial *et al.* 2007; Parker *et al.* 2009). This emphasis reflects a paucity of research that explores the community perspective (Fourie 2006; Nduna 2007; Alperstein 2007). Hlengwa (2010:1), for instance, questions the role of SL as a strategy for community engagement:

There are complexities which need to be considered regarding the potential of service-learning to bridge the gap between the university and society, and the extent to which it is the most appropriate pedagogic tool for this purpose.

In an effort to shift this perspective, some writers refer to **community service learning**:

Good community service learning needs to take place in a collaborative partnership context that enhances mutual reciprocal teaching and learning among all members of the partnership ... the often asymmetric power relations inherent in the relationship between university and community need careful thought (Fourie 2006:36).

Indeed, Stellenbosch University (2009: 2) in South Africa, amongst other universities, now provides its own definition of community service learning as:

An educational approach involving curriculum-based, credit-bearing learning experiences in which students (a) participate in contextualised, well-structured and organised service activities aimed at addressing identified service needs in a community, and (b) reflect on the service experiences in order to gain a deeper understanding of the linkage between curriculum content and community dynamics, as well as achieve personal growth and a sense of social responsibility. It requires a collaborative partnership context that enhances mutual, reciprocal teaching and learning among all members of the partnership (lecturers and students, members of the communities and representatives of the service sector).

Camacho (2004) elaborates, suggesting that the learning experience needs to be explored in relation to how the student addresses power inequalities with the 'served' community. In order to do this the experience must be sufficiently sustained to move beyond the student experience of being merely a tourist in his or her placement organisation. Camacho's observation, reiterated by Mahlomaholo and Matobako (2006), is also a justification for more sustained CE relationships with organisations that extend beyond their SL components. These observations have implications for knowledge and scholarship in CE and SL, as Bender (2008a) points out. Erasmus (2011), for example, in sharing recent concerns about issues of reciprocity, unequal power relations and lack of multisectoral approaches, also points to the dominance of single discipline approaches to community engagement, with implications for knowledge production.

Knowledge Production

Recent studies in South Africa highlight a number of issues around the constitution of cross-disciplinary knowledge and the role of experiential learning to address the multifaceted social problems of communities (Kruss *et al.* 2011). Discussions around new forms of knowledge production have created an opportunity to re-package experiential learning as a resource for ‘open system logic’. This recognises the subjective nature of knowledge that is embedded in context, in contrast with the more conventional ‘closed system logic’ of linear learning systems that lead towards universal knowledge claims (Lounsbury 2001:323).

Gibbons (2006) expands on this distinction. Two associated concepts are mode 1 and mode 2 knowledge and ‘reliable knowledge’ versus ‘socially robust knowledge’. In summary, mode 1 knowledge represents discipline based knowledge where the locus of the problem to be solved remains within a specific discipline. Mode 2 knowledge is associated with practice based research where the locus of the problem is in a context that requires a multidimensional approach to its solution. Mode 2 knowledge is often constructed collaboratively in a transdisciplinary way (Muller & Subotsky 2001; Albertyn & Daniels 2009).

Whilst the distinction between these two forms of knowledge have been revisited (Nowotny, Scott & Gibbons 2003), the argument continues that the language of knowledge creation is being re-cast to have a closer relationship to its application. Gibbons (2006:28) suggests that the concept of ‘reliable knowledge’ – equating broadly with mode 1 knowledge - is only valid in an experimental context, while ‘socially robust knowledge’ – equating more closely with the mode 2 distinction – is valued because it has been tested in a range of contexts. So he is arguing that universities need to focus on socially robust knowledge as part of the new language of ‘engagement’ as a means of contextualising research.

The role that indigenous knowledge (locally embedded knowledge based on experience) can play is also highlighted. Brock Utne (2003:49) calls attention to the range of local knowledges that could broaden university teaching:

Village women are great science teachers in the fields of agriculture, medicine and food technology ... [they] will even explain about the

different soils suitable for different crops. [They] will also talk about food processing and food preservation, for instance, through drying or smoking meat.

O'Brien (2009) associates these activities with a 'scholarship of engagement'. This means that all partners collaborate to produce increased access to indigenous and/or mode 2 knowledge. At the same time, she argues that such scholarship increases human capital and the community voice in knowledge construction.

The credentials of community SL, then, are justified by Fourie (2006:38-39) through four types of scholarship – discovery, teaching, application (engagement), and integration of knowledges across different disciplines.

These are all ideological claims which require a related alignment of university infrastructure and support systems. They also need closer examination in the field.

Criteria for Successful Implementation of CE with SL

The literature is consistent in its vision for an institutional framework that supports the principles of CE with SL (Bender & Jordaan 2007; Bringle & Hatcher 2007; Lazarus *et al.* 2008). The criteria include a mission statement that supports SL, an executive post with responsibility for CE with institution wide and faculty based committees, staff promotion and reward systems that recognise this work alongside teaching and research, an institutional culture that supports the integration of SL with other aspects of the university's work, budget and resources that enable reciprocal partnerships with relevant community agencies.

Fourie (2006: 44) further emphasises the issue of mutuality 'where all partners contribute to the mutual search for sustainable solutions to challenges and service needs, implementing a mutually agreed upon *modus operandi*'. Trust and reciprocity between all constituencies are core elements for a constructive partnership.

Recent evaluations of such work in South Africa (CHE 2009; Kruss *et al.* 2011) suggest that such parameters are not always in place. Furthermore, the purpose and mission of CE and SL are not without their

critics. Evaluations from the Higher Education Quality Council (HEQC), cited in Anderson's (2010) unpublished report on Community Engagement as an Area of Specialization in the University of KwaZulu-Natal, and more recently in Kruss *et al.* (2011) in South Africa highlight many gaps across the system that are reflected in lack of overall coordination, evaluation and funding frameworks, alongside insufficient assessment of impact on the communities that institutions are working with. Similarly, inadequate exploration of the evolving conceptual nature of SL and CE fails to maximise their potential for curriculum innovation and responsiveness to social welfare needs. Indeed, recent research by Preece *et al.* (2012) in one South African institution suggests that both SL and CE continue to suffer from a fuzziness of definition and interpretation in practice. These concerns suggest the need for closer attention to how SL interfaces with CE in order to provide policy ideas for quality improvement.

How, then, can a scholarship of engagement be developed in order to give credibility to the potential contribution of CE and SL to institutional teaching and research – whilst at the same time contributing to community development and change?

Three integrated features stand out as in need of further research in this respect – the issue of sustainability in engagement activities (O'Brien 2009; Erasmus 2011), the untapped potential for cross disciplinary engagement (Erasmus 2011; Kruss *et al.* 2011) and – added to concerns about sustainability - literature that discusses community development theory in relation to CE. A brief review of these three concerns paves the way for my proposed notion of 'adaptive engagement' as an overarching concept for SL and CE.

Multidisciplinarity and Cross-disciplinarity

In spite of the articulated connections between the multidimensional nature of community problems and the potential for multidimensional approaches, multidisciplinary work is under used and under-researched (Kruss *et al.* 2011). One documented example of its challenges and prospects is recorded in Billig and Furco (2002). The publication consists of a series of papers from a conference on service-learning research. The focus of the book is on identifying ways in which different disciplines can apply core research

principles and different theories to research service-learning impact. Although one chapter (Steinke *et al.*) specifically reports on an interdisciplinary study, the majority of papers focus on the way in which a specific discipline shapes and defines 'the concepts of civic education and citizenship' (Furco & Billig, 2002:20). Equally, the emphasis tends to be on exploring student, rather than community outcomes. One more recent interdisciplinary example by Hill (2008:122) in the context of field based courses on 'sustainable land use and natural resource management in rural communities in southern Africa' demonstrates that community dialogue, negotiation and critical reflection are essential components for student learning (and by implication a contribution to Gibbon's (2006) notion of socially robust knowledge). But in order to capture community benefits there is a need for sustained involvement.

Another recent study by Preece *et al.* (2012) suggests that academics value the idea of encouraging students to explore community challenges through multiple disciplinary lenses in recognition of the multi-dimensional nature of community based issues and concerns. This same study revealed that SL courses often involve students who have already chosen a multidisciplinary degree structure, mixing two or more subjects such as Psychology, Media, Politics, Sociology and Education, with consequent influences on how they perceived and approached their SL projects (Preece *et al.* 2013). However, efforts to integrate student participation across different discipline based classes met timetable challenges. Furthermore, the extent to which community partners either realized, or benefitted from, the contribution of integrated disciplines was not always apparent. One successful example in the above study was illustrated by an NGO whose specialism was counseling. The NGO requested assistance from Education students to improve the quality of spoken and written English by its isiZulu speaking counselors, but requested students who had an understanding of psychological terms so that the learning activities were relevant for the counselors (Preece *et al.* 2013). Students in an Education and Development SL module, who were also majoring in Psychology, responded resulting in positive feedback from the participating counsellors. The study indicated that one way to maximise multidisciplinary resources is to address community challenges from a community initiated perspective, whereby the community (in this case an NGO) articulates the complexity of its problems and potential

solutions in order to draw in a variety of disciplinary lenses and to create space for shared knowledge production. Such engagement strategies need closer theoretical scrutiny to assess what works where and how.

Sustainability

In terms of sustainable community engagement, Erasmus (2011) cites an example of ‘flagship sites’, developed by the University of the Free State, that provide spaces for dialogue with specific communities over extended lengths of time. She argues that building sustained relationships over time enables ‘communities to become co-educators’. This practice is supported for similar reasons by West (2004) in the University of KwaZulu-Natal, in the context of sharing interpretations of the bible amongst marginalised African communities. He emphasises the insights that communities bring to these interpretations based on their local resources and contexts. But he also argues that such interactions depend on long-term partnerships.

The necessity for long term partnerships and relationships to secure sustainable community engagement is in direct tension with SL as it is practiced in many universities, as Mahlomaholo and Matobako (2006) emphasise. SL courses are time-limited and constrained by institutional demands for completion dates which divert student attention from community agendas. It is apparent, therefore, that SL cannot stand alone as an engagement strategy if we are to view sustainability in terms of relationships and learning progression or the ongoing construction of knowledge that builds on what has already been learned. Although the above mentioned project identified by Preece *et al.* (2013) contributed as a short term measure to the organisation’s identified development needs, the organization also stressed that it required continuous involvement for a variety of reasons, including those of staff turnover.

However, many writers (for example Camacho 2004; Bender 2008; Hlengwa 2010; Erasmus 2011) have stressed the need to pay closer attention to the inequality of power relations in university-community partnerships.

It is suggested here, therefore, that the relationship between community development theory (as a resource for discussing power issues), and the practice of SL and CE deserves more scrutiny. This part of the article

reflects on the implications for university community engagement from different community development perspectives.

Community Development

Four recent examples shift the focus on SL as a pedagogy or learning experience for students onto CE as a developmental strategy for communities, to which SL students can contribute. The first two draw explicitly from educational and dialogic strategies. From an emancipatory education perspective Van der Merwe and Albertyn (2009) apply the Freirian process of ‘conscientisation’ to raise critical consciousness amongst rural women in South Africa ‘focusing on participation, dialogue, critical thinking and consciousness-raising which will lead to transformation’ (2009:165). A further example in Botswana is a community empowerment project for remote rural dwellers conducted in partnership between Ba Isago University College and the Kellogg Foundation, using what is known as the ‘zooming process’ – a consultative approach that aims to develop ‘self-drive’ capacity in communities to act for themselves, but over a period of several years (Raditloang 2011:39-41). Both these approaches demonstrate that engagement entails an implicit leadership role by the university although they do not discuss the inherent power differentials between the higher education institution and its target community. The extent to which this leadership relationship may enable community ownership over change processes in the face of particular challenges therefore needs to be explored at a more theoretical level. Two further publications provide an opportunity to examine how leadership can be paced and sequenced to facilitate community solutions to community problems within context specific situations, drawing respectively on organizational management and community development theories. While these two theories do not naturally sit together, they share a common goal to mobilise communities to ‘develop their response ability’ (Heifetz 1994:84) to address context specific problems.

Stephenson (2010) in the context of the United States, links CE to the concept of ‘adaptive leadership’ – an organizational management term taken from Ronald Heifetz (1994; Heifetz *et al.* 2009). Heifetz claims that the leadership process of pacing and sequencing authoritative action is a

mobilizing strategy that applies sensitivity to context specific situations. It entails a focus on maintaining trust whilst at the same time challenging individuals or groups to take responsibility for decision making processes at a pace which does not alienate participating actors from the painful process of adapting to change. Stephenson draws on Heifetz to provide a conceptual framework for the role of universities in community change processes. The lenses of ‘adaptive leadership’ and ‘network development’ challenge the university to think in multidimensional and multidisciplinary ways. Some of the leadership roles from the university’s perspective may include enabling access to technical information and, through listening to community expressed values, framing issues that can interface with current thinking whilst at the same time challenging participants to reflect on those values and cultural assumptions. The leadership role therefore includes encouraging community or organizational participants to ‘clarify values and make progress on the problems those values define’ as a dialogic process (Heifetz 1994:5). Heifetz (1994:25) summarises this as ‘working within society’s own frame of reference’. Stephenson (2011) drew on Heifetz because he attempted to move away from his institution’s more traditional role of merely providing technical expertise to community problems. He revealed that this traditional strategy did not necessarily address the problems from a community perspective, and the resultant effect was to nurture a dependency relationship by the community on the university. He describes the complexities of a university relationship with its communities in trying to find a fine balance between facilitating, challenging and ultimately letting communities take ownership over their own decisions. Heifetz’s’ approach is defined within a leadership theoretical framework and does not pretend to follow the community engagement rhetoric that promotes mutuality and reciprocity of relations. As such it accepts as a ‘given’ the university-community power relationship. Instead it concentrates on working through that power relationship that respects diversity and reduces dependency.

As Hill (2008) and others demonstrate, however, this is a fine and delicate balancing act. Hill suggests that from the student perspective the challenges of working with others across disciplines increased awareness of the need for critical reflection and responsiveness to different positions and cultures. Heifetz (1994:86) also emphasises the need to respect diversity of views. He openly acknowledges the existing power or ‘authority

relationship’ but suggests one can ‘fashion’ this relationship to ‘mobilise rather than hinder’ change by building on the assumption ‘that people have the potential to take responsibility’ for their own development ‘but need help to employ it’. But since Heifetz was essentially concerned with organizational management it is important to see how his ideas can be contextualised in community development theory which is more concerned with participatory reflection and building on community assets, often in the most disempowered circumstances.

In this respect Ferreira and Ebersöhn (2012) describe their STAR project (supportive teachers, assets and resilience) in a South African context. The goal in this case is to encourage communities to recognise and draw on their assets (skills, attitudes, knowledge, physical resources) to organically develop their own awareness of their ability to address local problems. Whilst using different terminology (Heifetz and Stephenson talk about adaptiveness, clarifying values, and context; Ferreira and Ebersöhn talk about participatory reflection and action and locality) all the writers are talking about a process of enabling communities to identify and mobilise their own resources for change, to solve their own problems. Ferreira and Ebersöhn take a position that recognises communities have a resilience which has always responded to challenging circumstances and that community interventions should harness rather than override that resilience. Heifetz (1994) and Stephenson’s (2011) position is to reduce dependency by communities when external interventions engage with them by developing a listening approach to their values and reference frameworks in a way that encourages communities to recognise their own resources for resilience. But the process of ‘empowerment’ within communities – and the process of disentangling the different layers of power within and across all sectors of the university-community partnership is not achieved through short term engagement activities. Competing values and purposes must be constantly renegotiated throughout the relationship, especially when a new SL initiative is introduced to an ongoing development process. The process of empowerment therefore requires long term relationships between key actors across institutions and community agencies, within which SL is a contributing factor.

These insights reflect West’s (2004) earlier mentioned focus on dialogue with communities for mutual growth and understanding. But rarely

does the SL literature encourage students to think in such adaptive terms. Rather it encourages students to explore their own growth, based on their empirical actions in community settings. It is argued here that a wider theoretical framework is needed for understanding SL as a CE process and the above multidimensional reflections may provide a starting point for taking the CE and SL literature beyond its pedagogical and single disciplinary focus.

So, for instance, Heifetz's adaptive leadership approach could be employed to recognise the potentially multi-layered dimensions of community participants. An 'adaptive engagement' process would therefore ensure university dialogue with all community layers (such as gatekeepers, community organisation leaders and their participants or co-workers). The dialogue process would foreground the different and often competing values and purposes for university involvement in order to clarify aims and outcomes. In other words, by using Heifetz's assumed authority (power) relationship to mobilise thinking around competing values and purposes universities (staff and students) can complement asset-based community development theories about the ability of communities to maximise their own resources to solve their own problems. This involves ongoing communication, respect, trust and participatory reflection about how people are working with the presented situation in order to build community independence. 'Adaptive engagement' starts with an acceptance that power relations are unequal. The approach employs adaptive leadership concerns with listening and working within societies' own frame of reference whereby all stakeholders clarify at the outset their competing goals and values. But this engagement employs community development philosophies for asset building that organically pace change over time through ongoing communication, respect and trust, recognising that no-one person has all the answers. Multidisciplinary involvement by university members raises awareness of these competing concerns because it broadens the range of perspectives that connect with the different aspects of the community problem. The power tensions that arise within these processes must be constantly clarified between and during SL interventions. This requires the involvement of academic staff as ongoing anchors in the community-university relationship which extends beyond the SL project. This, in turn, would raise awareness of both the complementarity of disciplines and the

need to clarify potentially competing value systems across disciplines which might impact on their community SL contributions. Thus ‘adaptive engagement’ operates at multiple levels in multiple ways. The aim would be to gradually change the power dynamics through the ongoing process of new learning within communities.

Concluding Remarks

This article has offered a brief account of the evolution of terminology and academic thinking that is now associated with the concept of community engagement and service learning. The focus has been on the South African context where such work is enshrined in government policy. The article has highlighted some gaps in understanding or theorizing particularly in relation to community values and power dimensions. These are outlined as relating to multidisciplinary and knowledge creation, sustainability and the link to community development theory. It is proposed that by employing community development theory with ‘adaptive leadership’ as a reflective tool has potential to enhance concerns about community ownership of the engagement process and provides additional lenses through which service learning might be led by community engagement rather than the other way round. In this context SL would be a complementary resource within a broader community-university relationship that develops over time through ongoing dialogue. An ‘adaptive engagement’ concept draws on the combined literature articulated by Heifetz and Ferreira and Ebersöhn (adaptive leadership and asset-based community development) as well as encouraging interdisciplinary collaboration. Such a focus, if established over time with communities, might go some way towards addressing some of the concerns about unsustainable SL as identified by Mahlomaholo and Matobako (2006) and others. This theoretical perspective requires further empirical research that establishes what works where and how.

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An Analysis of Perceptions of Academics Regarding the Reward for Excellence in Teaching versus the Reward for Excellence in Research Approached through the Lens of Critical Theory

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Abstract

Under the pretext of enhancing a knowledge society, educational transformation promotes a polarization between excellence in teaching and learning and excellence in research through a system that favours research. Academics who may be good teachers but who are not research active may be seen as incompetent. Through the lens of critical theory, this paper argues that this polarization has created an oppressive hegemonic working environment for academics. Self-administered questionnaires were applied with academics as the target group. Face-to-face interviews were conducted among middle and senior management. Respondents indicated that they were still committed to pursuing excellence in teaching despite the unbalanced reward system towards research. This sense of ‘calling’ could make respondents vulnerable to exploitation and manipulation. When, for the purpose of pursuing excellence, they take on an increasingly heavy workload in the absence of adequate resources and rewards, they are contributing to their own oppression and self-destruction.

Keywords: Critical theory, hegemony, Gramsci, educational transformation, research excellence, teaching excellence, teaching quality

Introduction

For the past two decades there has been much dialogue and debate over the reward structures for research and teaching. The perception that there are relatively more rewards and recognition for research than for teaching, and the accompanying criticism for this discrepancy, is well published (see Hay & Heselman 2001:131; Young 2006:191; Cronje, Jacobs & Murdoch 2002:38; Serow 2000:449; Ruth 2001:157). A study at the University of the North (UNIN), for instance, revealed that respondents criticized the lack of recognition and incentives for teaching (Ruth 2001:157). The study by Cronje *et al.* (2002:32,38), which involved 20 higher education institutions worldwide, demonstrated that while respondents supported the importance of teaching they perceived that their institutions tended not to reward teaching as much as it did research even though there were formal reward systems in place for the recognition of teaching excellence. Young's (2006:195) investigation in the UK demonstrated that the route to promotions was based more on research than on teaching. Thus, the recognition of teaching is either absent, or not on par with the recognition of research. It appears as though rewards for teaching are in place, yet are insufficient to achieve career advancement up to higher academic hierarchies.

There is even a tendency for academics that are not research-active to be seen as incompetent even if they excel at teaching. Those productive in research advance in their careers while those who focus on teaching alone risk compromising their career development (Morley 2003). Teaching competence may be taken into account for promotion up to senior lectureship, but in order to reach higher levels (professorship) research becomes an essential criterion (Young 2006:194). There is a clear message that teaching competence alone is not sufficient for academic advancement.

In addition, Webbstock (1999:161) reports on the University of Kwazulu Natal's response to the need for recognizing and awarding teaching excellence. This was through a promotional system that required the examination of a candidate's teaching portfolio that demonstrated evidence of excellence in teaching. Promotion via teaching leads up to associate professor level, while promotion to full professor is dependent on the demonstration of competence in both teaching and research. This implies that promotion to full professor cannot be achieved via teaching alone. A recent conference paper (Subbaye & Vital 2012) confirmed that it is still the

University of Kwazulu Natal's policy to follow this trajectory. Their paper also provides evidence that promotion via the teaching portfolio created more opportunities for females to succeed in their application for promotion.

Some studies show that the low status accorded to teaching in higher education is a barrier to developing teaching (Walker, Baepler & Cohen 2008:183) and could impinge on the quality of outputs (Avdjieva & Wilson 2002:381). If teaching is to be promoted in an environment that is research intensive it will have to be integrated with research. That is, teaching only has value when it is linked to research. For example, Walker *et al.* (2008:184 - 188) report on how research strategies in teaching had to be devised to promote the scholarship of teaching at the University of Minnesota, where the reward structure favours traditional research. Through these efforts the university had begun to 'recognize the research value of teaching and learning' (Walker *et al.* 2008: 184). In Australia, the shift towards recognizing teaching academics has given rise to greater acknowledgement of the scholarship of teaching and learning which has occurred predominantly through the academic promotion system. Several Australian universities are providing opportunities for university teachers who are not research active to be promoted (Vardi & Quinn (2011:39). Brew (2010: 139) writes about the importance of integrating research and teaching. Chalmers (2011:25) also discusses initiatives such as the scholarship of teaching, and other quality movements to enhance the status of teaching through better recognition and reward of teaching at universities, but reports that in spite of these interventions promotion and tenure are still proving to be elusive.

Furthermore, the lack of recognition and reward for teaching impacts on the professional development of academics. A case in point is the study by Steinhert, McLeod, Boillat, Meterissian, Elizov, and McDonald (2009:46) who found that one of the main reasons for the lack of attendance and participation in staff development programmes by (clinical) teachers was the perceived lack of financial reward and recognition for teaching. Many teachers commented that 'research counts more for promotion' (Steinhert *et al.* 2009: 46) than teaching excellence. They, therefore, saw little reason for attending staff development workshops to improve their teaching skills. Moreover, Olsson and Roxa (2013:40) argue that although teachers are rewarded as individuals for teaching excellence, they also contribute to the overall development of the institution, that is, the institution also stands to benefit.

Despite the lack of recognition for teaching for upward mobility, it is important to note that research should not be viewed as an adversary to teaching. The literature contains several accounts of how research complements and enhances teaching. Wehbic (2009) refers to the application of reflective practice as a research tool for enhancing the scholarship of teaching and the consequential publication of journal articles. Nilsson (2013) discusses how collaboration with a critical friend gives teachers an opportunity to reflect on their values, beliefs and professional practice, and ultimately to refine their practice. Turner, Palazzi, Ward and Lorin (2012) report on the creation of a community of practice which centres on teaching. The purpose of the community of practice was to exchange ideas, to reflect on teaching experiences and to share new knowledge with their peers. Thereafter, a series of conferences on teaching were held with the conference topics being written up as book chapters. Thus, effective teaching, from their perspective, is contingent on research.

In this article I intend to create an awareness of the hegemonic forces at play in higher education, and the way in which these forces impact on the professional lives of academics. It is for this reason that the perceptions and experiences of respondents, regarding differential reward structures for research and teaching, are illuminated in this study and analysed with reference to critical theory.

I refer to data captured as part of a broad study, which involved a survey conducted among academics, middle- and senior managers, to demonstrate that academics, instead of focusing on research, continue to show commitment and dedication to teaching in the midst of minimal rewards. Although the higher education institution involved in this study favoured research, it was a paradox that resources and support for engagement in research were found to be minimal. I argue that respondents in my study were participating in their own oppression and I position this argument by drawing on Gramsci's notion of hegemony. The article concludes by offering recommendations on how academics can be proactive in their own empowerment by challenging and deconstructing hegemony in higher education.

Theoretical Framework

Gramsci's theory of hegemony is rooted in the political process of establish-

ing consent (Friedman 2005:239-240) and is illustrated metaphorically in the following quotation:

Begging for our own oppression is what happens when hegemony works smoothly. Those who are exploited enter ideological prisons built by the exercise of their own free will. They choose their own cells, lock their cell doors behind them, and then throw the keys out of the cell window as far beyond retrieval as they can, all the while luxuriating in a gleeful sense of self-satisfaction at having completed a job well done. In a situation like this, there is no need for elites or state agencies to exercise coercive control. Not only will those being exploited work diligently to ensure their continued subservience, they will take great pride in so doing (Brookfield 2005: 99).

In referring to Gramsci's notion of hegemony, Brookfield (2005:98) explains that it is not about oppression through brute force by an elite group, but by consent of the oppressed. People are not forced against their will to assimilate the dominant ideology; they do this willingly. Those being exploited will work to ensure their continued oppression while taking pride in doing so.

Hegemony, as it pertains to higher education, is not a new concept: several examples can be gleaned from the literature. Lo (2011:209) writes about the way in which global hegemony is manifested in agendas. In particular, he speaks about the dominance of the western paradigms on global higher education and how non-western countries are willing to follow the Anglo-American paradigm when developing their higher education systems. Ives (2009:673) discusses the teaching of English as a foreign or additional language as the 'hegemony of English', where the notion of 'global English' is regarded as 'an imposition of a language', and yet it is willingly accepted. Goodman and West-Olatunji (2010:183-184) argue that educational hegemony experienced by students from certain minority groups (in the USA) could hinder achievement by creating traumatic stress and low self-esteem among these students. They argue for social action to counter educational hegemony to reduce the effects of traumatic stress on these students and enhance their academic performance.

Few articles, however, focus on educational hegemony to the point of exploring the way in which differential reward structures for teaching and research have created a (Gramscian) hegemonic working environment for academics. The study reported in this article addresses that gap.

Research Methodology

Context of the Study

This study was conducted at a historically black institution (HBI) in South Africa. At the time of conducting this study there were four faculties with approximately 5000 students who were predominantly black and about 1800 academics; only 350 of whom were employed permanently on a full-time basis.

As an HBI, the university has been financially disadvantaged and this impacted negatively on the resources available for engagement in research and teaching. Since its inception, the university placed more emphasis on teaching than on research and, as a result, productivity in terms of research has been low. Given the nature of the programmes offered (mainly medical), most of the students enrolled were at undergraduate level.

Methods and Research Instruments

In this study, a critical theory paradigm was adopted in order to challenge existing assumptions. The intention was to bring about transformation (Dash 2005). In order to transform assumptions, I needed to ascertain what the assumptions were in the first place. Therefore, I adopted a multi-perspective approach which involved conducting face-to-face interviews and applying self-administered questionnaires among different sets of participants. A multi-perspective approach allowed for the research problem to be addressed by examining the different viewpoints of participants at different levels in the academic hierarchy.

I distributed self-administered questionnaires which contained structured and unstructured items; the former was designed using a 5-point Likert scale. The application of self-administered questionnaires enabled me

to involve a larger target population than would have been possible had I used the interview method. In this way, I was able to involve the very people who were most adversely affected by the promotion policies and the research-teaching status quo instead of simply focusing on participants who were in positions of power, such as middle and senior management, thus addressing the problem of elite bias, one can assume, whilst not eliminated had been somewhat neutralized.

Sampling Techniques and Description of Participants

The sampling technique for the study was purposive. Self-administered questionnaires were sent to 350 full-time, permanently employed academics across all four faculties. Face-to-face interviews were conducted among management staff and involved 20 Heads of Department (HOD's), all four Deans and the Deputy-Vice Chancellor (DVC). The DVC was chosen because of his direct involvement in the monitoring and promoting of academic policies and procedures. The Deans and HOD's were chosen because of their leadership status within faculties and academic departments.

The HOD respondents were selected across the four faculties. Setting up interviews and analysis of the data from these 20 respondents fitted in with the time frame of the study. At the same time, the data gathered from these respondents was adequate in addressing the research problem.

Data Collection and Analysis

Three reminders of the self-administered questionnaires were sent, but in total, only 106 questionnaires were received, giving a response rate of 30% **which is reasonable**. I employed the Statistical Analysis System (SAS) for the statistical analysis of the responses to the structured items in the questionnaire and mainly descriptive statistics, such as the calculation of frequencies and **cross tabulations**, were employed. I analyzed the responses to the unstructured items using coding, categorization and the identification of themes which I explain in some detail further on in this subsection.

The face-to-face interviews with management ranged in duration from 30–140 minutes. The interview with the DVC took one hour and twenty minutes. The interviews spanned an average of one hour with the Deans and

an average of thirty minutes with the HOD's. All interviews were tape-recorded and handwritten field notes were also compiled. I then transcribed the recordings and superimposed that with the field notes to create a more comprehensible document for analysis. I analyzed the data using data reduction techniques which sharpened, sorted, focused, discarded and organized the data in such way that final conclusions could be drawn and verified (see Miles & Huberman 1994:10). I applied three steps in the analysis of the data: organizing, summarizing and interpreting the data (Ary, Jacobs & Razavieh 2002:465).

The first step taken to organize the data was to reduce it through a process called coding, which involved writing key words or phrases below the units of data. After coding, all units with the same coding categories were grouped together. The data was re-read to look for words and phrases that appeared relevant. This classification of similar ideas and concepts also represented categories. The goal was to create a set of categories that provided a meaningful reconstruction, summary and interpretation of the collected data (Ary *et al.* 2002:466-467; Bogdan and Bilken 1992:166). As a validity check, I had a colleague check the coded transcripts for correctness of coding and categorization. The ultimate step involved making general statements and further interpretations regarding relationships among categories by identifying patterns or themes within the data. In searching for patterns, I tried to understand the complex links between the respondents' perceptions, actions and beliefs in order to find negative evidence and alternative explanations. Pattern seeking also enabled me to explain the way in which the data illuminated the research problem, in addition to relating to the conceptual framework of the inquiry (McMillan & Schumacher 2001:476).

Approval to Conduct Research

The study was part of a PhD project and permission and ethical approval was obtained from the university in question to undertake the research.

Limitation

The power differential between the researcher (who was employed at the level of lecturer at the time of this study) and some of the participants such as

the Deans, DVC and HOD's could have influenced the responses given in the research situation.

Results and Discussion

In this section, the data obtained from the face-to-face interviews and the self-administered questionnaires are integrated to yield a coherent discussion.

Differential Rewards for Teaching and Research

In a previous publication (Hassan 2011) I report that the majority of respondents (76% or 79/104) agreed that the university (in question) seldom rewards excellence in teaching and learning, while just over a quarter of respondents (27% or 29/106) support the university's practice of rewarding research more than teaching. In that article, I argue that educational transformation has created a difficult environment for academics since they are expected to be imaginative and creative facilitators of innovative methods of teaching and learning even though more recognition and rewards are given for research than for teaching. Once again, when undertaking this study, the data confirmed that not much has changed.

In this article, I take the argument further by adding that in the midst of limited recognition and rewards for teaching as compared to research, and in spite of not supporting this practice, academics are still committed to teaching and, therefore, from a critical theory perspective, are contributing to their own oppression. I support this argument by drawing on additional data about academic's commitment to teaching obtained from the broader study.

It was during the interview with the DVC that the university's stance on teaching and research at the highest level was obtained. He admitted that the university rewards research more than it does teaching, but stated that: 'We see the importance of teaching on the same level as research and research development'. This is an important vision, but to what extent was it being implemented in faculties and departments? When the Deans and HOD's were interviewed, I noticed a differing perception regarding the university's focus on teaching and research. This is discussed in more detail later in this article.

Continued Commitment to Teaching (Compliance) in Spite of Minimal Rewards

Furthermore, the data also revealed that academic respondents were willing to participate in academic development programmes and that they were committed to improving their teaching skills. Sixty nine percent (73/106) of respondents indicated that they were willing to participate in staff development programmes to improve their teaching skills, even if they were not going to be rewarded for it. Almost all the respondents (94% or 90/105) perceived a need for staff development that would enhance the quality of their teaching skills. More specifically, they felt that staff development programmes should focus on helping academics cope with the challenges of empowering students who are educationally disadvantaged (91% of respondents or 96/106). If a postgraduate programme in higher education were to be offered, 59% (63/106) stated that they would be interested in enrolling for such a programme.

Although there was a perception that there were more rewards for research than for teaching, academic respondents still indicated that they wanted to pursue excellence in teaching. Further evidence from my study to support this interpretation was that 64% (or 66/106) of respondents disagreed that they would prefer doing research instead of being concerned with educational transformation as it relates to teaching. Also, 64% (or 66/106) indicated that they would be willing to participate in the educational change process (pertaining to teaching) at the university. Ninety one percent (96/106) of respondents expressed a need to learn more about teaching portfolios.

It was difficult to comprehend why academics would still be committed to pursuing excellence in teaching in the face of limited rewards and recognition. Gordon and Wimpenny (1996:483) attempt to offer some clarification on the matter by explaining that a person's vulnerability and need for approval and acceptance from those in authority can distort their perceptions of reality. This, however, does not explain why they would make themselves vulnerable by not engaging in research. When viewed from the angle of hegemony, we see that 'people actively welcome and support beliefs and practices that are actually hurting them' and furthermore, they believe that the dominant ideology represents their best interests (see Brookfield

2005:95, 96). Therefore, control of the subaltern classes (academics) is exercised in a subtle way and operates persuasively rather than coercively (Entwistle 2009:8).

In attempting to compare the results of my study with other documented studies, I found that many researchers simply refer to the job satisfaction that academics derive from teaching without discussing the reward structures for research and teaching, which would have provided the appropriate context for the interpretation of their results. The Ezer, Gilat and Sagee (2010:391-400) study is such an example: respondents who were graduates of a teacher education programme felt that teaching accords self-realization, provides a sense of purpose and enables lifelong development. Similarly, the research undertaken by Sturman, Rego and Dick (2011:725) show that the intellectual stimulation and intrinsic satisfaction of teaching were the most consistently valued rewards. Many academics feel they are 'putting something back' and stated that they 'enjoy the interchange with students'. These studies, however, did not discuss whether this perception was ascertained in a research-intensive university or not. Nor did they discuss to what extent teaching was being recognized and rewarded by the university. Therefore, it was difficult to determine if the respondents would have had a different view on teaching had there been more rewards for research at their university. If these respondents were not being rewarded and recognized for their laudable efforts in teaching then it would be safe to assume that hegemony had manifested. In a hegemonic environment, people not only comply, they desire and actively seek out oppressive practices. Brookfield (2005:95) proclaims that hegemony,

can be viewed as embedded in a system of practices–behaviours and actions that people learn to live out on a daily basis within personal relationships, institutions work and community.

Thus, in analyzing the phenomenon that academics are still committed to teaching in the absence of proper recognition, I drew on the concept of vocational hegemony (see Brookfield 2005) which states that academics work to ensure their own oppression and that there is no need for control from an external agent. When academics take on more and more work in the face of staff shortages until they work themselves into a state of

utter and complete exhaustion, while not being adequately rewarded for their efforts, they contribute to their own oppression and self-destruction. This inclination for self-destruction perpetuates a system that is starved of resources (Brookfield 2005:100).

More Teaching Means Fewer Opportunities for Research and Academics not Challenging this

When academics in this study reported that they took on extra teaching loads and had less time to focus on improving their qualifications and undertaking research, it may well imply they had remained at the same personnel rank for some time. According to the Deans, financial support systems were in place for academics to improve their qualifications but it was not simply funding that was needed in order to study further. Most probably, academics needed moral support as well. My study showed that only 15% of HOD's (or 3/20) had indicated that they had motivated their staff to further their qualifications in their field.

It should not be forgotten, also, that during the apartheid era more resources were made available for historically white institutions (HWI's) than for HBI's. Consequently, the HWI's have higher research outputs than the HBI's and what we have is the creation of an academic elite with research being the main element of this group. See for example Zeelan (2003:142) who talks about the low research outputs at HBI's, partly because of the perception at the UNIN: '...research is a monster which can only be tamed by highly intelligent white people'. Thus, the respondents in this study would have been disadvantaged (by the lack of resources and opportunities to undertake research) by the mere fact that they were from a HBI.

Entwistle (2009) recommends that if they (academics) are to tackle and change the hegemonic power intellectuals from the dominated classes need to crack the code and have knowledge of the dominating classes (This is what Bourdieu (1986) refers to as cultural capital.) I would interpret this to mean that academics from the dominated classes (that is, from HBI's) should become more involved in research (acquisition of cultural capital) since that is the 'code' of the dominating classes (HWI's). Gramsci's advice on tackling hegemony is that 'workers must think and act like a ruling class

because the counter-hegemonic task is one of education' (Entwistle 2009:9) In mapping out a path for how education can be used to contest ruling class hegemony, Gramsci develops the concept of the organic intellectual who is an activist and who comes from an oppressed group to work with and represents that group (Brookfield 2005).

With this in mind I sought to find out if there were adequate resources for doing research at the HBI where this study was conducted. My argument was that if the rewards were skewed in favour of research, then it should have made sense for the University to provide sufficient resources for engagement in research.

Insufficient Support for Development in Research, being Disrespected and Inaction to Change this

The results of my study exposed a paradox: while the rewards for research were high the support and resources for doing research were wanting. This deficiency was pointed out quite passionately by many of the respondents. The following comment from Dean A highlights the frustration regarding the lack of support for research development: 'We have no development in research. Without research, we can't develop academics'. These sentiments concerning the lack of support for research were shared by the HOD's with one proclaiming that: 'Research is not a priority of this university and the university doesn't support it'.

Dean B said that he did not understand how money for research was allocated within the university as his faculty received a very small amount. Dean C explained that while they had support systems to improve their qualifications such as financial support for staff, the research budget within the university was limited and they were often dependent on research support from outside agencies. This implies that research was dictated by the needs and prescriptions of the possible funders and only research that was deemed relevant to external funders would have been supported. This would have constrained academics' freedom to undertake research in their area of interest, which could have potentially been a deterrent to them engaging in research altogether. The Deans' comments indicate that although they were at a relatively senior and powerful position in the academic hierarchy, they

felt powerless and saw themselves as victims rather than as enablers.

Many HOD respondents confirmed that there was a lack of funds, a lack of facilities and limited time to become involved in research. In addition, limitations in human resources compounded the problem. Several HOD's complained that their departments were short-staffed, which had culminated in a heavy workload for academics. One HOD respondent lamented:

[The University] is not employing enough staff. As a manager, I cannot manage my department effectively since I have to do the groundwork in the department. I'm also responsible for delivery of all lectures in my department. There is no time for anything else.

Some HOD's were the only ones in their department with no additional staff to manage. This was a comment made by one of them: 'As far as staff is concerned, I couldn't do anything because I have no staff'. Another HOD argued:

The support provided to staff is negligible because of all the constraints, for example, financial. If you really want to develop staff you must have adequate numbers (of staff) and facilities.

Another HOD felt that: '...research falls by the wayside since there is no time for research under this situation'. She was the only one in her department. One HOD lambasted the University for neglecting its staff because management did not share a passion for research: 'Staff don't have an opportunity to develop themselves to do research'.

Dean D complained that he encourages research but 'staff complain that they are overworked and underpaid'. This sentiment was echoed by one HOD who asserted that: 'They must not overload us with work. People resign with overload of work and look for places with an easier job'. Yet another HOD declared that staff are 'too tired' and 'people are demotivated at the University'. That academics are overworked is not unique to the university in question. A survey conducted by Enders (1999:77) showed that many academics consider their teaching-related workload too high. As recently as 2011, Sturman *et al.* (2011:722) also found that academics are

experiencing high teaching workloads that impacts negatively on job satisfaction.

According to the HOD's, academics were encouraged and given support to engage in research. Fourteen HOD's (70%) pronounced that staff in their departments were involved in research and explained how they were managing staff to achieve research excellence. This claim paints a positive picture, yet contradicts earlier findings and complaints regarding the lack of support and time allocated for research, which gave the impression of limited involvement in research. It may well be that the HOD's wanted to give a positive impression of their leadership skills in promoting research in their departments. Only six HOD's (30%) maintained that it is difficult to manage staff to achieve research excellence since their staff are not actively involved in research.

One HOD respondent said that she tried to,

lead by example by presenting papers at conferences and also tried to coerce her staff to become involved in research by encouraging and supporting them and even gave them literature on research methodology.

Other methods used by HOD's to promote research include encouraging academics to publish once a year and assisting with applications for research funding. In spite of these measures HOD's had found it difficult to 'get people in gear'. One HOD commented: 'You must reinforce all the time otherwise the initiative dies down'. From another HOD was a complaint that most of the staff were currently relatively de-motivated and did not make themselves available for opportunities that existed.

What became evident was that while the support being afforded by the HOD's was important, it was not sufficient. What academics really needed was appropriate scaffolded support in the form of mentoring, from as more experienced other, on how to write articles that would have resulted in tangible research outputs such as publications in journals and books. From an intensive study on the interventions applied by universities internationally to promote the publication of research by academics, it was found that interventions such as writing courses, writing support groups and writing coaches lead to an increase in the average publication rates of the participants.

Many of the HOD's in my study were not active researchers themselves and were not competent to provide mentoring in research. For example, one HOD admitted that he was 63 years old and close to retirement and, therefore, his 'research days were over'. Arguably, he could have been mentoring young academic researchers. As the HOD, why was he not expected, as part of his job description, to mentor academics? Moreover, why were the academics in his department not insisting that they receive mentoring from him, given that there was nowhere else to turn to at the University when it came to research support? According to the Deans, the appointment of under-qualified staff to HOD positions, combined with a lack of research culture at the University, was compromising the quality of academics. Why were the academic respondents being so unassertive by not demanding leaders who were more qualified and competent?

Another factor that contributed to respondents being demotivated to do research was probably the heavy workload they were forced to endure as a consequence of staff shortages at a university that was under-resourced. During the time of this study, it was not the institution's practice to replace staff who resigned, thus overburdening those who remained. These results correlate with other studies (such as Garnett & Mohamed 2012:81) which have found that the lack of time, excessive administrative responsibilities and work overload contributed significantly to the lack of research outputs. In the Garnett and Mohamed (2012:87) research, professional barriers such as the lack of infrastructure, lack of support for research and limited organizational support were cited as additional obstacles to being active researchers.

Poor Leadership and a Sense of Helplessness

Evidence of poor leadership was embedded in the data, for example, one HOD maintained:

We should have experts to run this place. We have people who don't know how to run this place. Some HOD's don't know how to be HOD's.

Furthermore, as can also be gleaned from much of the preceding results in this article, the sense of helplessness and frustration that came

across during the interviews with the Deans and HOD's was glaringly obvious. The very people who were supposed to manage the institution were not able to offer solutions nor were there any indications that they were taking action to change the status quo. From the results obtained in the interview study alone, it was difficult to assume whether they were part of the dominant elite in power or not. It might have been tempting to say that they were 'invisible', but far from it, their ability to exercise power was absent. Were they themselves part of the problem? Could they really not have seen how important research leadership was in trying to pursue a research agenda?

Also, the University wanted to run departments and faculties efficiently and cost-effectively whilst spending the least amount of money and employing as few academics as possible. This works against the interests of academics. At the same time, the way hegemony manifests is for these academics to be convinced that the way they live out their professional lives is natural and works in their favour and that being subordinate is a desirable state to be in (Brookfield 2005).

As far as the academics were concerned, an unstructured item in the self-administered questionnaire sought to determine what they thought their main weaknesses were. The responses obtained were firstly from the perspective of weaknesses inherent within the university: 1) lack of resources such as staff, facilities and resources and 2) insufficient time to do their work effectively, and secondly from the perspective of weaknesses within themselves such as: lack of motivation to perform their professional tasks effectively. These findings correlate with the results obtained in the interviews with middle and senior management, discussed above. Once again, none of the respondents offered a way out of their situation. Neither were there indications that action was being taken against exploitation and oppression by the university. In fact, the respondents appeared to accept their plight as normal and chose to remain in that situation. Clearly, not only were academics unable to develop agency to cope with their dilemma, they developed acquiescence behaviour as well.

Lack of Resistance and Agency against the Status Quo

The Deans and HOD's although in leadership positions displayed a sense of

helplessness and unwillingness to take the initiative to change the status quo. For example, one HOD reasoned:

Why excel if there is no recognition for what you do. [The university] needs to create possibilities to grow, create possibilities for promotion and recognize excellence.

This also demonstrates that the University had left academics to their own devices. One could go as far as saying that academics were being blamed (and even punished) for not producing research and the University had expected them to solve the problem themselves. In this way, the University could absolve itself from all responsibility to help academics in terms of staff development, talent management and career development.

In addition, the main function of the University was teaching and this took precedence over research. It is indeed ironic that although the university rewards outputs in research, there is limited support and resources for academics to improve as researchers (Hassan 2011). One would be tempted to ask the question: why did the University adopt this skewed reward and support structure? Arguably, it was almost as if academics were being set up for failure and were being oppressed.

An important point is that the main thrust of the argument in this article is not simply about the University being construed as an apparatus of oppression. Rather, the focal point of the argument is about academics who willingly give consent to being controlled and exploited (by the University). Indeed, the inaction of academics in challenging their situation had made them complicit in their own state of subjection. From a Gramscian perspective of hegemony ‘the implication of rule by physical coercion, which the notion of dictatorship commonly entails, is absent’ (Entwistle 2009:7). In this study, if academics were being shortchanged by not being given adequate resources for research and yet were expected to excel as researchers, why did they not resist the status quo? For this to be understood, the insidious way that hegemony operates needs to be taken cognizance of, which is to coerce people to accept the way things are (Brookfield 2005: 95).

A poignant question at this juncture would be: How can academics develop agency against oppression? The Gramscian solution is to create a consciousness of oppression and organize a solidarity struggle against that

situation (Brookfield 2005). (Hopefully, as a starting point, this article will be instrumental in creating an *awareness* of the hegemonic forces at play in higher education and sensitize academics to oppression.) Gramsci's notion of hegemony

...contains the structural critique of the internalization of domination with a focus on its cultural characteristics and the potential for agency in creating resistance (Ives 2009).

Staying with the notion of agency, while there are a myriad of reported studies on the perceptions of the differential reward structures for research and teaching, only a few published studies focus are published on how academics adapt (or develop agency) to this phenomenon. Nicholls (2001:3) writes about academics who focus more on research than on teaching even if they are passionate about teaching, in response to the differential reward structures that are weighted towards research. In the study by Serow (2000:461), academics adapted by either combining research productivity with their passion for teaching, or simply persisted with their teaching without involvement in research. The latter group became increasingly marginalized and was overlooked for promotion, that is; they stagnated in their careers.

Sometimes it is not up to academics to decide whether or not to focus more on teaching than research. Santoro (2011:1) reports on,

accessing the moral dimension of teaching when the conditions of teaching become so challenging to the extent that teachers no longer see it as a moral reward'.

This access is achieved by not simply,

cultivating individual teacher's dispositions toward good work but structuring the work to enable practitioners to do good within its domain.

This shows that when academics become demoralized the institution will install measures to ensure that they continue to find moral value in teaching.

In this regard, Brookfield (2005:98) warns that hegemony is a difficult concept to grasp and is able to change its form and shape in order to ensure its survival: 'Subtle and elusive, it seems to slide from our consciousness even as we think we have it'.

Entwistle (2009:8), on the other hand, proclaims that,

it is possible for existing hegemony to accommodate alternative and counter-hegemonic cultural forces, neutralizing, changing or actually incorporating them.

Entwistle (2009: 8) cites an example by drawing on Klein's (1969) analysis of the 1960's to show that hegemony can operate to integrate different forms of protest in its own ideology. It must be noted that the relationships between hegemonies are subtle and complex.

Alternatively, a new theory to move out of the paralysis of exchanging hegemonies. Perhaps a 'capabilities approach' (see Sen 1993), wherein different capabilities are recognized and advanced, could be deployed. According to Sen (1993) policies should focus on what people are able to do and be, as well as on removing barriers and creating opportunities in order for them to have more actual (not paper) freedom to lead a life that they value. Therefore, they should have the freedom to choose to focus more on teaching if they value that; nevertheless, the opportunity and resources to undertake research should still be made available to them. This could be the focus of future research and since it is beyond the scope of this article it will not be further explicated here.

Conclusions and Recommendations

The main purpose of this article is to sensitize the reader to hegemony in higher education by illuminating the manner in which discrepancies in the reward structures for teaching and research are keeping academics in a state of oppression. By using data selected from a broader study, I have demonstrated that even though many academic respondents perceived teaching to be under-rewarded when compared to research, and did not support the institution's stance on this skewed reward system, many indicated that they would *still* pursue excellence in teaching. They still

portrayed commitment to teaching even in the wake of the low status and the lack of recognition compared to research. Numerous academics even perceived a need for staff development that would guide them towards improving the quality of their teaching. By these academics placing so much emphasis on teaching, when it was research that would ensure promotion, I have argued that the respondents in my study were contributing to their own self-destruction.

My study also illuminated the paradox that while there were more rewards for research compared to teaching, the support and resources for undertaking research were limited. This created an oppressive hegemonic environment which would ensure that the respondents would not easily advance in their careers, but remain enslaved to their profession as junior staff.

I have, therefore, demonstrated in this article that academics at the University where this study was conducted were subjected to hegemonic forces which were born from the activities and tools (or policies and practices) of management. I offer some recommendations on how academics can develop agency against these hegemonic forces weighing against them. I would like to suggest that they use those very same tools against the hegemonic practices of management. Maistry (2012:516) claims that performance management contracts are used as a surveillance mechanism to closely monitor the productivity of academics by quantifying their work, so one can, for instance, use these contracts to define the workload that one is prepared to undertake. If the number of hours of teaching looks unreasonable on paper this can be a point of departure for negotiation. Performance management contracts should also contain measures for professional development. One should further ensure that time is allocated for research activities such as presenting at conferences. If an individual is asked to work beyond the contents of the performance contract they should not be too quick to comply, unless it leads to the achievement of their developmental goals.

When academics take a stand in this way they would be teaching the relevant people (that is, those who occupy positions of power) how to manage higher education matters. For instance, management would be forced to employ additional staff, rather than over-burden existing staff. It would become the responsibility of management to motivate for new posts, should that become necessary. If it is not possible to employ more staff,

management should devise ways of working more strategically and effectively: ‘work smart, not hard’ should be the motto and there should be a focus on quality rather than quantity. It is also the responsibility of the university to put in place effective human resources policies which would ensure that people employed in management positions are leaders in the true sense of the word, are academically savvy and are capable of academic leadership so that they are able to provide guidance and nurturing for academics in a complex, uncertain, hegemonic higher education terrain.

Ultimately, the hegemonic status quo in higher education needs to be challenged, not bowed down to and feared, nor assimilated within our very being. Academics owe it to themselves to remain alert to its presence, its morphology and inclination to change its shape lest it be identified. They need to take a stand, not simply as individuals, but together in solidarity as a united force.

I conclude this article with Entwistle (2009:9) quoting from Gramsci’s writing in the *L’Ordine Nuovo* (a weekly journal) as follows:

Instruct yourselves because we shall need all our intelligence.
Agitate because we shall need all our enthusiasm. Organize
yourselves because we shall need all our power.

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Excellence in Teaching versus Excellence in Research

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Valuing Teaching in University Academic Promotions

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Abstract

Studies on academic promotions point to a consensus among academics that excellence in teaching quality should be rewarded and recognised though challenges remain about how exactly this can be done. This article presents a quantitative analysis of all applications for academic promotion and their outcomes over a three-year period (2009-2011) at a South African university; where promotions to all ranks (lecturer to professor) are made on the basis of teaching and/or research. It statistically examines the extent to which academic promotions may be attributed to research and/or teaching with particular reference to gender and rank. The results demonstrate that teaching is valued and brings into sharp relief the gendering of academic promotions. Significant findings show that while more men applied for promotion to the ranks of the professoriate; a greater proportion of women were successful in being promoted at these levels. Moreover, the success rate of females is 20% lower than the success rate of males if research is the only criterion for promotion; and the success rate of females, when using both research and teaching criteria, is 22% higher than it is for males. The research reported suggests that the implication of excluding teaching as a criterion for academic promotions disadvantages the career progression of women academics and is a barrier to increasing the number of women in the professoriate.

Keywords: academic promotions, excellence in teaching versus excellence in research, gender, professoriate, rewards and recognition, university teaching quality

Introduction

Do teaching excellence and expertise matter in academic promotions in universities? Historically, teaching has been a core pillar of universities and today most higher education institutions (HEIs) are reported to have strategies in place that recognise and value teaching quality. These strategies include teaching awards, teaching improvement grants and recognition of teaching through career development, staff appraisal and academic promotion (Bayissa & Zewdie 2010; Cronje, Jacobs & Murdoch, 2002). Moreover, universities have increasingly begun to create senior management and executive leadership positions in their organisations, to focus on and support teaching in a way that was once only reserved for promoting excellence in research.

However, despite these strategies, the general perception is that 'universities' commitment to teaching remains ambiguous in the face of its historically subordinate status to research' (Parker 2008: 237). Studies show that academics often report that teaching activities, while important, do not receive the same measure of reward and recognition that research-related activities do (Young 2006; Badri & Abdulla 2004; Cronje *et al.* 2002). A criticism levelled is that while academic promotions policies, which stipulate that the criteria for promotion should include teaching and research, are in place, they are often not implemented (Chalmers 2011) or do not include teaching as an area that needs to be evaluated for promotion to the higher ranks of the professoriate which is exclusively dependent on research productivity (Parker 2008; Doherty & Manfredi 2006).

It is not surprising, therefore, that the issue of whether teaching (compared to research) is given sufficient consideration for academic promotions has generated much debate in higher education literature. This article examines this issue with reference to the University of KwaZulu-Natal (UKZN), described as one of South Africa's top research universities (QS Rankings, 2012) and one of the largest contact universities, in which the academic promotions policy and procedures provide a framework for academic promotions to all ranks on the basis of teaching and research. This policy has been implemented for more than a decade. The article offers a statistical description and analysis of the actual promotion data and decisions at UKZN for the period 2009-2011. The research was undertaken to determine the extent to which academic promotions are attributed to research

and/or teaching at the university, and with a particular interest in examining the effect of gender and rank.

Challenges of Valuing Teaching in Higher Education Institutions

The literature, largely from the UK, the USA and Australia, argues that teaching-related activities in higher education institutions (HEIs) are not equivalently valued (compared to research) as important criteria for academic promotions, and that research provides greater rewards in terms of recognition, pay and promotion prospects for academics (MacFarlane 2007; Parker 2008; Young 2006; Fairweather 2005; Leslie 2002; Forster 2001; Neumann 2001; Moses 1986). This situation prevails despite most academics' support for the idea that teaching should be a criterion for promotion and their general disagreement that research should be the dominant or only determinant for promotion (Leslie 2002; Ruth 2001). A survey by Cronje *et al.* (2002) demonstrated that academic staff are more likely to be recognised for their research efforts than for excellence in teaching and noted that there was 'a disequilibrium between the recognition for teaching and research' (32). Even in HEIs, where teaching is considered an integral part of the organisation's mission statement, research is accorded a higher status (Fairweather 2005; Leslie 2002). A few studies conducted in South Africa also share the view that staff perception of teaching and research is that 'research is rated more highly as an academic activity' than teaching (Ruth 2001:21; Cronje *et al.* 2002). However, this state of affairs is beginning to change. For example, Badri and Abdulla (2004) reported that at a United Arab Emirate university, research and teaching were weighted equally when promoting faculty at associate professor and professor ranks.

While it is contended that evaluating research for promotion purposes is relatively objective, with transparent and widely agreed measures, indicators and benchmarks, the same cannot be said for teaching which is deemed to be complex, subjective and difficult to measure, thus limiting the use thereof for promotional purposes (Vardi & Quin 2010). It has been suggested that the more complex 'criteria for the evaluation of teaching in higher education [often] contribute[s] to the marginalization of teaching

within the reward structures of universities' (Pratt 1997: 23), because those responsible for promotion decisions are suspicious of their evaluations.

Chalmers (2011) reviewed initiatives to reward teaching in the UK, Australia and North America and found that although progress was being made in terms of recognising teaching for academic promotion, especially through policy development and revision of performance criteria, actual articulation of policies in practice was deficient as promotion remains focussed on research and the improved status of teaching still needed to be demonstrated. A further criticism is that those HEIs that have implemented various initiatives to recognise and reward teaching on par with research have applied these initiatives to the lower ranks of lecturers and senior lecturers; promotion to the higher ranks of professor is still largely dependent on research productivity (Parker 2008; Doherty & Manfredi 2006) with little attention being paid to teaching excellence at this level. Parker (2008) analysed the criteria used to determine promotions in UK universities by examining the extent to which research and teaching were recognised as evidence for promotions. She found that while universities have 'adopted formal parity' (237) in the research and teaching criteria for lower ranks, this was not the case for the higher ranks; most UK universities required research excellence but did not have similar requirements for teaching excellence for promotion to the level of professor.

From a gender perspective the literature shows that historically women are under-represented in the academic promotion process precisely because of the inequity between teaching and research productivity, where promotions have been traditionally related to research output only (Todd & Bird 2000). Since women are more likely to be over-represented in teaching-related activities (Winchester, Lorenzo, Browning & Chesterman 2006), not including teaching as a criterion for promotion disadvantages women in the promotion processes and exacerbates their under-representation in the higher academic ranks. 2011 academic staff data from the Council on Higher Education (2013) shows that in South Africa, 23% of professors, 33.5% of associate professors, 43.6% of senior lecturers and 49.5% lecturers are women.

Several studies show that women have lower promotion probabilities than men (Groeneveld, Tjidsens & Van Kleef 2012; Ward 2001), are more likely to be over-represented in teaching activities (Winchester *et al.* 2006; Thanacoody, Bartram, Barker & Jacobs 2006; Forster 2001) and are less

active in research than their male counterparts (Fox-Cardamone 2010; Doherty & Manfredi 2006). It is not surprising, therefore, that they are less likely to hold senior ranks of associate professor and professor at their institutions (Fox-Cardamone 2010; Thanacoody *et al.* 2006). A UK research assessment exercise conducted in 2004 showed that male academics were '1.6 times more likely to be counted as research active than females were' (Doherty & Manfredi 2006: 557) and that females were less likely to apply for promotion based on research output. The findings also showed that women remained under-represented in institutions that placed a greater emphasis on research. However, when equal value was placed on teaching and research for promotion, women tended to progress (Doherty & Manfredi 2006; Todd & Bird 2000).

Arguably, much of the research on the topic being considered in this article was generally based on policy analysis, qualitative methods such as interviews and staff surveys rather than on an analysis of actual academic promotions data. There appears to be a lack of research which draws on the evidence of human resource records of HEIs to analyse academic promotions and the extent (if any) to which teaching criteria play a role. This article addresses this gap in the literature by presenting an analysis of data captured from the UKZN academic promotions committee minutes. Triangulation was performed by adding information from the UKZN Human Resources(HR) records, to examine the question of the extent to which teaching excellence contributed to academic promotions, and in particular, with respect to gender and rank.

University of KwaZulu-Natal Context and Academic Promotions

The University of KwaZulu-Natal (UKZN) was formed in 2004 following a merger of the University of Durban-Westville, a historically black (disadvantaged) university, and the University of Natal, a historically white (advantaged) university. The resultant UKZN promotions policy was based on an integration of the policy criteria of the former institutions, in particular including teaching as one of the main areas of evaluation for academic promotion (which was introduced earlier in the former University of Natal – Webbstock 1999).

The UKZN Academic Promotions Policy stipulates that an applicant may be evaluated for promotion in four main areas: teaching; scholarship and research; community service and development; and university service. For promotion to all levels applicants must demonstrate a minimum of *strength* in teaching and in research. In addition, an applicant for promotion to the ranks of all levels from lecturer to associate professor must demonstrate *excellence* in at least one of the main areas; while for promotion to the rank of professor, an applicant must additionally demonstrate *excellence* in two of the main areas. For the period 2009-2011 being analysed, all academics at UKZN were evaluated in one or both areas of teaching and research during the academic promotion process (that is, no candidate was promoted on the basis of excellence in community or university service).

Since the merger in 2004, UKZN has been organised around four colleges — Agriculture, Engineering and Science; Humanities; Health Sciences; and Law and Management Studies. In the period 2004-2011 each college comprised two faculties. In the years for which the promotions data are analysed in this article, each of the eight faculties developed and implemented Senate-approved, faculty-specific criteria for evaluating research outputs for promotion. Unlike the criteria for research, teaching assessment criteria were also Senate-approved but were based on a common set of categories that applied across the university (that is, the criteria were not faculty-specific). All academics applying for promotions submit a teaching portfolio for evaluation. In each area of teaching and research, an applicant for academic promotions is assessed as achieving an evaluation resulting in one of the following ratings: excellence, strength or not meeting any of the criteria (i.e. below strength).

The evaluation of teaching for all levels of promotion takes place on the basis of an assessment of an applicant's teaching portfolio. The teaching portfolio requires candidates to provide information and evidence in the following eight categories:

- (1) rationale for approach to education;
- (2) methods of teaching and supervision;
- (3) methods of assessments and student performance;
- (4) peer and student evaluations of teaching;
- (5) ongoing study of tertiary education theory and methodology;

- (6) development of new curricula;
- (7) sharing teaching expertise with others; and
- (8) special recognition of teaching.

Detailed descriptions of the criteria for each category and assessment expectations are explained in the UKZN Academic Staff Promotions Procedures and Guidelines, which set out details for compiling and assessing teaching portfolios. Each category and the overall teaching portfolio are evaluated in descending order as: outstanding; excellent; strength; inadequate or no evidence. Categories 1 to 4 apply to all candidates and are evaluated for an overall judgement of strength in teaching. For an evaluation of excellence in teaching, candidates must achieve ‘outstanding’ or ‘excellence’ in a majority of categories 1 to 4, plus ‘excellence’ or ‘outstanding’ in at least two of the categories 5 to 8. According to the policy, while strength in teaching is a minimum criterion, for an assessment of excellence in teaching, candidates must provide evidence of excellence in teaching practice and in the scholarship of teaching. The university’s Quality Promotions and Assurance (QPA) department conducts annual workshops on developing and evaluating teaching portfolios for academic promotions.

The process is as follows: applications for promotions are called for once a year. The relevant Faculty Academic Promotions Committee evaluates each candidate’s application, based on the relevant criteria, and makes a recommendation to the College Academic Promotions Committee. Each teaching portfolio submitted for promotion purposes is evaluated by the Faculty Teaching-Portfolio Assessment committee, a sub-committee of the Faculty Promotions Committee. The sub-committee also includes a member from the QPA department, whose role is to ensure procedural regularity and consistency in evaluating teaching portfolios in accordance with the approved guidelines of the promotions policy. University-wide consistency in teaching portfolio evaluation is achieved by each faculty submitting three portfolios (good, average and weak) to a Teaching Portfolio Moderating Committee, chaired by the QPA director. This moderating committee also mediates any disputes on teaching portfolio evaluations, including those arising from deliberations in any of the promotions committees. The College Academic Promotions Committee makes the final decision on academic promotions and records the evaluation outcomes of the area(s) considered

and the success (or otherwise) of the application and these are noted by the Senior Academic Promotions Committee.

Methodology

In the research on which this article is based, a quantitative analysis was done of academic promotions for UKZN staff over a three-year period and the relationship between academic promotion applications, outcomes, teaching or research excellence, rank and gender was statistically examined. For the analysis, all applicants for academic promotion in the period from 2009-2011 inclusive, were selected from all four colleges in the university, namely Agriculture, Engineering and Science; Humanities; Health Sciences; and Law and Management Studies. Applications for promotion to the ranks of professor, associate professor, senior lecturer and lecturer were considered.

Demographic data, criteria for promotion (based on research and teaching excellence) and promotion decisions were captured directly from the UKZN College Academic Promotions Committee minutes onto an MS Excel spread-sheet. These were cross-referenced and triangulated with data from the UKZN Human Resources Division (also on an MS Excel spread-sheet). The spread-sheets were then merged and errors and omissions in the data were resolved on a case-by-case basis. This method of double-entry ensured that data capturing errors, duplicate entries and the potential for missing data were minimised. Permission was obtained from the Registrar of UKZN as custodian of all institutional data.

The analysis explicitly excludes community or university service as an area of evaluation for promotion as there were no applications for promotion based on excellence in these categories for the period being analysed and the number of applications based on service was negligible. Similarly, out-of-cycle promotions were also excluded. The data was then analysed by calculating frequencies and a log-linear analysis was conducted. The log-linear model approach does not make an a priori distinction between independent and dependent variables, although our model specifications allow for the distinction to be made. The emphasis of the log-linear methods was primarily to test for independence and generalized independence, goodness-of-fit tests and estimation of cell frequencies or probabilities for the underlying contingency table.

The results report on all academic staff members who applied for promotion in each year of 2009, 2010 and 2011, a total of 165 cases. The key dependent variable was the outcome of the application and the independent variables were the rank and the gender of the applicant. The results demonstrate the extent to which teaching excellence, rather than research prowess exclusively, when used as promotion criteria, affects the outcome of the promotion applications of the profiled applicants.

Promotion Applications and Outcomes

In this section a quantitative description of the academic promotion applications and outcomes is provided and analysed in terms of rank and gender

Of the 165 academic promotions applicants for the period 2009-2011, 88 were successful and these outcomes are described by year, gender and rank (see Table 1). The largest number of applications (71) and the largest number of successful outcomes (39) were for the rank of senior lecturer while the smallest (10) were for lecturer level where all were successful. However, overall 49% of the 165 applications were for promotion to lecturer and senior lecturer levels and 51% of the applications for promotion were for the higher ranks of associate professor and professor. Applications in the lower ranks of lecturer and senior lecturer were more likely to be successful than applications to the higher ranks. This was a statistically significant finding ($r_s = -.204$; $p < 0.01$ – see Table 2).

Table 1: Summary of UKZN academic promotion applications and outcomes (2009-2011)

Characteristics (N=165)	Applications		Successful applications	
	No.	%	No.	%¹
Year				
2009	58	35.1	35	60.3%
2010	59	35.8	31	52.5%
2011	48	29.1	22	45.8%

¹ Percentage successful relative to applicants per category.

Gender				
Female	79	47.9	45	57.0%
Male	86	52.1	43	50.0%
Rank				
Lecturer	10	6.1	10	100%
Senior Lecturer	71	43.0	39	54.9%
Associate Professor	51	30.9	25	49.0%
Professor	33	20.0	14	42.4%

Table 2: Correlations between Application-outcome, Gender and Rank

			Application Outcome	Gender	Rank
Spearman's rho	Application outcome	Correlation coefficient	1.000	-.080	-.204**
		Sig. (2-tailed)		.301	.008
		N	167	167	167
	Gender	Correlation coefficient	-.080	1.000	.193*
		Sig. (2-tailed)	.301		.012
		N	167	167	167
Rank	Correlation coefficient	-.204**	.193*	1.000	
	Sig. (2-tailed)	.008	.012		
	N	167	167	167	

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

For the three-year period that was analysed, there were more male applicants (52%) than female applicants (48%) but relatively more females were successful (Table 1). Of the 88 (or 53%) applicants who were successful in

their bid for promotion, 57% of all the female applicants were successful while 50% of all male applicants were promoted.

The study found there was a positive correlation between gender and applications for the higher ranks, where men were more likely to apply for higher ranks than women (see Table 2). This result was significant ($r_s = .193$; $p < 0.05$). When intersecting rank and gender, Table 3 shows that while more men applied for promotion to the ranks of associate professor and professor; a greater proportion of women were actually successful in being promoted (52% of the women vs. 43% of the men) at these levels. It also shows that at the lower rank levels of lecturer and senior lecturer more women (46) applied for promotion than men (35) and had similar levels of success (60%).

Table 3: Promotion outcomes by rank and gender

	Female		Male		Total	
	(n)	(%)	(n)	(%)	(n)	(%)
SUCCESSFUL	45	27.3%	43	26.1%	88	53.3%
Lecturer	8	4.8%	2	1.2%	10	6.1%
Senior lecturer	20	12.1%	19	11.5%	39	23.6%
Associate professor	10	6.1%	15	9.1%	25	15.2%
Professor	7	4.2%	7	4.2%	14	8.5%
UNSUCCESSFUL	34	20.6%	43	26.1%	77	46.7%
Lecturer	0	0%	0	0%	0	0
Senior lecturer	18	10.9%	14	8.5%	32	19.4%
Associate professor	9	5.5%	17	10.3%	26	15.8%
Professor	7	4.2%	12	7.3%	19	11.5%
GRAND TOTAL	79	47.9%	86	52.1%	165	100.0%

Teaching and Research in Successful Academic Promotions

Each promotions applicant is evaluated for their research outputs and their teaching contributions as showing strength or excellence. The various

combinations of outcomes for all successful candidates are captured in Table 4, which shows the distribution by rank and gender.

For the study period, 43% or 38 of all successful promotion outcomes (n=88) were based on the candidates' being assessed as showing excellence in both teaching and research. Many more (34% or 30) were promoted on excellence in teaching (and strength in research), then were promoted on excellence in research (with strength in teaching) (22% or 20). This means that overall, a majority, more than three quarters (77.3%) who were successful in their promotions, had been evaluated as having achieved excellence in teaching. At all rank levels half or more of the successful candidates achieved an evaluation of excellence in teaching.

It may be worth mentioning that even among the unsuccessful candidates (77) more academics (17) achieved excellence in teaching compared to those who were evaluated as showing excellence in research (11) but did not meet the other criterion and hence were not successful.

Table 4: Successful promotion evaluations of teaching and research by rank and gender

Rank	Female		Male		Total	
	(n)	(%)	(n)	(%)	(n)	(%)
Lecturer	8	9.1%	2	2.3%	10	11.4%
Excellence in both Excellence in research and strength in teaching	2	2.3%	0	0.0%	2	2.3%
Excellence in teaching and strength in research	0	0.0%	1	1.1%	1	1.1%
	6	6.8%	1	1.1%	7	8.0%
Senior lecturer	20	22.7%	19	21.6%	39.0	44.3%
Excellence in both Excellence in research and strength in teaching	9	10.2%	7	8.0%	16	18.2%
Excellence in teaching and strength in research	1	1.1%	7	8.0%	8	9.1%
	10	11.4%	5	5.7%	15	17.0%

Associate professor	10	11.4%	15	17.0%	25.0	28.4%
Excellence in both	4	4.5%	2	2.3%	6	6.8%
Excellence in research and strength in teaching	3	3.4%	8	9.1%	11	12.5%
Excellence in teaching and strength in research	3	3.4%	5	5.7%	8	9.1%
Professor	7	8.0%	7	8.0%	14.0	15.9%
Excellence in both	7	8.0%	7	8.0%	14	15.9%
Grand total	45	51.1%	43	48.9%	88	100.0%

For promotion to the ranks of lecturer, senior lecturer and associate professor, candidates must achieve excellence in at least one area, hence those who had been promoted on the basis of excellence in teaching (and strength in research) would not have been successful had there not been the teaching criterion in the academic promotions. This translates to 30 (or 34%) of the successful applicants directly attributing their promotion to teaching excellence. If the 14 professors (who must demonstrate excellence in at least two areas) who were promoted on the basis of excellence in both teaching and research are added, then the figure rises to 44 or half of the successful candidates having been promoted as a result of the recognition of teaching excellence in the promotions process.

In terms of gender, Table 4 bears evidence that more successful females (42%) were evaluated to have excellence in teaching as compared to males (25%). Conversely, more successful males were evaluated with excellence in research (37%) than females (9%), over the study period.

For each rank level in which excellence in only one area was required (lecturer to associate professor), women exceeded the requirements and dominated in achieving excellence in both teaching and research. Similarly, males dominated in being evaluated as excellent in research for all levels where excellence in one area was required.

Furthermore, 19 of the 45 successfully promoted females (42%) would not have been promoted were it not for teaching as an area of evaluation; similarly only 11 out of 43 (26%) of males would not have been promoted. The role that teaching plays in academic promotions success was analysed statistically below, further interrogating the findings for women.

Statistical Analysis: Outcomes of Teaching and Research in Academic Promotions

The data in this study was used to set up a log-linear analysis of variance table by using the parameters Gender, OutcomeOld (the outcome if only research is used as promotion criteria) and OutcomeNew (the outcome if both teaching and research are used as promotion criteria). The following output was obtained after interrogating the 165 applications for academic promotion at UKZN, for the period 2009-2011:

Table 5: The log-linear model (saturated model) analysis of variance

Parameter		Estimate	SE	Chisq	Pr>chisq
OutcomeOld	SUCCESSFUL	-0.3497	0.1184	8.72	0.0032
OutcomeNew	SUCCESSFUL	0.2927	0.1184	6.11	0.0134
Gender	Female	-0.1414	0.1184	1.43	0.2326
OutcomeOld* OutcomeNew	SUCCESSFUL SUCCESSFUL	0.7045	0.1184	35.39	<.0001
OutcomeOld* Gender	SUCCESSFUL Female	-0.2477	0.1184	4.37	0.0365
OutcomeNew* Gender	SUCCESSFUL Female	0.2355	0.1184	3.96	0.0467
OutcomeO* OutcomeN* Gender	SUCCESSFUL SUCCESSFUL Female	0.0686	0.1184	0.34	0.5626

The *p*-value of 0.5626 in the last row of Table 5 of the log-linear analysis of variance table indicates that the three-variable interaction is non-significant (greater than 0.05), which means that there is no significant effect between the three parameters Gender, OutcomeOld and OutcomeNew, more specifically, thus, concluding that there is no evidence of a significant pattern by which these three variables jointly perform. All of the two-variable

interactions, however, are significant, as can be seen by the last column in rows 4-6 of Table 5; where all values are lower than 0.05; thus demonstrating evidence of pairwise mutual dependence among all three the mentioned variables (OutcomeOld, OutcomeNew and Gender). This model is often referred to as homogeneous association.

Homogeneous association implies that the conditional relationship between any pair of variables, given the third variable, is the same at each level of the third variable. That is, the odds ratio of gender and promotion application outcome, using teaching and research as criteria (OutcomeNew), is the same for both successful and unsuccessful applicants using the research excellence criteria (OutcomeOld). Likewise, the odds ratio of OutcomeNew and OutcomeOld is identical for male and female applicants. The deviance goodness of fits statistic for the homogeneous model reflected in Table 5 was found to be 0.35 with degrees of freedom 1 ($p=0.5533$). This provides strong evidence of pairwise condition dependence of OutcomeNew, OutcomeOld and Gender.

Table 6: The log-linear model homogeneous model parameter estimate

Parameter		Estimate	SE	Chisq	Pr>chisq
OutcomeOld	SUCCESSFUL	-0.3217	0.1037	9.63	0.0019
OutcomeNew	SUCCESSFUL	0.2644	0.1034	6.54	0.0106
Gender	Female	-0.0940	0.0823	1.30	0.2534
OutcomeOld* OutcomeNew	SUCCESSFUL	0.6823	0.1072	40.50	<.0001
	SUCCESSFUL				
OutcomeOld* Gender	Female	-0.2141	0.0991	4.67	0.0306
OutcomeNew* Gender	Female	0.2008	0.0979	4.20	0.0404

The interactions estimate in Table 6 is the conditional log odds ratio. Since we established that all two-way interactions are significant, we did not

interpret the first three rows of the above table, as each variable experiences interaction with another.

The log odds ratio of OutcomeOld*OutcomeNew, reflected at 0.6823 in Table 6, shows strong positive association between promotion application success using research as promotion criteria (OutcomeOld, successful) and successful application for promotion when using research as well as teaching (OutcomeNew, successful) as promotion criteria, this association being the same for both for male and female applicants. What this means, therefore, is that irrespective of gender, there is a strong relationship between being successful under the research only criteria, versus being successful under the research and teaching criteria, for the profiled applicants in the study. When taking the log odds ratio of OutcomeOld*Gender, we found a negative association (-0.2141) between female applicants and success using research excellence (OutcomeOld), for both successful and unsuccessful records in OutcomeNew, where teaching excellence only is recognised. We further noted that $\exp(-0.2141) = 0.8073$, indicating that the success rate of females was almost 20% less than the success rate of males under OutcomeOld (research criteria only), both for those applicants that would have been successful under OutcomeNew (when both research and teaching are used as criteria) or not.

On the other hand, OutcomeNew*Gender log odds ratio showed positive association between female applicants and success using teaching and research criteria; this was true for both successful and unsuccessful applicants using research excellence criteria (Outcome Old). In other words, the success rate of females under the teaching and research promotion criteria was 22% higher than it was for males, irrespective of whether they would have been successful under the research only criteria for promotion, since $\exp(0.2008)=1.22$, from the last row of Table 6 above.

This homogeneous model reproduces the predicted cell frequencies for the data given in Table 7. The homogeneous model predicted the frequencies with fractional errors, which supports the goodness of the mutual dependence of the three variables, thus showing strong evidence for the applicability of the fitted model.

In summary, the key results are that if we partition the applicants by status of their outcome when both teaching and research

OutcomeOld	OutcomeNew	Gender	Observed		Predicted			Residual
			Frequency	Error	Frequency	Error	Residual	
SUCCESSFUL	SUCCESSFUL	F	27	4.752033	26.34529	4.568679	0.654708	
SUCCESSFUL	SUCCESSFUL	M	32	5.078773	32.65471	4.992621	-0.65471	
SUCCESSFUL	UNSUCCESSFUL	F	2	1.405616	2.654708	1.160192	-0.65471	
SUCCESSFUL	UNSUCCESSFUL	M	8	2.759007	7.345292	2.398375	0.654708	
UNSUCCESSFUL	SUCCESSFUL	F	19	4.100259	19.65471	4.005945	-0.65471	
UNSUCCESSFUL	SUCCESSFUL	M	11	3.204164	10.34529	2.903556	0.654708	
UNSUCCESSFUL	UNSUCCESSFUL	F	31	5.017545	30.34529	4.847527	0.654708	
UNSUCCESSFUL	UNSUCCESSFUL	M	35	5.251262	35.65471	5.165683	-0.65471	

are used as promotion criteria, then for both the successful and the unsuccessful candidates, the success rate of women will be 20% lower than that of men if teaching is excluded as promotion criteria. On the other hand, if we partition the applicants by status of their outcome when applying for promotion based on research only, then introducing teaching as promotional criteria will result in the success rate of women being 22% higher than that of males, irrespective of the status of the outcome under the research only criteria.

Discussion

The analysis provides evidence of how teaching has been and can be valued in the actual academic promotions outcomes of a large, South African university which has a strong research focus. UKZN comprises more than 40000 students and approximately 1400 academics, about half of whom are women. The research reported in this article was conducted in the period 2009-2011, during which 165 academics applied for promotion and 88 or 53% were successful. The results showed that when teaching and research were equally available in the promotions criteria, more candidates were evaluated as achieving excellence in teaching than in research.

The notion that teaching cannot be evaluated with consistency and with the same rigour as research productivity is challenged by the UKZN case. It has been demonstrated that promotions processes that are merit-based, fair and transparent with mechanisms for dealing with differences can be instituted to evaluate teaching. At UKZN university-wide consistency in teaching portfolio evaluations is achieved through the Teaching Portfolio Moderating Committee that also mediates any disputes about teaching portfolios. The University also provides annual education and training workshops for academic staff on how to develop teaching portfolios for promotion. Moreover promotion committee members and the relevant quality staff are required to attend workshops and training sessions on how to evaluate teaching portfolios. These factors have contributed to a culture of accepting teaching as a valid and important part of the promotions process.

Not surprisingly the data bears evidence that applications for promotion in the lower ranks was more likely to be successful than applications to the higher ranks. This is because the criteria for promotion to

the senior ranks are more demanding and more substantial contributions toward the main evaluation areas are expected at the higher rank levels.

A major finding is the role teaching plays in academic promotions for women and the extent to which academic promotions are gendered. The analysis revealed that men are more likely to apply for the higher ranks of associate professor and professor. Women may be more tentative about applying for higher academic ranks which are more demanding because of family responsibilities, work-life balance, gender stereotypes, gender discrimination, limited career mobility and fewer years of service (Groeneveld *et al.* 2012; Thanacoody *et al.* 2006; Forster 2001; Ward 2001; Todd & Bird 2000). However, despite the lower application rates for these ranks, the results show that more of those women who applied (52%) for associate professorships and professorships were successful versus the 43% of males who were successful.

This study clearly demonstrates the extent to which women are affected in promotions outcomes through the inclusion of teaching in promotions criteria. From the data presented 91% (41 of the 45) successful women achieved an evaluation of excellence in teaching in the promotions outcomes compared to 63% of males who achieved the same outcome. The results are consistent with those from previous studies which confirmed that more women were likely to be promoted on teaching compared to men who were promoted on the same criteria. The analysis presented in this article goes further by quantifying the margin by which teaching influences promotions in these cases. Also, the results show that more men (59%) were promoted on research excellence alone than women (this excludes professors) and corroborates the findings of Winchester *et al.* (2006) and Forster (2001). The dominant view in the literature is that teaching is not valued and that females are disadvantaged in academic promotions. This article shows that if teaching is a criterion for promotion the means for its evaluation created and it is accepted by the academic community as a valid and important component of assessing candidates for promotions, then; it significantly improves the odds for female academics being successful in promotion applications. The data analysed suggests that the success rate of female applicants for promotion at UKZN between 2009 and 2011 is almost 20% less than the success rate of males if research is the only criterion for promotion; while the success rate of females, when using both research and

teaching criteria, is 22% higher than it is for males. This finding thus provides hard evidence for a long-held view that women, who are over-represented in teaching in HEIs, are disadvantaged in academic promotions which do not adequately or equally recognise teaching as a criterion.

As demonstrated by Parker (2008) and Doherty and Manfredi (2006), the primacy of research in academic promotions in universities is the dominant norm and difficult to challenge despite widespread views that teaching-based criteria can and should be equally valued, especially insofar as it disadvantages women. For example, Todd and Bird's (2000) study at an Australian university, where the promotions and tenure committee members were interviewed, supported the view that including teaching excellence as a criterion for promotion was especially beneficial to female staff: 'While some men benefit[ted] from this broadening of the application of the promotion criteria, it was felt that commitment to teaching ... particularly within the university, was more characteristic of women' (4).

The literature (Parker 2008; Doherty & Manfredi 2006) also suggests that where teaching is valued in promotions, it is often not considered in real terms at the professoriate level. It would appear that UKZN is among a few universities world-wide that allows for promotion to professor to be based on excellence in both teaching and research. Furthermore, while these studies showed that women were less likely to be promoted to the rank of professor, at UKZN 50% of women who applied for professorships were successful versus the 37% of successful male applicants; and during the period 2009-2011, equal numbers of men and women were promoted to professor. It is important to note this does not imply that there is equity of gender representation at the professoriate level, which is still dominated by males (Groeneveld *et al.* 2012; Thanacoody *et al.* 2006; Forster 2001). This is also the case for UKZN where, in 2011, 25.3% of professors were females (CHE 2013). However, this figure compares favourably with national figures which show that only 23% of professors are female in South Africa (CHE 2013). This study shows that valuing teaching in academic promotions can provide a way to increase the number of women in the professoriate and thereby contribute to having more successful women academics to serve as senior mentors and role models. Thanacoody *et al.* (2006) assert that female role models are in the best position to understand the challenges faced by female academics and to empathise with these academics. They are also better equipped to

encourage and motivate other females to apply for more senior positions.

A point raised in some studies is that a further obstacle to the promotion of women is the androcentric composition of the promotions-evaluating committees (Thanacoody *et al.* 2006). It is worth mentioning that in the context of UKZN, the promotions committees (as with all other committees) are required to be diverse in composition. A related point is the representation of women in leadership positions who serve on these committees. These women can influence decisions in many different aspects by encouraging women to apply and by contributing to the formal promotions process.

It is possible to discern a shift in university promotions policies toward including teaching for evaluating promotions. However, despite recommendations from studies that universities should formulate formal policy documents for rewarding teaching excellence through a variety of strategies (including promotions) (Cronje *et al.* 2002), it has been found that such policies are not necessarily implemented as intended (Chalmers 2011). At UKZN the Academic Promotions Policy stipulates that the criteria for promotion include teaching and research equally. This article provides evidence that the policy is being realised in practice; that is, the evaluation of teaching is considered to be as important as research for making academic promotion decisions at all levels, including in particular at the rank of professor, and that this implementation benefits women academics. Moreover, by having to demonstrate strength in both teaching and research and then excellence in one or more area as defined in the UKZN promotions policy, results in a valuing and balancing of both teaching and research and does not pit one against the other.

Conclusion

The question posed in the introduction has been addressed: teaching excellence and expertise matter in academic promotions in universities. The analysis of actual academic promotions data and outcomes in one institution, UKZN, provides a clear answer, namely that valuing teaching does matter in the promotions process and it especially matters for one group of academics – women.

With a few exceptions, the dominant theme in the literature in this area is that compared to research, teaching is not equivalently valued as a

criterion for academic promotions. Despite a consensus that in principle, teaching needs to be an important criterion, there appears to be little evidence to support that it is actually being implemented. This article has demonstrated how teaching, which has been part of the academic promotions for more than a decade in one relatively large research-intensive university, can contribute to gender equity in HEIs through academic promotions.

Although previous studies show that women generally have lower probability of successful application for promotion than men have, this statistical analysis of actual applications and outcomes demonstrates that if teaching is included as a criterion, the probability of successful application for promotion for women is increased more than the corresponding figures for men. In other words, including teaching as a promotion criteria improves the odds of women being promoted. The literature also shows that advancement to the rank of professor is largely dependent on research productivity, and as a consequence favours the promotion of men. However, the equal valuing of both teaching and research in academic promotions criteria for all rank levels ensures that women are not disadvantaged in the promotions process, and this is translated into practice as evidenced in the outcome of the academic promotions process. The case of UKZN shows women enjoying significantly higher odds (22%) of being promoted under the included criterion of teaching, compared to men.

The results of this analysis are limited to UKZN, as the dataset is unique and is based on the university's human resources records and resolutions captured in the university's College Academic Promotions Committee minutes. Many more similar quantitative and statistical analyses are needed, especially of actual promotions outcomes, to provide generalizable evidence and to complement the many studies that focus on perception, attitudes and opinions about academic promotions based on interviews and surveys in this area.

While women continue to remain underrepresented in senior academic ranks and positions in universities, the results of this study point to a real and concrete way in which this challenge can be addressed by recognising and valuing a core pillar of higher education – teaching – an activity that appears to be increasingly dominated by women academics in many countries of the world, including South Africa.

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