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Editorial

Wayne Hugo

What is the relationship between tacit/explicit and possible/actual and why does it matter for those of us who take education seriously as an object of research and thought?

It helps that we have a lucid account of the importance of getting the tacit/explicit relationship right in this issue of JoE. Yael Shalem and Lynne Slonimsky make two key moves. Firstly they point to the need to get the emphasis on what is tacit correct. Tacit means both ‘we know more than we tell’ and ‘we know more than we *can* tell’, and in the auxiliary verb ‘can’ lies the rub. Both senses of tacit are valid. As teachers we know far more than we actually say and do; and as teachers there are processes that we carry deep down but cannot articulate clearly. The danger lies in confusing what is being held in the background but can be articulated if needs be with what is in the deep dark recesses that never comes out and can only be heard moaning in the cellar, or glimpsed through the cracks. If the ‘locked in the basement’ emphasis of tacit is held as its predominant pedagogic meaning, then all a student can hope for is to go live in the ‘house’ of the teacher and experience, but never explicitly see, the dark, hidden knowledge. Learning becomes something gothic, learnt by mysterious contact in some dark corridor. To bring this ‘tacit knowledge’ out into the light would destroy it, make it wither, so best leave it tacit and learn by being there. But if the major emphasis on tacit falls towards ‘we know more than we tell’, then there are not so many dark and difficult secrets of knowledge, more light is cast on what is said, and the task of making the tacit explicit becomes a key component of teacher education. It’s not that there are not dark secrets in the basement, it’s that these secrets are not the main focus or rationale behind teacher education.

Shalem and Slonimsky want to get away from the over-inflated, gothic view of tacit knowledge and push towards an enlightenment view. They feel such a move is crucial because it affects how we professionalise teachers: either we buy into the gothic view and send our student teachers off to learn in the ‘house’ where they will learn by being in the place where things happen, much of which cannot be clearly articulated but needs to be experienced to be learnt;

or we hold that what is tacit in our profession can mostly be made explicit and clearly shown to the student in an ordered way that teaches students the key principles guiding judgement and action within the profession.

If our argument is correct, then our conclusion is that the common view of socialisation into professional practice is wrong. The view that *we know much more than we can represent by telling*, and therefore practical understanding of professional knowledge must be acquired in experience is false. It is time that the over inflated view of the role of tacit knowledge is challenged and we hope that we began to address it.

The central claim that we want readers to take from this paper is that the heart of practical understanding is in discrimination and evaluation, which must be premised on disciplinary knowledge and cannot be obtained from emulating the activities of other practitioners. Practical knowledge develops, primarily, from learning to order ideas – to distinguish and relate between ideas, know what procedures to take to validate them and how to recognise what interpretation is most appropriate for the instance at hand. Acquisition of professional knowledge lies in access to criteria about what is permissible, right or wrong, true or false, appropriate or inappropriate, and what is better and why.

In the second paragraph of the above quote, you can see a summary of the second key move, which is to argue that development of professional practice involves enabling students to work at a level of abstraction and generality that both holds grounded practice within but also allows classification of the practice. The student needs both the practice and the rules generating the practice. This is a significant move – the student needs both an experience of practice, and the beginnings of an understanding of what the field of possibility generating the practices are. When an actual move is made, it holds within itself many possibilities, only a few of which realise themselves in action, much of the rest hangs about, unrealised, but in the air. A professional teacher is not caught in the spectre of the actual lesson, she knows the lesson could have gone many different ways depending on how the lesson developed, and what counts are the underlying rules that enable choice between possibilities, not the manifestation of the choices.

This field of possibility is not only the fertile ground from which the actual manifests, it also is the field of possibility each action enables going forward. Implications spill out of every move, pushing forwards into many possibilities and even more impossibilities, and the task of a professional is to be able to recognise what the implications are and work intelligently forward within and between them. Shalem and Slonimsky work with Collins, Winch, Abbott, and Muller to make this point, but for me, the person who articulated this most clearly and thoroughly within an education context is Alfred North Whitehead,

and he uses the possible/actual distinction to make the point. Once you get a taste for what he (and other process philosophers mean) a beautiful, strangely obvious world opens out to view. It's a world in which a given process has behind it a seething set of possibilities it sprung from, and spilling in front of it a series of implications it can move into. To develop a position where you not only see the actual event but also the possibilities it sprang from and possibilities it can move towards is to have a godlike view, and this is what we find in Shalem and Slonimsky's paper, an articulation of a secularised god view for the professions.

What they do not provide is an empirical example of their argument, mainly because their paper exists as a part of a series on professional judgement and the paper in this edition focuses in on argument, not exemplification. But if you read Devika Naidoo's paper in this edition, you will find a thorough description of what it means to make disciplinary knowledge explicit through ordering ideas in a principled manner. Naidoo analyses four grade 10 Geography textbooks in a way that reveals how clearly the textbooks provide access to the organising criteria of Geography as a discipline. Here is her analytical framework, and you will immediately see that it gets to the heart of the matter, unlike many textbook analyses out in the ether.

Attribute of geography	Intellectual process	Analytical criteria
Make meaning of experiential world.	Observation, identifying, describing, naming	The extent to which each textbook requires students to observe and make sense of the experiential world?
A technical lexis	Naming	The extent to which the technical lexis is represented.
Ordering the experiential world	Ordering/taxonomising/classifying: classification based on super-ordination and compositional principles	The extent to which the geographic taxonomy is represented.
Explaining experiential phenomena	Implication sequences – Network diagrams that represent the taxonomic relationship	The extent to which phenomena are explained

It's a sweet framework. Notice that it moves from a meaning making relationship between the everyday and specialised into a more formalised

technical naming, and then an ordering of the lexis into a taxonomy, and then an explanation of the taxonomy in a way that gets into the processes involved. I would like to focus on the difference between the third and fourth aspects and ask it as a question: what is the difference between a taxonomy on the one hand and implication sequences on the other? Here is an answer Naidoo uses from a systemic functional grammarian:

Where taxonomising tends to focus on things. . . explaining tends to focus on processes. The emphasis shifts from things in place to things in action. To explain how things are, or came to be the way they are, it is necessary to use processes, participants and circumstances. These tend to be arranged in clause complexes which will be called implication sequences (Martin, 2006, p.157).

A taxonomy gives you the skeleton of a discipline, an implication sequence breathes life into it and makes it move. You need both to be made explicit in textbooks, and you need both to be made explicit to professionals in training, for how else are they to make a judgement in a specialised discipline if they do not have the structures and processes clear.

Making things and processes explicit, however, is not a cure-all. It has its own vices, like when you explain things so much that the actual topic in focus gets lost. Everything gets made clear, but to do this you take up precious time and resources and land up with a student who has all the rules and no idea what the point is. Another issue is that the sub discourses of a discipline do not neatly align with each other, even with a discipline like Mathematics. The process of one sub discourse tangles with the process of other, causing confusion. If you multiply two natural numbers you get a larger number, right? Well, what is a half multiplied by a quarter? It's an eighth. Damn. That's smaller, because rational numbers don't work in quite the same way as natural numbers. As Brodie and Berger (2010) point out, mathematics has sub-discourses that relate to each other in strange ways – sometimes you can apply rules across, other times it gets you into trouble. The key point is to be able to move between these sub discourses in ways that understand their different ordering patterns, and seeing the higher principles that hold these differences together. But what happens in Mathematical Literacy, where you need some grasp of the contextual example as well as the mathematics? This is what Sarah Bansilal explores in her article 'Understanding the contextual resources necessary for engaging in mathematical literacy tasks'. Like the other papers discussed so far, she is concerned with making explicit what the tacit demands of mathematical literacy are, and she provides a useful framework, taken from Greeno, Sfard, Duranti and Goodwin, to make both

the conceptual and contextual demands of a discipline explicit. Here is one of her examples:

Pizza task
 At a restaurant at the Waterfront in Cape Town, tourists have a choice of different pizzas:

<i>Base</i>	<i>Toppings</i>
Thick	Pineapple
Regular	Salami
	Tuna
	Mushroom

If a tourist buys a pizza with three toppings, how many combinations are possible? (Use any systematic counting method that you have learnt.)

There are a number of issues with this example. Firstly, if you don't understand the contextual background of Pizzas, you cannot get to the conceptual root of the problem. Secondly, most of us would not have a clue how to answer this question even though we decry the terrible results in Maths and ML. And thirdly, the example is preposterous: a restaurant at the Waterfront with the above choice range simply could not exist – where is the thin and crispy base? Everyone knows that it should be either a thin base (Roman Style) or a thick base (Neapolitan Style). And what about gluten free?

At least, with Mathematics and ML, you have the virtue of each action containing a formal base, but what happens when you enter a warmer, fuzzier space of human interaction in its own terms? Doctoral supervision is enormously complex and subtle, but it is vital for us to get a thorough grasp on its processes and dynamics, for it is through the doctorate that we both reproduce and regulate our academy. Fataar picks up on, and extends, an existing body of research and debate on supervision in South Africa. He pushes the debate into the elusive relationship between supervisor and student that holds both a knowledge dimension and a knower dimension. Fataar focuses on how deeply the subjective, personal engagement between supervisor and student informs the process of knowledge acquisition. For those who enjoy Legitimation Code Theory (LCT), read Fataar's paper in terms of the knowledge-knower structures (or epistemic relations and social relations) and see how it talks back to you. Supervision is as much about producing a certain kind of knower as a specific kind of knowledge. Fataar quotes Green to make the point clear

Subjects are formed as an ensemble of knowledges, capacities, identities and dispositions through the interplay of specific social relations and social practices, mediated by language. This is always a fragile ensemble, a provisional settlement, with various degrees of durability. Moreover, this must be understood as necessarily a *relational* subjectivity. Academics, graduate students and their discourse/disciplinary communities are implicated in social/symbolic networks and circuits of identification and citation, repetition and renewal, learning and forgetting. . . . Doctoral pedagogy is as much about the production of *identity*, then, as it is the production of *knowledge*. At issue is the (re)production of specific research identities (Green, p.162).

Put in Shalem and Slonimsky's terms, Fataar is working hard at making what is tacit in the supervision process explicit by refusing to leave the difficult and darker parts of the process unarticulated and left to some kind of osmosis to be learnt. There are elements of the supervision process that experts in the field find hard to articulate clearly, but this should not stop the process of making it explicit. This is not to say that there are elements of the process existing beyond overt expression, and that we need to learn how to talk about these elements in similar ways to how the mystics (like Dionysius the Areopagite) learnt to talk about God. We need a language of mysticism within our profession that tries to say the unsaid, not by making it explicit but by naming the impossibility of explicitness. The post moderns have shown us how to do it in a secular way. But this kind of unnameable is not the dominant focus, or the most important part of the supervision process. There is much to the dynamic that exists in the realm of the 'we know more than we tell' rather than 'we know more than we can tell'. It is incumbent on all of us engaged in the process of supervision to continue the process of opening our unexpressed practices out to the light, and not stopping when the energies become subtle.

Let's test our own ability to work out implications of subtle forces by using Shelly Wilburn's article 'How the 'outside' becomes 'inside'. It's a deceptively simple paper but the message it carries is profound. She tells the story of two schools in the Western Cape that are both from poor communities and performing well. The issue she opens out is how the different social contexts these two schools find themselves in make them respond in very *different* ways to produce *similar* decent academic results.

The first school (School 1) is 15kms outside Cape Town at the edge of a black township. It has 1 500 learners and 42 teachers, with almost all learners living in shacks. There is support for the school that comes from NGOs active in the area, and strong transport links to Cape Town that provide access and mobility.

The second school (School 2) is also around 15 kms outside of town, only the town is Lutzville and the community is isolated and homogenous, purely Afrikaans speaking and coloured, with very strong traditional roots. There are massive issues with Fetal Alcohol Syndrome resulting in a number of students with cognitive and physical disability.

If I told you that one of the schools has a more open and connected orientation to the community, and the other a more internal orientation that closes itself off from the community, which school do you think goes with what orientation and why?

School 1	Open orientation
School 2	Closed orientation

If I told you that one of the schools has a more pragmatic orientation where it accepts that some of the kids can do the work and others will never get there, and the other had an optimistic orientation that pushes for all children having the ability to succeed, which school do you think goes with what orientation and why?

School 1	Optimistic orientation
School 2	Pragmatic orientation

If I told you one of the schools had a communalising orientation which emphasises that everyone must do the work and perform, and the other school has an individualising orientation that focuses on learners who have what it takes to succeed, which school do you think goes with what orientation and why?

School 1	Individualising orientation
School 2	Communalising orientation

If you got the following correlations, then go have another whiskey.

School 1 (Open, Optimistic, Communalising)
School 2 (Closed, Pragmatic, Individualising)

If you didn't, then have a double.

If you don't drink, then carry on reading the rest of the editorial.

So we have two schools in poor communities, both of which are producing good results but with very different orientations to their communities. And it has to be like this, because different contextual conditions demand different responses to produce the same results. What could be more foolish than to take what works in school 1 and use it as a model for school 2? Both schools are responding to their communities in intelligent ways; that's what you want to encourage, not one set list of how all schools should respond to the community. You want a school **response** to the community, not a **set list** on what school/community relations should be. This is what Wilburn brings out for us – what Shalem and Slonimsky call, on a different level, professional judgement – and what Whitehead theorises in its full glory as process.

What happens when the 'outside community' gets control of the 'inside school' and runs it on community principles? What do you do when a deeply religious-based school insists that its religious mores and customs hold priority and then excludes a pregnant school girl from entering class because it has a particularly literalist or fundamentalist interpretation of Islamic law that the community around the school strongly support? What do you do when the very democracy that attempts to recognise diverse beliefs finds itself rejected by those beliefs? The South African Schools Act and our constitution ensure that pregnant school girls have a right to education. Davids and Waghid explore this tension in terms of independent Muslim-based schools that exclude pregnant school girls from class. They come out strongly for an inclusive cosmopolitan view.

On the one hand, then, these schools exist because of a pluralist and cosmopolitan understanding of citizenship – that individuals have the right and protection of the state to exercise their beliefs. And on the other hand, these schools use the same right to practise a form of discrimination. Surely, the right of these schools to exist, as constituted in the SA Schools Act, is constitutive of a conception of inclusive cosmopolitanism, which all religious-based schools, for the sake of their own existence, ought to protect and promote. To discriminate against learners on religious grounds undermines the spirit of inclusive cosmopolitanism that initially contributed to their existence. Thus, building a democratic school with an inclusive and cosmopolitan ethos does not necessarily restrict religion but does countenance the exclusive ways in which religions are and can be used to demoralise difference, in this instance, instigated by teenage pregnancy.

It's an attractive argument, but I am not sure how much weight it carries. A minority community has a certain 'way of life' that is far more deeply entrenched than any religion, and it will have sanctions that enable and protect the community as a whole, not the individual member.

Cosmopolitanism downgrades their way of life by treating it as a belief that needs to be held lightly in the face of others, and does not offer much in return, except happy diversity snacks. I do not have an answer here, but I certainly feel that the issue is not so much religious fundamentalism as different ways of life.

Both Wilburn and Davids and Waghid show that the relationship between the outside and inside is a complex affair. Peter Pausigere and Mellony Graven add to the complexity by discussing how teachers inside schools are responding to the strong national drive to improve standards with Annual National Assessments (ANAs). Teacher responses range from outright rejection (a teacher at a Montessori School) to slavish following, where ANAs have completely reoriented what they teach and how they teach. The main mode of response was one that recognised and accepted the reality of ANAs whilst at the same time still insisting on teaching for meaning and covering areas not tested by ANA. I take a similar message home from this paper as from Wilburn – there is no one response to the outside that is correct and definitional. We need to develop an understanding of process that accommodates different responses. But here is the rider – this accommodation still has to have principled judgement attached, where the adequacy of the response is investigated and measured, not by a list, but by a set of principles that recognise contextual relevance but does not defer to it. The articles discussed above help us to think through what this would mean. So let's do a final test case, using beating children as our example.

Patti Silbert explores the issue of school learners often supporting a beating, rather than resisting. It could be that all resistance has simply been thrashed out of them, but listening to their own reasoning, it's more complex than that. Silbert firstly describes the setting – Ubuntu High, a school of over one thousand, mostly Xhosa speaking learners.

The students who attend Ubuntu live in the townships located on the outskirts of the city and rely on public transport, many travelling far distances across the city to get to and from school. The appeal of this school for many township youth is because of its perceived functionality as compared with the majority of schools in the local township communities. Perceptions of success are associated with its location: a seemingly far distance from the scourges of township life, and a stone's throw away from some well-known tertiary institutions. . . Despite poor facilities and overcrowded classrooms, messages of hard work and success were prolific. Newspaper articles mounted on the walls of the school foyer conveyed different stories of success.

In this school, most of the students support corporal punishment.

Yeah, they, they're doing their best. They're beating us when we are late, and they, I, I see that as, that's a good thing, because we, um, we as black child, they always tell us that, um, in order for you to. . . have respect, we must like, we must teach you when you're young, like and here, they, they beat us, which is a good thing. . .

And

. . . it works for me, because there are no other ways that I can see, that can make students be what the school wants them to be. So, the, the disciplinary actions that take place are perfect.

By their account, the school uses corporal punishment because it works. Physical pain acts as an effective deterrent. More than this, the students felt it impacted positively on academic performance, enabled university entrance and access to a better life. Is this a barbarous throwback or is it students insightfully pointing to the necessity of quick and effective discipline that is short, sharp, and to the point? Don't we all know, from 'research', that beating a child results in higher incidents of criminality, lower cognitive development, divorce, delinquency, alcoholism, sado masochism, and everything else bad in adult existence? Surely not? Do we not need to discriminate between beating and spanking, and within spanking – when it's done, how it's done and why it's done – and maybe then, the results will not be as clear? It's the nature of the response, not the act itself, that we need to pay more careful attention to. But then, I was spanked as a child at home and at school, and maybe I got a taste for it.

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Using Bernstein to analyse primary maths teachers' positions and identities in the context of national standardised assessment: the case of the ANAs

Peter Pausigere and Mellony Graven

Abstract

This paper is informed by Bernstein's notion of pedagogic identity and Morgan's (Morgan, 1998, Morgan, Tsatsaroni and Lerman, 2002) study of mathematics teachers' orientations in assessment practice. These are used to identify primary maths teachers' positions and identities in the current South African education context characterised by an emphasis on monitoring through standardised national learner tests. The paper draws on data obtained from interactive interviews with nine sampled primary maths teachers who were participants in a numeracy in-service education community of practice. Using Bernstein's four pedagogic identity classes and relating these to Morgan's maths teachers' orientations we identify primary maths positions being taken up by the sampled teachers in relation to the Annual National Assessment (ANA) tests. The research indicates that most of the primary maths teachers' say that their practices are being influenced by the ANAs, although in different ways. We finally propose that primary maths teachers need to develop ways to 'critically align' their practices to national policies so as to maintain some agency while aligning with policy.

Introduction

This paper brings to the fore the notion of primary maths teachers' practicing identities within the current South African education context characterised by the national testing of learners in primary school. We take particular interest in how educators respond to and align their teaching practices in relation to the Annual National Assessment maths tests (commonly referred to as ANAs). "ANA is a testing programme that requires all schools in the country to conduct the same grade-specific Language and Mathematics tests for Grades 1 to 6 and Grade 9" (Department of Basic Education (DBE), 2012, p.2). Employing Bernstein's notion of pedagogic identities supplemented with Morgan's model on positions taken by United Kingdom (UK) maths teachers (when they assess students' coursework) (Morgan, 1998, Morgan *et al.*, 2002)

as analytical tools we explain positions and identities being taken up by the teachers sampled in this study. In this paper we analyse the teacher participants' responses to questions related to the ANAs as part of longer interactive teacher interviews. We categorise the primary maths teacher positions and identities as either being; Neo-Conservative, Therapeutic, Instrumental-Examiner or Teacher-Adviser (Bernstein, 2000, Morgan, 1998, Morgan *et al.*, 2002).

The interactive interviews with the teachers were part of a broader doctoral research study of the first author. We sampled nine teachers out of 53 teachers who were participants in a maths in-service professional learning community conceptualised by the South African Numeracy Chair (the second author) at Rhodes University in Grahamstown. The nine selected teachers actively participated in and frequently attended the Numeracy Inquiry Community of Leader Educators (NICLE) sessions throughout 2011. Additionally these teachers were willing to be part of the first author's longitudinal research study. This paper focuses and presents data gleaned from two interview questions which read, '*What is your opinion on the Annual National Assessment tests? Have they influenced your teaching at all?*' The responses from these questions indicate that most of the sampled teachers are influenced by the ANA tests, however the degree and extent of the influence differs.

The ANA tests were introduced by the Minister of Education in 2008 when she launched the Foundations for Learning Campaign which aimed at improving the average learner performance in literacy and numeracy to 60% by 2014 (Department of Education (DOE), 2008). Furthermore the campaign was motivated by South African learners' poor performance in regional and international tests. Under the new national monitoring measures put in place by the Department of Education all South African primary learners undergo Annual National Assessments in Numeracy and Literacy using standardised tests to monitor their literacy and numeracy levels. The first ANA national results made public in the second half of 2011, have revealed that the Grade 3 and the Grade 6 Maths national mean score stands at 28% and 30% respectively (DOE, 2011). The 2012 report shows 41% and 27% respectively (DBE, 2012). South Africa has also introduced a repackaged curriculum, CAPS (Curriculum and Assessment Policy Statement), which was introduced in the Foundation phase last year (2012) and is to be fully implemented in the Senior Phase by 2014. This new curriculum took heed of the criticisms levelled against the National Curriculum Statement, thus the CAPS curriculum is time-paced, specifies content, knowledge and skills to be taught, and

provides explicit sequencing and pacing (DOE, 2011). Locally Parker (2006) and Graven (2002), drawing on Bernstein have argued that curriculum policies and educational reforms provide South African mathematics teachers with new official pedagogic identities. Bernstein used the concept of pedagogic identity to analyse contemporary curriculum reforms in Britain, from the mid-1980s (Bernstein, 2000). The UK curriculum changes, initiated under the 1988 Education Reform Act saw from 1991 the administration of compulsory testing (National curriculum assessment) of 7, 11, 14 and 16-year-old learners using Standard Assessment Tasks (SATs) in Mathematics, English and Science subjects (Whetton, 2009). South Africa has and continues to experience major post-apartheid education change which is more recently becoming driven by national learner assessments similar to the national standardised testing, experienced in the UK in the 1990s (Bernstein, 2000). In this regard Bernstein's work becomes relevant for this study which investigates the sampled primary maths teaching identities and positions in relation to the onslaught of the recently introduced national assessment regime in the form of the rollout of the ANA tests.

Literature review and theoretical framing

Many studies employ the concept of identity to explain secondary school maths teacher identities within education reform contexts (Lasky, 2005, Parker, 2006, Graven, 2002, Morgan *et al.*, 2002). Particularly relevant to this paper is Morgan's study of positions adopted by UK maths teachers as they assessed students' coursework although their study did not specifically focus on primary maths teachers (Morgan, 1998, Morgan, Tsatsaroni and Lerman, 2002). Some studies have investigated *primary* maths teacher identity formation in teacher education (Davis, Adler and Parker, 2007, Jaworski, 2003, Hodgen and Askew, 2007, Graven, 2002 and 2003, Walls, 2008). Of the cited examples Davis *et al.*, (2007), Graven (2002), Morgan *et al.* (2002) and Parker's (2006) work on maths teacher identity have been informed by Bernstein's theory. Closely related to our study but from a Foucauldian theoretical perspective is Walls' (2008) paper which discusses how Australian primary maths teacher identities are 'produced' within standardised test processes. Our study contributes to this field of exploring the relationship between teacher identity and national testing regimes informed by Bernstein's construct of pedagogic identity and specifically investigates South African primary maths teacher identities in relation to national testing.

In the UK the revision of the National Curriculum, which began in 1988, resulted in the growing significance of course-work assessment, national mass testing, the implementation of cross-curricular themes and a shift from collection (visible/explicit pedagogy) to integrated curriculum codes (invisible/implicit pedagogy) with weak classification and weak framing (Bernstein, 2000, 1995, Bernstein and Solomon, 1999, Sadovnik, 1995, Morgan *et al.*, 2002). Britain's education reforms influenced the classification, framing, sequencing, pacing and evaluation of educational knowledge and shaped and distributed teacher and learner consciousness and identity (Bernstein, 1975, Bernstein and Solomon, 1999, Sadovnik, 1995). Secondly Britain's curricular reforms were marked by tight quality control, monitoring and public evaluation over both inputs and outputs/outcomes of education (Bernstein, 2000). From this perspective, Bernstein (1999, p.259) argues that the "centralised setting of criteria and the central assessment of outputs" are the State's "new forms of centralised regulation". Thus, from a political viewpoint, national mass standardised testing regulates education making the schooling system accountable, transparent and efficient (Tyler, 1999, Whetton, 2009). Whilst mass learner assessment is one practical and feasible way of monitoring education outcomes and the efficiency of the education system it also simultaneously projects a particular national teacher identity and the effects of the take-up or rejection of this promoted identity may or may not support the efficiency of education in the classroom.

Central to Bernstein's pedagogic identity model (Bernstein, 2000, Bernstein and Solomon, 1999) is the argument that the official knowledge or different pedagogic modalities of curriculum reforms initiated by the state and distributed in educational institutions construct, embed and project different official pedagogic identities. Bernstein defines pedagogic identity as composing of "a social and a career base", with the social base being controlled and regulated by the State through the "official pedagogic modalities" (official regulation and practices) and giving rise to "official projected pedagogic identities" (Bernstein and Solomon, 1999, p.269 and Bernstein, 2000, p.62). In contrast a "career" base is "moral, knowledgeable and locational" and gives emergence to "local identities" (Bernstein and Solomon, 1999, p.269 and Bernstein, 2000). This aspect of identity and its construction is external to the official arena (Bernstein, 2000). However an interesting feature of Bernstein's pedagogic identity concept is that he uses the same model with similar positions for both the official pedagogic identities (social base) and the emerging local identity field (career base), the latter involves the teacher's own individual and personal beliefs and practices. This gives us the

space to investigate and thus explore the inter connectedness of primary maths teachers' pedagogic identities and positions. Bernstein (2000, p.204) also emphasised that the "form and modality of pedagogic identity are an outcome of the classificatory relations and . . .the strength of the framing". In this regard official pedagogic identities are the outcomes of classification and framing properties, thus a function of the principles of social order aligned with the state.

Bernstein (2000, p.66) identified "an official arena of four positions for projecting of pedagogic identities", namely Conservative, Neo-Conservative, Therapeutic and Market. The Conservative and Neo-Conservative positions Bernstein (2000, p.66) calls centred pedagogic identities and these "are generated by resources/discourses managed by the State" and "focus upon the past". On the other hand the Therapeutic and Market categories are generated "from local contexts or local discourses. . . where the institutions concerned have some autonomy over their resources" and "focus upon the present". In our study Bernstein's model of pedagogic identities becomes important in analysing local primary maths teacher identities within educational reform contexts marked by standardised ANA tests. Thus we draw on Bernstein to investigate the official primary maths teacher identities constructed in the official arena as projected by the macro structures and then explore local take-up. For purposes of clarity in teaching orientations we also refer to Morgan's maths teacher positions which relate specifically to assessment (Morgan, 1998, Morgan *et al.*, 2002). Morgan *et al.*'s, (2002) study examined Bernstein's description of the performance and competence models and their modes. They recontextualised these to explain positions taken up by Britain's Secondary school teachers when assessing learners' mathematical coursework tasks. The idea of 'positioning' (Morgan, 1998) is important for this study as it takes into account the individual teacher practices and their beliefs or feelings about primary maths teaching and standardised testing. Morgan *et al.*'s (2002) work becomes particularly relevant for our study as it provides us with a framework for understanding mathematics teacher assessment practices drawing on the work of Bernstein. Both Bernstein (2000) and Morgan *et al.*'s (2002) studies show how pedagogic identity is produced through pedagogic discourses and pedagogic models.

This paper discusses four of the initial eight teacher positions identified by Morgan (1998) namely: Examiner-using externally determined criteria, Examiner-using own criteria, Teacher-advocate, Teacher-adviser, Teacher-pedagogue, Imaginary naive reader, Interested mathematician and Interviewee.

The four positions of relevance to this paper are: Examiner-using externally determined criteria, Interested mathematician, Teacher-pedagogue, and Teacher-Advocate (Morgan, 1998, Morgan *et al.*, 2002), and we relate these to Bernstein's (2000) four pedagogic identity classes. It is this close relationship and link between Bernstein's pedagogic identity categories and Morgan's maths teacher positions that allows us to investigate both the primary maths teacher's pedagogic identities and their positions in the context of the newly introduced national ANA testing. In the discussion section we elaborate on the Teacher-adviser position (Morgan *et al.*, 2002) which combines and contains features of Bernstein's (2000) Neo-Conservative and Therapeutic pedagogic identities and is illustrated by one of the sampled teacher participants. Table 1 below indicates the interconnectedness of Bernstein's pedagogic identity categories and Morgan's maths teacher positions which we have identified as useful for exploration of primary maths teacher identities in relation to the ANAs.

Table 1: The inter-connectedness of Bernstein's pedagogic identity classes and Morgan's maths teacher positions

Bernstein's pedagogic identity classes	Morgan maths teachers' positions
Conservative	<i>Interested mathematician</i>
Neo-conservative	<i>Teacher-pedagogue</i>
Therapeutic	<i>Teacher-advocate</i>
Instrumental/market	<i>Examiner – using externally determined criteria</i>

Bernstein (1995, 2000) classified Conservative Pedagogic identities as those teacher positions generated and shaped by national resources or discourses (the collective social base) and 'grand narratives of the past' which provide exemplars, criteria, belonging and coherence. Conservative teacher identities are "formed by hierarchically ordered, strongly bounded, explicitly stratified and sequenced discourse and practices" (Bernstein, 2000, p.67). In this category of identity there is tight control over the content of education but not over its outputs. This teacher identity category relates to what Morgan (1998) calls an *Interested mathematician* position which emphasises the understanding of the mathematical content subject matter. This teacher position makes sense of and is curious about mathematics (Morgan, 1998).

Neo-Conservative Pedagogic identities are “formed by recontextualising selected (and appropriate) features from the past to stabilise and facilitate engaging with contemporary change” (Bernstein, 2000, p.68, Bernstein, 1995, p.410). This ‘new fusion’ of identity, according to Bernstein foregrounds the career base (individualised construction) with an emphasis upon performance and takes heed of social relations. Implicit in this emerging identity is “the beginning of a change in the moral imagination” of the teacher (Bernstein, 2000, p.77). This teacher identity category corresponds with Morgan’s (1998, p.135) *Teacher-pedagogue* maths teacher position which mainly suggests “ways in which a student might improve her perceived level of mathematical competence”. Teachers in this position are both in a pedagogical relationship with their learners so as to further their mathematical learning and also ensure that each student achieves as highly as possible on external examinations (Morgan, 1998). In this paper we discuss how four of the nine teachers sampled in this study had taken this position in relation to the introduction of the ANAs.

Therapeutic pedagogic identities are “produced by complex theories of personal, cognitive and social development, often labelled progressive” (Bernstein, 2000, p.68). The therapeutic position projects autonomous, sense-making, integrated modes of knowing and adaptable co-operative social practices that create internal coherence. However such a pedagogic identity according to Bernstein (2000, p.69) “is very costly to produce and the output is not easily measurable”, furthermore “it is projected weakly, if at all” in “contemporary arenas”. The transmission which produces this identity goes against specialised categories of discourse and prefers weak knowledge boundaries (Bernstein, 2000). The therapeutic pedagogic identity closely relates to the *Teacher-advocate* position which is characterised by educators orientated towards students, who draw on what is present with reference to the student, speak the alternative discourse and explicitly reject the official criteria. This paper will exemplify how one of the sampled participants, Belinda, positioned herself in this category.

Lastly Bernstein (2000) identified the ‘Neo-liberal, Market or Instrumental pedagogic identities’ teacher category which is characterised by autonomy, with a focus on producing competitive output-products that have an exchange value in a market and constructing an outwardly responsive identity driven by external contingencies rather than one driven by dedication. Bernstein’s Instrumental pedagogic identity is similar to the, *Examiner: using externally*

determined criteria teacher position identified by Morgan, thus we have chosen to call this teacher pedagogic orientation ‘Instrumental-Examiner’. Because this teacher position speaks the voice of the legitimate discourse, it is orientated towards the text and draws on what is absent from the student’s text (Morgan *et al.*, 2002). One key and outstanding feature of this teacher position highlighted by Bernstein (2000) and reported by Morgan *et al.* (2002, p.456) is that this category “explicitly refers to the official criteria”. Three of the teacher participants in this study exemplify this teacher identity and position category.

Research methodology

In carrying out this research we are using what Merriam (2001) calls educational ethnography. Whilst the broader PhD study of the first author, uses participant observation, interactive interviews and reflective journals to gather data, this paper only draws on the data obtained from interactive interviews carried out in November and December 2011. The data presented here was gleaned from two sub-questions from the interactive interview question 11, which read, ‘*What is your opinion on the Annual National Assessment tests? Have they influenced your teaching at all?*’ To provide a rich thick description of the primary maths teachers’ practising identities we also present data from the teachers’ utterances in relation to their maths teaching identities in the context of the ANAs across a range of other interview questions. These interviews were conducted by the first author with nine selected primary maths teachers participating in NICLE. A semi-structured interview schedule with open-ended questions was used with the average time for each interview being about an hour. All interviews were conducted at the respondent’s school and were audio-recorded and fully transcribed.

The nine teachers drawn from NICLE were selected through a combination of purposive and stratified sampling strategies. We intentionally selected teachers who frequently attended NICLE sessions and those teachers who were willing to be part of this longitudinal research journey. Teachers in the sample are from four different types of schools in the South African education system. Three are from a farm school, two are from a township school, two are from historically Coloured schools in a historically coloured area and two are from an ex model C preparatory school in a formerly white area. In this sample of teachers three are Intermediate Phase teachers, two are multi-grade teachers of grades 2–3 and grades 4–5, and the other four are Foundation Phase teachers.

Notably all Foundation Phase teachers in the sample are female. (This is also the case for the larger group of NICLE teachers – that is, all Foundation Phase teachers in NICLE are female while there are several male teachers in the Intermediate Phase). For this reason the sample has more female than male teachers.

Table 2: Sample teachers background information

School type	Teacher's pseudonym	Gender	Phase and Grade(s) taught	Teaching years experience	Highest qualification attained
Farm school with some multigrade classes	Belinda	F	FP – 1	6	Montessori Diploma
	Swallow	F	FP – 2/3	14	B.Ed. (Primary)
	Evelyn	F	IP – 4/5	20	B.Ed. (Secondary)
Ex model C school in a historically white area	Melania	F	FP – 3	11	Higher Diploma in Education
	Ruth	F	FP – 3	27	B.Ed. (Honours)
African township school	Pamela	F	FP – 3	17	Further Diploma in Education
	Calvin	M	IP – 6	25	B.Ed. (Primary Maths)
Historically coloured combined primary and secondary school in a historically coloured area	Edna	F	FP – 0	6	Matric Final Year – National Primary Diploma in Education
Historically coloured primary school in a historically coloured area	Robert	M	IP – 4–7	19	B.Ed. Honours in Maths Education Currently studying for a Masters in Maths Education

A deductive data analysis approach that is theory-driven was used to analyse our data. Thus the coding and exploration of data was theoretically guided by Bernstein's model of pedagogic identity and Morgan's maths teacher positions in discourses of assessment. Bernstein's concept of pedagogic identity and Morgan's maths teacher positions provides analytic tools that enable us to position the sampled participants according to their interview responses and

also provides a language to describe and explain the local primary maths teachers' identities and positions in the midst of the newly introduced national testing.

Discussion: Primary maths teacher practicing identities in relation to ANA tests

In this part of the paper we present one part of our research findings interpreted through the lens of Bernstein's pedagogic identity theoretical framework, supplemented with insights from Morgan's maths teacher positions as discussed above. We interpret the teachers' responses and positions on the ANAs and how according to teachers' these have influenced their teaching. We discuss how the sampled teacher participants' articulations resonated with the Neo-conservative, Instrumental-Examiner and Therapeutic teacher identity positions. We did not find any teacher whose position and identity resonated with the Conservative teacher identity category. In our analysis we grappled with identifying a pedagogic category that related to Pamela, however her position relates well to Morgan's Teacher-adviser position which combines features of both Neo-Conservative and Therapeutic pedagogic identity categories.

Neo-conservatives (teacher-pedagogue): Calvin, Robert, Ruth and Melania

Four of the nine teachers indicated experiencing some tension in relation to the dual need to be test-focused and at the same time teach for 'maths learning'. The teachers in this identity category felt that the ANA tests influenced the manner in which they taught maths, however they gave different reasons for this influence. For both Melania and Calvin the ANA tests had influenced their teaching, linguistically and evaluatively, and made Melania 'realise how they are asking the questions and I try to use the same type of language when I am working with numbers'. Similarly Calvin was now 'concentrat(ing) on exam papers and how they are asking the questions and I try, when I do my tests I try to ask my questions in the ANAs way'. Yet for Ruth ANA maths tests had made her recognise the need to refocus her teaching and to get the learners to: 'understand the system, because they are being assessed in a certain system and they need to be familiar with it. . .they

need a lot of revision and exposure to the format of the tests. . .they need all those things that formal assessment require’.

Robert felt the need in his maths teaching ‘to keep in mind’ the ANAs as to him these tests were a ‘good way of setting a benchmark. . .of setting external papers’.

Whilst these teachers all felt the need to ‘keep an eye’ on the ANA tests to inform their practice they had some reservations and critique on the administrative technicalities, standards and the validity of the ANA tests. For example Melania was of the opinion that school results could be ‘inflated’ as the test ‘papers are marked by the teachers themselves’. This point was also raised by Robert when he argued that the ANA papers ‘should be marked externally’. Robert, Melania and Ruth felt that some of the instructions and language used in the exam papers were not easily accessible to learners (as written language is hard for some learners) – Ruth suggested the need for some of the tests to be administered through ‘an oral test’. Both Robert and Calvin felt that ANAs exerted unnecessary pressure on the teachers to finish the syllabus. This is succinctly captured by Calvin when he says, ‘so you are pressurised as a teacher to make sure that you finish the syllabus’. The inadequacy of ANA, in terms of the range of content assessed, raised later in the paper by Pamela was also noted by Robert, who argued that ‘ANA doesn’t cover all different things’.

Because of the stated limitations of the ANAs this category of teachers felt morally obliged to additionally teach the learners ‘to understand the topic’ (Ruth). Similarly Melania, a colleague whom Ruth taught with at the same school, felt the need to teach learners to understand the maths and not merely to do well in the tests. She said, ‘children are not used to doing tests. . .because that’s not the way it is in the normal classroom routine’. Calvin’s response to whether the ANAs influenced his teaching, highlighted the need for maths teachers to ensure that learners understand the basic mathematical concepts and not to rush through the syllabus. He said, the ANA

influences the way you try to make sure that a learner understands. You can say I don’t care if I don’t finish with my syllabus. The kid understands what he learnt so that in the next year he will be able, he has the basic knowledge for those things.

Whilst Robert took a similar stance to that of Calvin he felt the need to be ‘critical’ in his maths teaching practices as he elaborated that:

I have realised you can't just be. . . blindly lead. . ., sometimes you take leadership within mathematics and manage your teaching and know when to scale down and when to give an overview, and let learners see and do it and perhaps focus on those concepts that are seen as difficult to teach and learners to learn like, eh, volume, area, circumference'.

The Neo-conservative teachers in this category thus express the need to both improve the learners 'performance' in the ANAs thus 'engaging with the contemporary change' in the local education policy yet on the other hand taking heed of their traditional 'moral' obligation of ensuring primary learners additionally understand the 'maths' and the full range of work. These teachers' practices in relation to the ANAs resonate with Morgan's (1998) *Teacher-pedagogue* position under which teachers acknowledge the dual responsibility of furthering the student's mathematical thinking as well as ensuring that students achieve as high as possible on external examinations.

Instrumental - Examiner: Swallow, Edna and Evelyn

Three of the nine teachers, Swallow, Edna and Evelyn shared a common teaching and learning orientation in relation to ANAs. They all felt that the ANAs were 'good' and influenced their teaching practices positively. These teachers explained how their maths teaching practices had been tailored to suit the ANA tests. For example Evelyn would 'expose' the learners to '(ANA) problems put in a different way. . .'. Swallow showed how in her maths classes she would 'revise' and 'reinforce' a 'particular concept' if the learners were 'battling' with it in the tests. Yet for Edna it was a matter of constantly checking how her maths teaching aligned with the ANA tests as she said, 'seeing that the ANA will come in, you can always go back to the ANAs and see if I am on the right track and if I give my learners proper opportunities'. In a way these teachers' practices were being adapted to align to the ANAs and their practices can be seen as incorporating 'teaching to the test'. Additionally there is an implied uncritical acceptance of the validity of the ANAs in relation to assessing the work teachers are doing against an external notion of the right track. This Examiners category of teachers explicitly involves reference to the official criteria (Morgan et al, 2002). Through their allegiance to the ANAs the three teachers can be considered, according to Bernstein (2000), to be constructing an outwardly responsive identity driven by external contingencies (ANAs) rather than one driven by inner dedication towards making learners understand maths. Bernstein (2000, p.71, 68) ironically calls this new orientation in education "the pedagogic schizoid position" because of

its “emphasis upon performance” rather than focusing upon learners’ understanding of disciplinary knowledge.

Looking now towards the reasons why the teachers in this category felt that it was good to be influenced by the ANA tests in their maths teaching practices, Swallow explained that they:

are quite a good benchmark for me. . . a good indication of how much my children have done, and how much they need to know, and if they have achieved the goals that they need to achieve.

Similarly for Edna the tests served as an indication for learners on ‘whether they are ready to go forward’. In this regard the national tests served as a yardstick of the learners’ mathematical understanding and progress. Both Edna and Evelyn agreed that the ANA tests gave them the space to reflect on their learners’ maths performance and take the appropriate corrective measures. Thus for Edna the ANAs ‘. . . will give you time to do reflection, how can I do better, how can I go about to increase or improve the current results’. In the same vein for Evelyn these tests encouraged her to conduct a ‘reflection on how well our children had done or how badly’. For Swallow the ANA tests directly informed her maths teaching strategies especially on questioning techniques, thus to her the ANA allowed her:

to check if I am going about in the correct way, am I asking my questions in the correct way, or if they ask it in a different way is that not another way I should be looking at asking questions.

For Evelyn the ANA tests and the mathematical content that the learners are supposed to be taught are the same. Thus for her the ANA tests are good for the ‘children to be exposed to them because they actually learn that this is nothing different to what they have learnt it is just put in a different way’. Lastly, and for Edna, the ANA tests were important because they were externally set national tests, ‘. . . it’s something coming from somebody else. . . it’s a national thing. . . it’s something that you didn’t set up for the kids’. Due to the acceptance of the value and validity of the ANAs the teachers in this category allowed their maths teaching practices to be influenced by the ANA tests. It is also interesting to note that the first three reasons given by the teachers for their alignment with the ANAs in their teaching are congruent with the national goals and purposes of ANA tests as set in the national policy (DOE, 2011).

Therapeutic (teacher-advocate) - Belinda

Of all the nine teachers Belinda seemed the only one to be unaffected by the 'official pedagogic modalities'. She rarely aligned herself with the national curriculum policy views of the recently introduced (CAPS) or the previous one (NCS) or the ANAs and maintained firm rooting in the Montessori holistic child approach which she had experience of. During the interview Belinda defines Montessori as 'a methodology of working with children... very practical and hands on'. Belinda repeatedly emphasises the practical aspect of the Montessori approach which she experienced during her teacher training:

...there was quite *a lot of practical training* where you actually had to work with the children *a lot more practical* than I think in most of the training that gets presented we had *a lot of practical stuff*.

Her Montessori training also focused on other key yet unique teaching foundations such as the need to do 'a lot of (learner) observations', 'dual teaching', and the 'psychological perspectives on children' and their learning. The Montessori approach is foreign to the local curriculum discourse contained in the NCS and the new CAPS curriculum statements. According to Morgan *et al.* (2002) teachers within the *Teacher-advocate* position speak the alternative discourse and explicitly reject the official criteria. According to Bernstein (2000, p.64) this is typical of de-centred identities which draw resources "from local contexts or local discourses". Thus according to Belinda her maths teaching approach is not exam oriented neither did the ANA tests affect her teaching. She says 'so it didn't really (influence), my approach is not really from that side' (test-focused). Belinda's 'holistic child approach' arouses in her the interest to, 'look(s) at why something has happened... there are always a thousand reasons sometimes when you are working with children why things don't always works out the way they seem'. This statement illuminates distinct aspects of this teacher identity category in the sense that this position is dependent upon internal sense-making procedures, with the teacher having to think flexibly at the numerous reasons when things do not work out when teaching learners. It also illuminates the humanistic orientation towards students and the integrated approach to teaching and learning of teachers in this category.

With regard to the teaching and learning of primary mathematics Belinda had been heavily influenced by her Montessori pre-service teacher training, which had inculcated in her the core value and need '...to teach the mathematical

concepts from a very concrete base'. During the interview Belinda mentioned 'wooden blocks', 'towers of blocks' and 'various pieces of equipment' as examples of concrete things that enable learners to 'work with the senses' and in the process 'get a tactile sensual impression' of numbers.

Belinda was driven by the need to develop number-sense amongst her learners using concrete objects for learners to understand mathematical concepts and numbers. Belinda's autonomous orientation to the Montessori, holistic child approach that emphasises practicality and the concretisation of mathematical concepts, her discourse and primary maths teaching practices are distinctively non-aligned to local teaching or national assessment practices.

Teacher-adviser (neo-conservative-therapeutic) - Pamela

Of all the participants in the sample, Pamela is the only teacher to position herself in relation to Morgan *et al.*'s (2002) *Teacher-Adviser* position. The *Teacher-Adviser* position features are found in both Bernstein's Neo-Conservative and Therapeutic Pedagogic identity categories. This primary maths teacher position and identity is articulated by Pamela, who in the midst of the ANAs remained steadfast to the earlier curricula and was concerned with teaching her learners 'the five learning outcomes'. In explaining her teaching identity position which aligned with previous national curricula requirements, Pamela insisted that 'I should be teaching everything those LOs (Learning Outcomes) with their assessment standards so that I know my learners at the end of the year'. Learning Outcomes and Assessment Standards were amongst the key curriculum features of Curriculum 2005 which was the first curriculum policy in the post-apartheid education. Besides an Outcomes Based Approach this curriculum policy was also underpinned by integration and socio-constructivism and explicitly emphasised a learner-centred approach (DOE, 2000). The *Teacher-Adviser* position is also "orientated towards the student" (Morgan *et al.*, 2002, p.456) and on this aspect relates with the therapeutic pedagogic identity which is "produced by complex theories of personal, cognitive and social development, often labelled progressive" (Bernstein, 2000, p.68). In primary maths education, Curriculum 2005 features closely relate with Bernstein's therapeutic pedagogic identity category (Pausigere and Graven in press). It is on these bases that we link Pamela with the therapeutic identity position.

Under Curriculum 2005 the primary maths Learning Outcomes, included the

knowledge, skills, values and attitudes that learners displayed at the end of the educational experience and these were assessed through an on-going participative informal and formative assessment means (standards) (DOE, 2000). Under this curriculum the five main primary maths Learning Outcomes were Numbers, Number patterns, Shape, space, time and motion, Measurement and Data handling. These ‘five learning outcomes’ contained the key fundamental tenets that enabled learners to understand the rudiments of elementary mathematics. The five learning outcomes provided ‘exemplars and criteria’ of foundational and fundamental concepts in primary mathematics. Through teaching her learners the basic primary maths concepts which were embedded in the LOs, through integration and learner-centred approaches, Pamela speaks the “voice of the legitimate discourse” (Morgan *et al.*, 2002, p.456) as contained in the then local national curricula’s – official pedagogic modalities – C2005 and the NCS. Furthermore according to Bernstein (2000, p.68) the Neo-conservative like the Conservative pedagogic identity emphasises the importance of specialised categories of discourses which under the former position are recontextualised to enable “engaging with contemporary change”. Pamela’s concern with teaching the ‘five learning outcomes’ is an attempt to engage learners in the basic primary maths concepts which have been recontextualised into Learning Outcomes under C2005. Such a view resonates with the Neo-Conservative pedagogic identity.

Besides being deeply immersed and concerned with the five learning outcomes, the influence of the ANAs on her teaching is somehow minimal, or in her own words, ‘not that much’. She argued that she hoped to see in the near future a change in the manner in which ANA test items are set up as ‘sometimes you see that they didn’t cover all the learning outcomes’ and she wanted ‘each and every ANA question’ to ‘have at least one of the learning outcomes in it’. Her take on ANA aligns with the *Teacher-Adviser* position which ‘implicitly refers to the official criteria’. Thus Pamela did not completely reject the importance of the standardised tests for she held that these were important especially if the ‘five learning outcomes will be covered in the (ANA) paper’. She also suggested that assessment standards enabled her to know her ‘learners at the end of the year’ implicitly suggesting the importance of assessment for benchmarking purposes. Pamela’s latter position on the ANAs reflects on yet another feature of the Neo-conservative pedagogic identity as it puts emphasis ‘upon performance’. Pamela thus fits into the *Teacher-Adviser* position which combines features of the Neo-Conservative and the Therapeutic pedagogic identities which were influenced by C2005’s informing principles, whilst taking a relatively neutral position on

the ANAs.

Concluding remarks

In this paper we have illuminated the way in which a sample of nine primary maths teachers participating in an in-service community of practice took up four different positions and pedagogic identities in relation to the recent introduction of ANAs. We have drawn on both Bernstein (2000) and Morgan's (Morgan, 1998, Morgan *et al.*, 2002) study. In this analysis we have revealed overlaps between pedagogic identity categories and maths teacher positions. In the light of our theoretical framework and the empirical data we argue that the different pedagogic identities and positions taken by the teachers are influenced by the state's education reforms as well as the primary maths teachers' own beliefs and practices. Generally our findings indicate that most of the primary maths teacher practices are to a certain degree being influenced by the ANAs but however differently. In concluding this paper we caveat that this study only reports on the participants' responses from two interactive interview questions about their views on the ANAs. The study could have been strengthened by observing some of the teacher's maths lessons prior to the writing of ANAs. However in this limitation lies the strength of this study as Morgan *et al.*, (2002, p.453) argue that in the "context of interviewing" it "is easier to trace" the teachers' positions in relation to the official discourse. The sample is also small to allow for generalisations but even with a large participant sample one might come with some of the teacher position categories identified in this study. The analysis is confined to local primary maths teachers and thus is context and primary level specific. It would be interesting therefore to read results of similar studies that use the same theoretical framework in different countries or for maths secondary school teachers.

In contexts of national testing Hill, Blunk, Charalambos, Lewis, Phelps, Sleep and Ball (2008) suggests that primary teachers must guide learners to understand maths and raise standards. This position is captured in Bernstein's 'Neo-Conservative pedagogic identities' and is articulated by Ruth who ensures in her primary maths teaching practices that learners, 'do both' – 'understand the topic' and 'do well in the test'. We also share in the notion that teachers are professionals who should exercise their autonomy and be 'critical' in their approach to policy and external assessment in relation to their maths teaching practices – a stance taken by Robert when he refuses in his

practices to be 'blindly lead'. In national testing regime contexts primary maths teachers as autonomous professional need to 'critically align' (Jaworski, 2003) with education policy, and so 'keep in mind' their mathematical moral obligation whilst at the same time being concerned with their learners' performances and the repercussions of their performance. The notion of 'critical alignment' is a key aspect of the projected professional numeracy teacher identity promoted within NICLE.

References

Bernstein, B. 1975. *Class, codes and control Volume 3*. London: Routledge & Kegan Paul.

Bernstein, B. 1995. A response. In Sadovnik, A.R. (Ed.), *Knowledge and Pedagogy: the sociology of Basil Bernstein*. London: Ablex Publishing, pp.385–424.

Bernstein, B. 1999. Official knowledge and pedagogic identities. In Christie, F. (Ed.). *Pedagogy and the shaping of consciousness*. London: Continuum, pp.246–261.

Bernstein, B. 2000. *Pedagogy, symbolic control and identity theory, research, critique*. Revised edition. New York: Rowman & Littlefield Publishers.

Bernstein, B. and Solomon, J. 1999. 'Pedagogy, identity and the construction of a theory of symbolic control': Basil Bernstein questioned by Joseph Solomon. *British Journal of Sociology of Education*, 20(2): pp.265–279.

Davis, Z., Adler, J. and Parker, D. 2007. Identification with images of the teacher and teaching in formalised in-service mathematics teacher education and the constitution of mathematics for teaching. *Journal of Education* 34: pp.33–60.

Department of Education. 2000. *A South African curriculum for the twenty first century: report of the Review Committee on Curriculum 2005*. Pretoria: Department of Education.

Department of Education (DOE). 2008. *Foundations for learning campaign*. Pretoria: Department of Education.

Department of Education. 2011. DBE Presentation to HESA Education Deans Forum. East London.

Department of Basic Education. 2012. Report on the Annual National Assessments 2012. Pretoria: Department of Basic Education.

Graven, M. 2003. Teacher learning as changing meaning, practice, community, identity and confidence: the story of Ivan. *For the Learning Of Mathematics* 23(3): pp.25–33.

Graven, M. 2002. Mathematics teacher learning: communities of practice and the centrality of confidence. Unpublished PhD Thesis. Johannesburg: University of the Witwatersrand.

Hill, H.C., Blunk, M.L., Charalambos, Y., Lewis, J.F., Phelps, G.C., Sleep, L. and Ball, L.D. 2008. Mathematical knowledge for teaching and the mathematical quality of instruction: an exploratory study. *Cognition and Instruction* 26(4): pp.430–511.

Hodgen, J. and Askew, M. 2007. Emotion, identity and teacher learning: becoming a primary mathematics teacher. *Oxford Review of Education* 33(4): pp.469–487.

Jaworski, B. 2003. Research practice into/influencing mathematics teaching and learning development: towards a theoretical framework based on co-learning partnership. *Educational Studies in Mathematics* 54(2–3): pp.249–282.

Lasky, S. 2005. A sociocultural approach to understanding teacher identity, agency and professional vulnerability in a context of secondary school reform. *Teaching and Teacher Education* 21: pp.899–916.

Merriam, S.B. 2001. *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass Publishers.

Morgan, C. 1998. *Writing mathematically: the discourse of investigation*. London: Falmer Press.

- Morgan, C., Tsatsaroni, A. and Lerman, S. 2002. Mathematics teachers' positions and practices in discourses of assessment. *British Journal of Sociology of Education* 23(3): pp.445–461.
- Parker, D. 2006. Official pedagogic identities from South African policy – some implications for mathematics teacher education practice, *Pythagoras* 63: pp.2–17.
- Pausigere, P. and Graven, M. (in press). Unveiling the South African official primary maths teacher pedagogic identity. (article submitted to *Perspectives in Education*).
- Sadovnik, R. A. 1995. Basil Bernstein's theory of pedagogic practice: a structuralist approach. In Sadovnik, A.R. (Ed.), *Knowledge and pedagogy: the sociology of Basil Bernstein*. London: Ablex Publishing, pp.3–38.
- Tyler, W. 1999. Pedagogic identities and educational reform in the 1990s; the cultural dynamics of national curricula. In Christie, F. (Ed.), *Pedagogy and the shaping of consciousness*. London: Continuum, pp.262–289.
- Walls, P. 2008. Down the dark zone: teacher identity and compulsory standardised mathematics assessment. In Matos, J.F., Valero, P. and Yasukawa, K. (Eds.), *Proceedings of the 5th International Mathematics Education and Society Conference*. Albufeira, Portugal, pp.485–494.
- Whetton, C. 2009. A brief history of a testing time: national curriculum assessment in England 1989–2008. *Educational Researcher* 51(2): pp.137–159.

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Corporal punishment and the achievement of educational success: perceptions of learners in the South African school context

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Abstract

This article examines students' responses to corporal punishment and their perceptions of corporal punishment as a necessary form of discipline that brings benefit to individuals in their pursuit of success. By focussing on the notion of 'success' as a dominant market discourse, I describe how this rhetoric is reinforced through the disciplinary practice of corporal punishment – and how learners on the whole regard this form of punishment as beneficial in achieving their educational aspirations. Foucault's notion of discipline offers a useful conceptual framework in understanding how corporal punishment operates to regulate conduct and codify behaviour according to what is regarded as acceptable and desirable. Research findings suggest that most students who are recipients of corporal punishment display limited capacity for resistance and that students' perceptions of the effectiveness of corporal punishment, function to reinforce their construction as disciplined, hard-working and 'docile' subjects.

Introduction

Prior to 1994, the heavy reliance on corporal punishment in South African schools to maintain discipline (Maphosa and Shumba, 2010) resulted in this becoming an accepted and integral part of schooling for many teachers (Morrell, 2001). With the ending of apartheid, a human rights culture was heralded, laying the legal foundation for the ending of physical forms of punishment in schools. Despite corporal punishment being prohibited in terms of South African law, its practice in many disadvantaged, working class schools is not uncommon. The change of law in corporal punishment has been taken up differently in working class and middle class schools. While in formally white, middle class schools corporal punishment has effectively disappeared (Morrell, 2001) it continues to be enforced in a number of poor, working class schools across the country.

This article presents a description of learners' responses to corporal punishment, and discusses perceptions of corporal punishment as a necessary form of punishment in the achievement of educational success. This study emerged as part of a doctoral thesis (Silbert, 2012) which examines how the learner is imagined in neoliberal times in education policy discourse and school practice, and describes ways in which learners are able to enlist other discourses to resist interpolation. Drawing from this broader study, the article focuses on discourses of success as an effect of education marketisation, and describes how learners' perceptions of corporal punishment are linked to the accomplishment of their educational aspirations.

Theoretical considerations: the notion of success in education discourse

There is broad consensus in the literature on education marketisation that education has been fundamentally affected by market influences: Angus (2004); Ball (2004, 2003, 1990); Blackmore (2004, 1997); Bottery (2006); Comber (1997); Fleisch and Christie (2004); Gewirtz and Ball (2000); Jansen (2004); Masschelein and Simons (2002); McInerney (2003); Rasmussen and Harwood (2003); Sachs (2001); Simons and Masschelein (2006) and Whitty and Power (2003) address the impact of school restructuring and marketisation for school principals and teachers. Biesta (2004); Gewirtz and Ball (2000); Masschelein and Simons (2002) are interested in the impact of marketisation on social relations and subjectivities within the school and Barnett, Clarke, Cloke and Malpass (2008); Hamann (2009); Masschelein and Simons (2002); Olssen (2003); Read (2009); Schmidt and Wartenberg (1994) and Steiner (2008) examine the production of new subjectivities associated with neoliberalism. In much of this scholarship, market discourses are viewed as representing particular ideas of success and productivity that are absorbed into, and deployed through the school's discursive formations and practices.

The notion of success has come to dominate what Bernstein (1975) refers to as the 'expressive order' of the school. This relates to the school's disciplinary mechanisms that are configured to produce learners whose conduct and behaviour comply with a normative set of constructs. The school's expressive order represents a range of discursive formations that infiltrate the school from the public domain. In addition to national policy discourse, the media is a key mechanism through which market discourses infuse the school. After the release of the 2009 matriculation results in South Africa, the headline of an

article published in the Business Report of the *Cape Times* stated the following: “Matric result is economic failure” (Enslin-Payne, 2010, p.15). In this article the director-general of the Department of Labour and president of the Black Management Forum was quoted: “The learners of today are the economic managers of tomorrow. If they are not well-equipped we are signing our death warrant”. Such messages overtly construct the learner as ‘product’ and attribute to this construction particular actions and behaviour that are enscripted in economic discourses. As Jansen (2002, p.42) suggests, post-1994 education reforms were “lodged clearly and consistently within powerful economic rationales as the overriding motivation for ‘transforming’ apartheid education”.

The economist rationales of South African education are rooted in the 1981 De Lange Commission report, which focused its attention on the private sector’s role in schooling and the need to train young people for the economy (Jacklin, 2011). Although the commission was not immediately implemented, its significance was two-fold: first, its principles reflected a similar economic-based logic to those articulated in international education reforms during that time; and second, the report provided an economic-based rationale for education policy post-1994.

As argued in the larger study on which this article is based, it is these economic rationales that circumscribe the way in which the South African learning subject is imagined and it is this imaginary that permeates the school’s discursive terrain. The ‘ideal’ student, as suggested in the original thesis, is the future economic participant, the individual who is primed to take his/her place in the labour market. In this article I am interested in the ways in which corporal punishment functions as a disciplinary instrument in schools in the production of learning subjects, and in perceptions of corporal punishment by learners as a necessary form of discipline. The intention of the article is to problematise students’ responses to corporal punishment, which as will be shown, is mostly regarded by them as beneficial in their pursuit of success.

Foucault’s (1977) notion of discipline offers a useful conceptual lens through which to view corporal punishment as a regulatory mechanism in the shaping of the subject. This is explored in more detail in the section that follows.

Foucault: Discipline, discourse and the subject

Discipline in the Foucauldian sense refers to a type of *regulatory power* that codifies behaviour according to what is regarded as acceptable and desirable. Rather than operating as a top-down imposition of power, disciplinary procedures serve to normalise and regulate conduct, as stated by Foucault (1977, p.24):

. . . punitive measures are not simply ‘negative’ mechanisms that make it possible to repress, to prevent, to exclude, to eliminate; but . . . they are linked to a whole series of positive and useful effects which it is their task to support. . .

As an institution emerging within the modern nation state, the school is a critical structure in which power is exercised through discipline in order to produce a particular type of subject. The term ‘subjectivity’ as used in this article refers to the ways in which the individual is constituted within a particular social and political context through the discourses that are made available, and through the disciplinary and regulatory mechanisms employed within that context.

Discourse is regarded as a form of sense making, through which the social production of meaning takes place, through which power relations are maintained and through which the subject is constituted (Kenway, 1990). It represents a complex set of practices and is the medium through which power operates, regulating expectations and actions, and defining behavior accordingly. The subject is constituted therefore through discursive and institutional interactions.

Significant in the Foucauldian notion of the subject, are the constitutive practices he refers to as ‘technologies of the self’: the processes by which individuals *act upon themselves*, and form themselves as subjects. These strategies constitute ways in which individuals’ understanding of themselves in terms of *what is expected of them* is internalised. The capacity of subjects to act upon themselves or engage in self-government is contingent on the subject’s capacity to act or perform actions (Foucault cited in Rabinow, 1994). Foucault described this self-fashioning as “. . .the government of the self by oneself in its articulation with relations with others. . .” (1994, p.88). As a result the subject engages in constituting him/herself in a particular space in relation to the discourses and power relations encountered. As Prinsloo (2007) suggests:

It is from the available repertoire of systems of ideas that people can constitute themselves and be constituted in the process. Possible ‘imaginings’ are enabled through the available discourse in circulation at a particular time in a particular space (2007, p.192).

It is through the self-fashioning process that subjects come to internalise values and norms through accepting, desiring and aspiring to achieve congruence between personal internal objectives and objectives that are external to themselves (Edwards, 2008). Subjectivation therefore requires that the individual be invested with capacity, freedom, utility and productivity. In order for the body to be acted upon it must be subjected or made submissive. The term 'docile' is derived from the Latin 'docilis' meaning teachable (Hoskin, 1990), signalling the exercising of discipline to regulate behaviour. Goodson and Dowbiggin (1990, p.105) suggest that in order for relations of power between 'professional and client' to be legitimised, there must exist "both a 'discipline' and a mode of disciplining self, body, emotions, intellect, and behaviour" (1990, p.105). They quote Foucault, who asserts, "the disciplines' become 'general forms of domination' which create subjected and practised bodies, 'docile bodies'" (1990, p.106).

Viewed within a Foucauldian framework, corporal punishment may therefore be understood as a regulatory mechanism, oriented towards the production of learners as docile, useful and productive. This suggests an important way in which disciplinary mechanisms operate through the school and how they are embedded in dominant discourses, which are taken up, reinterpreted and re-contextualised in school practices. Such discourses privilege certain values and produce particular subjectivities.

Research methodology and approach

The study was designed as a qualitative discourse analysis. Texts were constructed from interviews, and Foucauldian discourse analysis was used to interpret the themes that emerged from the interview texts. This type of discourse analysis made it possible to explore the formation of subject positions in discourse and to examine discourse patterns that have become normalised. Moreover Foucauldian discourse analysis offered a tool through which to describe the school's dominant discourses; the ways in which these discourses have been transmitted through disciplinary mechanisms or 'rituals of power' (Jabal and Rivière, 2007) and how through these discursive processes, subjects are constituted.

Research methods, data collection and analysis

Interviews were conducted with fifteen randomly selected grade 12 learners

and ten educators (including the principal). The student participants comprised eight girls and seven boys. All the pupils were isiXhosa first language speakers and lived in local townships. All travelled to school using public transport.

Pseudonyms were used at all times, both in referring to the participants and to the school itself. The school selection was purposeful rather than random: Ubuntu High was one of the two schools selected for the doctoral research on which this study is based. Both schools used in the original study were specifically chosen because of their fundamental differences with regard to their socio-economic status and their standards of performance, my objective being to show through the data, that social processes and the effects of discourse are contingent upon the social context. Secondary schools were chosen as the interview questions focused on ways in which participants had been shaped and influenced by their schooling. The choice of grade 12 learners as interviewees was based on the understanding that young people in their final years of schooling have greater capacity to reflect on their secondary school years, while simultaneously having begun, in many cases to look forward toward their future.

For the analysis of interview texts, an interpretive, thematic approach was used. Overlaying the analysis of texts, I was concerned with dominant themes and patterns. Important to state is that the doctoral study did not set out to explore corporal punishment, or the effects thereof. As mentioned earlier, the purpose of the study was to describe the imagined learner in neoliberal times and the ways in which the learning subject is constructed in education policy and school practice. What emerged unsolicited from the interview process at Ubuntu High, was learners' accounts of instances of corporal punishment. This was then developed as a dominant theme from the data.

The responses that were elicited from the interviews generated the data for analysis. All references to corporal punishment from the larger study comprise the data used in this study, and are represented in the sections that follow.

Validity and reliability

The construction and interpretation of interview texts exposes the study to particular threats to validity, including in particular, descriptive validity, interpretive validity and generalisability (Maxwell, 1992). 'Descriptive

validity' (1992) firstly was achieved by ensuring that the recordings accurately reflected the participants' responses. Interviews were professionally transcribed and transcripts were checked by participants for accuracy. This process sought to address, to some degree, a second possible threat, namely 'interpretive validity', which pertains to interpretations of meaning and is based on the language of the participants. Because discourse analysis was the chosen methodology, value was placed on the particular words and sentences used by participants. However, as Maxwell (1992, p.290) suggests, "accounts of participants' meanings are never a matter of directed access, but are always *constructed* by the researcher(s) on the basis of participants' accounts and other evidence". This is significant within a Foucauldian context as the meaning that is constructed and communicated by subjects is based on individual perceptions which are socially and historically constructed. All views expressed were regarded as subjective responses and were thus considered valid and 'truthful'.

A related threat to validity with regard to the interview texts, was the interpersonal dynamic between the interviewer and the respondent. An understanding of that dynamic, "how it affects what goes on in the interview, and how the informant's actions and views could differ in other situations" is, according to Maxwell (1992, p.295) "crucial to the validity of accounts based on interviews". Similarly, the language in which interviews were conducted was regarded as a potential threat to the reliability of the data. Because English was not the mother tongue of the speakers (albeit the medium of instruction at the school), I considered using a translator in the interview process. Once the interviews began however, it was apparent that this was not necessary as pupils were comfortable to be interviewed in English and were able to express themselves easily. Although participants responded with confidence and ease of expression, throughout the interviews I was aware of the potential limitation of language.

A final validity threat relates to generalisability – the degree to which the study can be generalised to other contexts, both empirically and theoretically. I do not make the claim that what happens in the instances described in this study may be applied generically to other instances, either empirically or theoretically. However in similar socio-economic school contexts in which discourses of success are dominant, and where corporal punishment is enforced, students' capacity to speak out against physical punishment may be compromised on account of corporal punishment being regarded as necessary in the achievement of educational success. This suggests that regulatory

processes and the effects of discourse are contingent upon the social context in that discourses are taken up and interpreted differently in different contexts.

Ethical considerations

The ethical concerns in this study pertained to issues of confidentiality with respect to the participants and the school. As mentioned, pseudonyms were chosen for the respondents, and for the school. Interviews were only conducted if pupils had agreed to being interviewed and written consent had been given by parents. In an effort to uphold the anonymity of the school, salient details which may have resulted in the school being recognisable, were removed from the data.

Having outlined the methodological approach; data collection; validity and ethical considerations, the discussion shifts to the school as the research site. In the next section the case of Ubuntu High is introduced, after which the findings are discussed.

Ubuntu High

Ubuntu High is a disadvantaged, underprivileged school located in a mixed residential and business area. Although functional,¹ Ubuntu would be described as a relatively poor performing school.

¹

Functionality here refers to schools in which systems have been implemented to ensure that teaching and learning takes place. Teachers mostly arrive for their classes on time and most students are motivated to perform well.

More than one thousand learners attend this school, most of whom are Xhosa speaking with a small percentage of foreign national students. The students who attend Ubuntu live in the townships located on the outskirts of the city and rely on public transport, many travelling far distances across the city to get to and from school. The appeal of this school for many township youth is because of its perceived functionality as compared with the majority of schools in the local township communities. Perceptions of success are associated with its location: a seemingly far distance from the scourges of township life, and a stone's throw away from some well-known tertiary institutions. Despite the school's location, Ubuntu is an under-resourced school. There is no school hall and many of the fifty classrooms are constructed out of basic pre-fabricated material, resulting in extreme temperatures throughout the year. This, coupled with an average of forty-five to fifty students in each class makes for difficult learning conditions.

Despite poor facilities and overcrowded classrooms, messages of hard work and success were prolific. Newspaper articles mounted on the walls of the school foyer conveyed different stories of success. One article was entitled 'Celebrating success after all the hard work', while a second title stated, 'Hard work earns Matric boy hard cash'. This article described how one pupil received a cheque of R1 500.00 from the Western Cape Education Department for five distinctions for his 2009 final matriculation examination results. Cash incentives for the top achiever, was a recently introduced practice at Ubuntu as some of the teachers pledged to contribute towards this monetary award. Messages of hard work and success were frequently reinforced during the school assemblies, as suggested for example by the principal who explained to the student body during one assembly that hard work meant being 'present', 'prepared' and 'punctual'. These habits, if achieved, would generate success:

You must be present, prepared, punctual in order to be successful. Time is marks, and marks is money. . .

In spite of promises of a brighter future and dreams of success, Ubuntu High is a disadvantaged school confronted with similar challenges as those experienced in townships schools. As will be shown in the discussion that follows, dominant discourses of hard work and success permeated the school's discursive framework – and were reinforced daily by the school's close proximity to a number of tertiary institutions.

Findings

School location

The physical and psychological effects of travelling out of the townships into a mixed residential,² inner-city location influenced learners' self-perceptions. The impact of the daily movement from poor, challenged communities across the city into an area populated with businesses, schools, tertiary institutions, and student residential establishments enabled Ubuntu students to re-imagine themselves as aspirant, upwardly mobile young people. The physical location of the school positioned Ubuntu inside the margins of a middle class 'virtual community', which as Dowling (2009) explains, represented the students' 'aspired destination' as opposed to students' 'origins and intended destinations'. In the opinion of Lizo (a teacher), the school was no different to other township schools – except for its location:

Fortunately for us, we have . . . an unfair advantage . . . of the position of our school . . . as the school . . . is not different from the schools in the township, but it's just that where we are . . . we give them that sense of pride. They are proud to say that (they) are studying at Ubuntu. You can tell from how they dress, they wear their uniform, you can see that there is a difference between them and a learner in the township schools, as much as the set up of the school is more or less the same as the township schools.

Because of the school's close proximity to tertiary institutions, pupils were exposed to opportunities that would otherwise not have been available to them. As Tina (student) says:

There are many, many opportunities and they push us to the limit . . . For example, in our school, the main focus is for us to go to UHL³ 'cause they think that is the greatest university available for us as . . .

Aspirations of success were linked to admission to a tertiary institution – and in particular to UHL. In this sense the rhetoric relating to UHL functions as an 'affiliation strategy' (Dowling, 2009): entry into the 'virtual community', as mentioned earlier, becomes possible through admission to one of the most reputable institutions of higher learning.

² This refers to an area which is both residential and business. In the case of Ubuntu High the location comprised a mix of classes and cultures.

³ UHL is an abbreviation for The University of Higher Learning. This is a pseudonym.

The physical location of the school, together with its perceived quality of education, resulted in frequent comparisons by teachers and students of Ubuntu with top achieving schools in the suburbs. Such comparisons, which functioned to set Ubuntu apart from, and ‘above’ township schools, were integrated into the school’s vernacular, serving to position the Ubuntu student as special and different. As illustrated by a teacher during a ceremony in honour of the top matriculants from the previous year:

Whatever happens in private schools, it does happen here. We are a township school in (the suburbs). We are producing quality at its best. . .

The claim above that Ubuntu was comparable with private schools validates McLeod’s (2000, 507) notion that “mimicry is mistaken for the ‘real thing’”. According to Kenway and Bullen (2001, p.147) the process of emulation involves a double movement: “an imitation of those richer as well as differentiation from those poorer or less refined”. These authors maintain that discourses of desire and success become part of the school’s lingua franca as the school models itself on those schools perceived as superior.

The subjectivation of the Ubuntu students as ‘different’ on account of the school’s location is linked with attributes of being hard working and aspirant. Measures of success were closely related to normative constructs of ‘being good’ which meant providing material support to the family and community. These sentiments are reiterated by Vusi (a student) who expressed the desire to study engineering and thereby to become a ‘better person’:

So like, after I’ve passed like matric, I’ve done a tertiary institution, I want to be a better person. That’s why I thought engineering . . . it’s a serious place for me to be.

When asked what he meant by wanting to be a ‘better person’, Vusi said that he would help “those who could not help themselves”. ‘Being good’ or ‘better’ defined students’ conceptions of success which related to providing support to their families, and service to their communities. Throughout the interviews, students made the connection between education and the achievement of future dreams and goals, recognising their school as a morally empowering key to future success. Hard work meant access to university which was regarded as the springboard to upward mobility. Admission to university was considered the ultimate success, the prerequisite being hard work which meant being ‘present’, ‘prepared’ and ‘punctual’.

It is against this discursive background of the aspirant Ubuntu High student that the discussion now shifts to corporal punishment and the extent to which this disciplinary practice served to reinforce normative constructs of success.

Corporal punishment at Ubuntu High

In this section corporal punishment is examined in relation to Foucault's notion of discipline: a mechanism that regulates behaviour according to that which is regarded as desirable within the school's discursive framework.

The biggest problem at Ubuntu, as explained by most of the respondents, was that of late coming. Because the school was located 'out of community', many of the students travelled daily for between one and two hours to get to school, and to return home. At Ubuntu, the practice of corporal punishment for late coming may be regarded as a *visible* disciplinary mechanism representing external displays of power, through which attempts were made, as Foucault suggests to transform and improve subjects (Foucault, 1977). Referring to disciplinary procedures in general, Foucault stipulates that "[t]hese methods, which made possible the meticulous control of the operations of the body. . . assured the constant subjection of its forces and imposed upon them a relation of docility-utility. . ." (1977, p.137). The docility-utility synthesis signals the relationship between discipline and success, suggesting that corporal punishment at Ubuntu converged around normative discourses of success: the objective being to improve behaviour and increase performance – and the result, the construction of a disciplined, obedient and compliant subject.

Learners perceptions of the *purpose* of corporal punishment were based on the idea that teachers were doing "their best" in trying to make students "more disciplined" (Sandiswa, a student). In the opinion of Sakhiwo (a student), in order to have respect they needed to be taught when they were young. With regard to the *effects* of corporal punishment, all except one student agreed that the outcome was positive. While Elias (a student) felt that students were now "taking things seriously" and passing their exams, Amanda (a student) maintained that "smacking [put] you in the right direction", motivating students to work harder. These incentives were coupled with the opinion expressed by Zoe (a student), that because of the physical pain of corporal punishment, it was considered an effective deterrent. Kwezi (a student), similarly, condoned efforts by the school to discipline learners:

. . .it works for me, because there are no other ways that I can see, that can make students be what the school wants them to be. So, the, the disciplinary actions that take place are perfect.

According to Sakhiwo corporal punishment was regarded as a necessary form of punishment for a 'black child':

Yeah, they, they're doing their best. They're beating us when we are late, and they, I, I see that as, that's a good thing, because we, um, we as black child, they always tell us that, um, in order for you to. . . have respect, we must like, we must teach you when you're young, like and here, they, they beat us, which is a good thing. . .

Sakhiwo's defence of corporal punishment on account of being black draws attention to the effects of particular positionings and the place of schooling in reproducing subject positions. Kwanda, a teacher, shed light on the subject position of working class children within what he referred to as 'a culture of submission':

We serve children from the working class and the way in which children from the working class grow up . . . dispositions them in one way to be . . . less vocal . . . If a parent gives an instruction, it is the nature of working class (children) to follow that instruction as it is coming from an adult . . .

Although more critical of corporal punishment, Sandiswa believed it would never end, because it made the students more obedient.

I think they are trying to like, make us more disciplined. But, to some of us, it's not, it doesn't feel right, because, maybe some of us are not used to being punished in that way at home . . . I don't think corporal punishment will ever really end at school. Because they, the kids are mostly obedient when it's reinforced. . .

Sandiswa's reference to obedience aligns with the Foucauldian notion of docility and utility. Through being disciplined the body becomes more obedient and concomitantly, more useful. The association of docility and utility is contingent on diminished power as the subject is primed, in a particular way for economic participation. In this sense, according to Foucault (1977):

[d]iscipline . . . dissociates power from the body; on the one hand it turns it into an 'aptitude', a 'capacity', which it seeks to increase; on the other hand, it reverses the course of the energy, the power that might result from it, and turns it into a relation of strict subjection (1977, p.138).

At Ubuntu High, the compliance resulting (in general) from being 'beaten' was equated with students' need for discipline and respect. This, students

agreed would impact positively on academic performance, equipping them with the prerequisites for admission to university, and ultimately supplying them with the required currency for economic participation.

Tina was the only student interviewed who was resolute about the futility and injustice of corporal punishment:

At the back of your mind you say, they will beat me at 8 o'clock, by 9 o'clock that pain will be gone, so what the hell, maybe I should be late . . . no it's not good for us to be beaten up. I don't want to be beaten up. When I'm late, I'm late for a good reason . . . they don't ask me why I'm late, they just come around and beat me up. So it's not a good punishment. They should do something else, like, if you're late, you should, I don't know, clean the school or something.

While others felt it was a deterrent because of the physical pain, in Tina's view, corporal punishment by its very nature was *ineffective*: because the physical pain was short-lived, the transgression would invariably be repeated. Corporal punishment therefore had the opposite effect for Tina: instead of rendering her obedient, it provoked resistance:

The discipline has made me resilient. I'm not a resilient person. I'm a quiet and shy person, but when somebody's keep on beating me up, the same with, like, not asking you why you're late and stuff like that. That makes me want to speak my voice and, and, and speak out.

Tina's response offers important insights regarding processes of power and subjectivation. She described herself as being 'quiet and shy' yet had become 'resilient' and wanted to 'speak out'. This invokes the Foucauldian notion of power, which is not unidirectional but circulates at multi-levels, positioning subjects in particular ways in relation to its manifestation (Foucault, 1977). As Foucault suggests,

power is not exercised simply as an obligation or a prohibition on those who 'do not have it'; it invests them; is transmitted by them and through them; it exerts pressure upon them, just as they themselves, as in their struggle against it, resist the grip it has on them (1977, p.27).

In becoming subjectivated, Tina became empowered - attempts to render her compliant resulted in her resistance. Yet paradoxically Tina regarded her behaviour at Ubuntu as having improved: "I'm punctual toward things. I understand things. I discipline myself towards situations. I don't react (fast)".

This apparent paradox aligns with Foucault's notion of power: although relations of power imply *certain possibilities of resistance*, this, according to

Foucault never takes the form of a total rejection of power or changes in power relations (Schmidt and Wartenberg, 1994). Although Tina resisted commonly shared perceptions about the benefits of corporal punishment, she attributes her improved behaviour to the school's approach to discipline. Tina's subjectivation demonstrates the effective operation of disciplinary practices at Ubuntu High. Significantly however, although she is subjectivated by broader disciplinary processes, she is able to disrupt dominant discourses by exercising her freedom as a subject. This she does by working within discursive formations to destabilise them.

Conclusion

At Ubuntu High the successful student was the student who passed his/her final matriculation exams and obtained admission to study at university. Corporal punishment in this context represents a disciplinary practice through which education aspirations are reinforced.

The lack of resistance to corporal punishment in most cases, signals the construction of the 'obedient subject'. In referring to disciplinary procedures in general, Foucault (1977, p.128) speaks about the 'apparatus of corrective penalty', which acts through the body and the soul. Disciplinary instruments comprise ". . . forms of coercion, schemata of constraint, applied and repeated". Ultimately, as suggested, through these normative corrective techniques, an obedient and utilitarian subject is constructed. The construction of the *obedient subject* at Ubuntu High illustrates the effects of corporal punishment in reproducing subject positions and relations of power. Because power implies a *free subject* – and concerns relationships between free subjects – obedience negates possibilities of resistance and therefore undermines freedom. The project of the self according to Foucault is not to escape relations of power, but to exercise resistance by working within dominant discursive formations:

I do not think that a society can exist without power relations, if by that one means the strategies by which individuals try to direct and control the conduct of others. The problem, then, is not to try to dissolve them in the utopia of completely transparent transaction but to acquire the rules of law, the management of techniques, and also the morality, the ethos, the practice of the self, that will allow us to play these games of power with as little domination as possible (Foucault, 2000, p.298, cited in Christie, 2006, p.449).

Foucault stresses the point that power relations are possible "only insofar as

the subjects are free” (Foucault, 1984, p.292) and that this means that within power relations there is “necessarily the possibility of resistance because if there were no possibility of resistance . . . there would be no power relations at all” (1984, p.292). The point that needs to be emphasised is that resistance is intrinsic in every relation of power, since power implies a free subject. Although the subject is constituted through discourse, it is perpetually open to the possibility of critique. According to Gunzenhauser (2006):

The practice of freedom . . . is a stance in relation to certainty, an incredulity toward foundations and essences, a radical appreciation for ‘persistent critique’ St. Pierre 2002, not for the sake of critique but for the possibilities that arise (2006, p.254).

The task of the subject therefore is not to find ways to escape the discourses but to “acquire the rules of law” (Foucault, cited in Christie, 2006, p.449) and to work *within* discursive formations to shift them. The exercise of freedom is to wedge cracks within the discourses; to expose and destabilise them so as to render them “permanently open, permanently contested, permanently contingent” (Butler, 1995, cited in Christie, 2010, p.4). The capacity to expose and rupture discursive practices and to assume alternative positionings marks the point of resistance – the moment at which the self becomes actively engaged in subjectivation processes. Recognising that obedience regulates behaviour according to what is considered desirable, the task of the subject is to work within discursive formations to shift and disrupt them, as demonstrated by Tina.

In this article I have argued that young people who have been subjugated through unequal relations of power have limited capacity to resist dominant discourses. In the post-apartheid South African context where practices of violence have become normalised, it is particularly difficult for young people to express their agency and speak out against corporal punishment. Moreover, students are even less inclined to demonstrate resistance if physical disciplining is perceived as generating success or benefit to the individual. At Ubuntu High, support by students of corporal punishment was based on perceptions that this form of punishment would lead to improved discipline and performance, which would result in them fulfilling idealised constructs of success. Over and above perpetuating physical acts of violence and subjugation, corporal punishment operated at Ubuntu High as a regulatory mechanism which reinforced and reproduced normative constructs of success in the shaping of the Ubuntu High student.

References

- Angus, L. 2004. Globalisation and educational change: bringing about the reshaping and renorming of practice. *Journal of Education Policy*, 19(1): pp.23–41.
- Ball, S.J. 2004. Performativities and fabrications in the education economy. In Ball, S.J. (Ed.), *The RoutledgeFalmer Reader in Sociology of Education*. London: RoutledgeFalmer, pp.143–155.
- Ball, S.J. 2003. The teacher's soul and the terrors of performativity. *Journal of Education Policy*, 18(2): pp.215–228.
- Ball, S.J. 1990. Introducing Monsieur Foucault. In Ball, S.J. (Ed.), *Foucault and education*. London: Routledge, pp.1–8.
- Barnett, C., Clarke, N., Cloke, P. and Malpass, A. 2008. The elusive subjects of neo-liberalism. Beyond the analytics of governmentality. *Cultural Studies*, 22(5): pp.624–653.
- Biesta, G. 2004. Education, accountability, and the ethical demand: can the democratic potential of accountability be regained? *Educational Theory*, 54(3): pp.233–250.
- Blackmore, J. 2004. Leading as emotional management work in high risk times: the counterintuitive impulses of performativity and passion. *School Leadership and Management*, 24(4): pp.439–459.
- Blackmore, J. 1997. Institutional schizophrenia: self governance, performativity and the self governing school. Paper presented to the Annual Conference, Australian Association of Research in Education, Brisbane, December 1997.
- Bottery, M. 2006. Educational leaders in a globalising world: a new set of priorities? *School Leadership and Management*, 26(1): pp.5–22.
- Christie, P. 2010. The complexity of human rights in global times: the case of the right to education in South Africa. *International Journal of Educational Development*, 30: pp.3–11.
- Christie, P. 2006. Changing regimes: governmentality and education policy in post-apartheid South Africa. *International Journal of Educational Development*, 26(4): pp.373–381.

Comber, B. 1997. Managerial discourses: tracking the local effects on teachers' and students' work in literacy lessons. *Discourse: Studies in the Cultural Politics of Education*, 18(3): pp.389–407.

Dowling, P. 2009. *Sociology as method. Departures from the forensics of culture, text and knowledge*. Rotterdam: Sense Publishers.

Edwards, R. 2008. Actively seeking subjects? In Fejes, A. and Nicoll, K. (Eds), *Foucault and lifelong learning: governing the subject*. London and New York: Routledge, pp.21–33.

Enslin-Payne, S. 2010. Matric result is economic failure. Business Report: *Cape Times*, 8 January: p.15.

Fataar, A. 2009. Schooling subjectivities across the post-apartheid city. *Africa Education Review*, 6(1): pp.1–18.

Fleisch, B. and Christie, P. 2004. Structural change, leadership and school effectiveness/improvement: perspectives from South Africa. *Discourse: Studies in the Cultural Politics of Education*, 25(1): pp.95–112.

Foucault, M. 1994. Ethics, subjectivity and truth. In Rabinow, P. (Ed.), *Michel Foucault: ethics subjectivity and truth*. New York: The New York Press, pp.73–92.

Foucault, M. 1984. The ethics of the concern for self as a practice of freedom. In Rabinow, P. (Ed.), *Michel Foucault: ethics subjectivity and truth 1954–1983*. New York: The New York Press, pp.281–301.

Foucault, M. 1977. *Discipline and punish*. London: Penguin.

Gewirtz, S. and Ball, S. 2000. From 'welfarism' to 'new managerialism': shifting discourses of school headship in the education marketplace. *Discourse: Studies in the Cultural Politics of Education*, 21(3): pp.253–268.

Gillies, D. 2008. Developing governmentality: conduct 3 and education policy. *Journal of Education Policy*, 23(4): pp.415–427.

Goodson, I. and Dowbiggin, I. 1990. Docile bodies. In Ball, S.J. (Ed.),

Foucault and education. London: Routledge, pp.105–129.

Gunzenhauser, M. 2006. Normalizing the educated subject: a Foucaultian analysis of high-stakes accountability. *Educational Studies*, 39(3): pp.241–259.

Hamann, T.H. 2009. Neoliberalism, governmentality, and ethics. *Foucault Studies*, (6): pp.37–59.

Hoskin, K. 1990. Foucault under examination: the crypto-educationalist unmasked. In Ball, S.J. (Ed.), *Foucault and education*. London: Routledge, pp.29–53.

Jabal, E. and Rivière, D. 2007. Student identities and/in schooling: subjection and adolescent performativity. *Discourse: Studies in the Cultural Politics of Education*, 28(2): pp.197–217.

Jacklin, H. 2011. The subject of schooling in the logic of policy. Unpublished paper presented to the College of Arts and Sciences and the College of Education, University of Kentucky, on 26 January, 2011.

Jansen, J.D. 2004. Autonomy and accountability in the regulation of the teaching profession: a South African case study. *Research Papers in Education*, 19(3): pp.51–66.

Jansen, J.D. 2002. Globalization, curriculum and the third world state: in dialogue with Michael Apple. *Current Issues in Comparative Education*, 1(2): pp.42–48.

Jaworski, A. and Coupland, N. 1999. Editors' introduction to part six. In Jaworski, A. and Coupland, N. (Eds), *The Discourse Reader*. London and New York: Routledge, pp.495–501.

Kenway, J. 1990. Education and the right's discursive politics: private versus state schooling. In Ball, S.J. (Ed.), *Foucault and education*. London: Routledge, pp.167–205.

Kenway, J. and Bullen, E. 2001. *Consuming children*. Philadelphia: Open University Press.

Maphosa, C. and Shumba, A. 2010. Educators' disciplinary capabilities after the banning of corporal punishment in South African schools. *South African Journal of Education*, 30(3): pp.387–399.

Masschelein, J. and Simons, M. 2002. An adequate education in a globalised world? A note on immunisation against being-together. *Journal of Philosophy of Education*, 36(4): pp.589–598.

Maxwell, J.A. 1992. Understanding and validity in qualitative research. *Harvard Educational Review*, 62(3): pp.279–300.

McInerney, P. 2003. Moving into dangerous territory? Educational leadership in a devolving education system. *International Journal of Leadership in Education*, 6(1): pp.57–72.

McLeod, J. 2000. Subjectivity and schooling in a longitudinal study of secondary schools. *British Journal of Sociology of Education*, 21(4): pp.501–521.

Morrell, R. 2001. Corporal punishment in South African schools: a neglected explanation for its persistence. *South African Journal of Education*, 21(1): pp.292–299.

Olssen, M. 2003. Structuralism, post-structuralism, neo-liberalism: assessing Foucault's legacy. *Journal of Education Policy*, 18(2): pp.189–202.

Prinsloo, J. 2007. Making visible constructions of dis/advantage through genealogical investigation – South African schooled literacies. *Critical Arts*, 21(1): pp.190–211.

Rasmussen, M. and Harwood, V. 2003. Performativity, youth and injurious speech. *Teaching Education*, 14(1): pp.25–37.

Read, J. 2009. A genealogy of homo-economicus: neoliberalism and the production of subjectivity. *Foucault Studies*, 6: pp.25–36.

Sachs, J. 2001. Teacher professional identity: competing discourses,

competing outcomes. *Journal of Education Policy*, 16(2): pp.149–161.

Schmidt, J. and Wartenberg, T.E. 1994. Foucault's enlightenment: critique, revolution, and the fashioning of the self. In Kelly, M. (Ed.), *Critique and power*. Massachusetts: MIT Press, pp.282–308.

Silbert, P. 2012. The imagined learner in neoliberal times: constructions of the South African learning subject in education policy and school practice. Unpublished PhD thesis. Cape Town, South Africa: University of Cape Town.

Simons, M. and Masschelein, J. 2006. The permanent quality tribunal in education and the limits of education policy. *Policy Futures in Education*, 4(3): pp.292–305.

South African Schools Act, (No 84 of 1996), Government Gazette, 377, 17479. Pretoria: Government Printer.

Steiner, P. 2008. Foucault, Weber and the history of the economic subject. *European Journal of the History of Economic Thought*, 15(3): pp.503–527.

Whitty, G. and Power, S. 2003. Making sense of education reform: global and national influences. In Torres, C.A. and Antikainen, A. (Eds), *The international handbook on the sociology of education*. Lanham: Rowman and Littlefield Publishers, Inc. pp.305–324.

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Understanding the contextual resources necessary for engaging in mathematical literacy assessment tasks

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Abstract

Mathematical Literacy (ML) was introduced in South Africa as a compulsory school subject for all learners who are not studying mathematics in Grades 10 to 12. In an ML classroom, mathematical skills are used to explore the meaning and implications of information in context. In this article, the notion of context in ML is interrogated by identifying particular constructs that can be used to illuminate the focal events in a contextual setting. It is argued that each context constitutes a particular domain with specific contextual resources which set out the parameters of engagement with the focal event of the context. It is shown that the contextual resources often differ from the corresponding constructs in the mathematics domain. It is then argued that in order to fulfil the life-preparedness mandate of ML, the differential purposes of the mathematics and contextual domains needs to be acknowledged and the corresponding implications with respect to the nature of ML assessments needs to be considered by ML practitioners.

Introduction

In South Africa authorities have been concerned with the low rates of participation in mathematics in the Further Education and Training Band. For example in the period 2000 to 2005, as much as 40% of all learners writing the matric examination did not take mathematics as a subject (Brombacher, 2010). In addition to the concern of learners not being exposed to mathematics past Grade 9 level, there is also the issue of learners not developing mathematics literacy skills such as those described by the Programme for International Student Assessment (PISA):

An individual's capacity to identify and understand the role that mathematics plays in the world, to make well-founded judgements and use and engage with mathematics in ways that meet the needs of that individual's life as a constructive, concerned and reflective citizen (Organisation for Economic Co-operation and Development (OECD), 2003, p.15).

The school subject Mathematical Literacy (ML) was introduced in an attempt

to inculcate in learners a mathematical gaze on life-related issues (Department of Education (DoE), 2003; 2007). The aim of ML is to provide

learners with an awareness and understanding of the role that mathematics plays in the modern world [and to enable] learners to develop the ability and confidence to think numerically and spatially in order to interpret and critically analyse everyday situations and to solve problems (DoE, 2003, p.9).

There have been different interpretations of the subject ML in South Africa, with many seeing it as a ‘watered down’ version of the real mathematics for those learners who cannot cope with studying the subject mathematics (Child, 2012; Jansen, 2011). These interpretations stem from a view that the purpose of ML is to learn more mathematics, which is not the intention. The curriculum documents clearly state:

The competencies developed through Mathematical Literacy are those that are needed by individuals to make sense of, participate in and contribute to the twenty-first century world – a world characterised by numbers, numerically based arguments and data represented and misrepresented in a number of different ways. Such competencies include the ability to reason, make decisions, solve problems, manage resources, interpret information [. . .] to name but a few (DoE 2007, p.7).

The subject ML is not about learning more mathematics but about developing skills that will enable them to participate in (and not be excluded from) situations that use numerically based arguments. Thus ML demands a greater ‘real life’ authenticity than the usual mathematics classroom activities. In a mathematics classroom, contexts are used mainly to mediate the understanding of an abstract concept by using a concrete setting or to illustrate the applicability of mathematics in other settings. In an ML classroom, the contexts that are used are more authentic; for example, contexts in real life are selected (like billing systems of different cell phone providers) and it is intended that mathematical skills be used to explore the meaning and implications of the information in the context. By studying life-related applications, there is an expectation that learners will not be intimidated by a world “drenched with data” and “awash with numbers” (Orrill, 2001, p.xiv) and instead will seek to be more informed before they make decisions across various contexts. The context is the focus because the intention is that when learners encounter these contexts in their current or future lives, they will be able to make more informed decisions. Venkat (2010, p.55) refers to this focus as a “life-preparation” option.

One of the constraints to meeting this life-preparedness mandate in ML has

been the form and structure of the assessment of learners' competencies in the subject. The highest contribution to the assessment in ML is via examinations and tests. For example, the summative assessment in Grade 12 for ML consists of two examination papers. Learners' performance in summative assessments may not necessarily imply a greater ability to critically analyse everyday situations using a mathematical gaze. In order to understand the various contexts, learners need more time and guidance in decoding and understanding the contextual settings. An examination setting cannot offer the space and time for this kind of engagement with the contexts.

In this article I am concerned primarily with identifying some of the challenges involved in recognising and using information, language and reasoning that is specific to the contexts in which the assessment is set. The design of assessment tasks for ML (with its emphasis on real-life contexts) has created a new set of demands, previously not encountered in the usual mathematics tasks. My argument is success at these contextualised tasks, requires more than just the application of mathematics rules and skills to problems based on the context. I argue that ML tasks that promote a life-preparedness orientation of ML require participation within two domains: the mathematics domain with its clearly articulated demands, rules and areas of application, and the contextual domains where these demands may sometimes not be so clearly articulated.

In this article I first set out constructs that can be seen as characteristic of the mathematics domain using Sfard's (2008) commognition theory. I then draw on Duranti and Goodwin's (1992) elaboration of a context to show that the contextual domain also consists of attributes particular to the context. By referring to previous ML assessment tasks I identify some of these contextual rules, visual mediators, and language and show how these are often different from the corresponding constructs in the mathematics domain. I then argue that in order to fulfil the life-preparedness mandate of ML, this differential nature of the two domains needs to be acknowledged, which has implications for the kinds of assessments that are prioritised in ML.

Conceptual domains in mathematics

It is useful to draw upon Greeno's notion of conceptual domains in order to provide a link between discourses in mathematics and discourses in ML. Greeno (1991) describes a conceptual domain in mathematics as an environment with resources at various places in the domain (instead of the usual view of a subject matter domain as a structure of facts, concepts, principles, procedures, and phenomena that support the cognitive activities of knowing, understanding, and reasoning). Knowing the domain means knowing one's way around the environment and also includes the ability to recognise, find and use those resources productively (Greeno, 1991). A conceptual domain in mathematics would be an environment within which discourses of mathematics operate. Here I will draw upon Sfard's descriptions of signifiers, visual mediators, routines and narratives that can be seen as the tools and resources available in the mathematics domain.

Tools and resources of mathematics conceptual domains

Sfard (2008: p.xvii) introduces the term 'commognition', which is a combination of communication and cognition and emphasises "that interpersonal communication and individual thinking are two facets of the same phenomenon". By communicating with other learners, an individual's cognitive understanding is enhanced. Brodie and Berger (2010) explain that in Sfard's theory, mathematics as a discourse is characterised by the use of objects and signifiers, visual mediators, routines and narratives (Sfard, 2007; Brodie and Berger, 2010). These constructs are the elemental structures of the mathematics discourse and can be seen as tools and resources available to participants. As newcomers communicate with more experienced participants, they begin to use the tools and resources of the domains more appropriately, and this enhances their participation as their practices become endorsed by the community. These constructs are explained in the paragraphs that follow.

Sfard (2008, p.302) describes a *signifier* as a primary object used in communication. *Routines* entail the use of signifiers and narratives are often created around signifiers. A *narrative* is any "text, spoken or written that is framed as a description of objects or of relations between objects or activities with or by objects and that is subject to endorsement or rejection, that is, to being labelled true or false" (Sfard, 2007, p.572).

According to Sfard (2007, p.177) "*visual mediators* are means with which participants of discourses identify the object of their talk and coordinate their communication". An example of a visual mediator is a graph. Sfard (2008,

p.147) sees visual mediators as providing the image with which discursants identify the subject of their talk and coordinate their communication. *Routines* are “well defined repetitive patterns in interlocutors’ actions, characteristic of a given discourse” (Sfard, 2007, p.572). Routines are not merely mathematical procedures, but include these. Participation in the discourse is facilitated when interlocutors are able to consider both how and when routines are used. Here I consider routines as including rules, formulae and procedures. The process of participating in a mathematics discourse involves creating narratives about objects, visual mediators and routines in a new discourse.

Brodie and Berger (2010) explain that in Sfard’s theory, mathematics as a discourse consists of sub-discourses which relate to each other in various ways. Some are isomorphic; some subsume others while some are incommensurable. For example, the Euclidean geometry discourse is incommensurable with the spherical geometry discourse because in Euclidean geometry, for example, given a line and a point, it is always possible to draw a second line through the point which is parallel to the first line. However in spherical geometry the equivalent of a line is a great circle (or arc of a great circle), and any pair of great circles intersect at two points, so it is not possible to find a second line parallel to the first line as is the case with Euclidean geometry. Within the whole number discourse, the multiplication of two numbers will result in a larger number while this does not always hold in the discourse of rational numbers even though the rational number discourse subsumes the whole number discourse. Flexible movement between sub-discourses is key to mathematical expertise. A conceptual domain can be seen as one in which a sub-discourse of mathematics operates e.g. circle geometry, or quadratic functions, or probability.

Contextual domains in mathematical literacy (ML)

Duranti and Goodwin’s (1992) work on the meanings and role of educational contexts is of relevance here. The authors (Duranti and Goodwin, 1992, p.3) use the term *focal event* to identify the phenomenon being contextualised:

When the issue of context is raised it is typically argued that the focal event cannot be properly understood, interpreted appropriately, or described in a relevant fashion, unless one looks beyond the event itself to other phenomena (for example cultural setting, speech situation, shared background assumptions) within which the event is embedded, or alternatively that features of the talk itself invoke particular background assumptions relevant to the organisation of subsequent interaction.

The context is thus a frame for the event being examined and provides resources for its appropriate interpretation. It involves two entities: a focal event and a field of action within which the event is being embedded (Duranti and Goodwin, 1992). An important point is that because of its clearer structure the focal event often receives “the lion’s share of analytic attention” while methods for analysing “the more amorphous background of the context” are not given as much emphasis (p.10). The authors contend that the danger of such an approach is that the focal event may be viewed “as a self-contained entity that can be cut out from its surrounding context” effectively rendering the “context as irrelevant to the organisation of the focal event” (p.10).

Duranti and Goodwin (1992, pp.6–8) identify four ‘attributes’ of educational contexts which are elaborated below in terms of how they relate to this study. (See also Bansilal and Debba, 2012).

1. **Contextual setting:** This refers to the social and spatial setting within which the interactions take place (p.6). The contextual setting in ML refers to the particular context that is under discussion.
2. **Behavioural environment:** This refers to the framing that establishes “the preconditions for coordinated social action by enabling participants” (p.7) to project what is about to happen. In other words, it sets the scene for the focal event. In this case, the behavioural environment refers to the pedagogic setting which could be examinations, projects, investigations or other assessment or classroom activities within which the contextual task is presented.
3. **Use of language:** This refers to the ways “in which talk itself invokes context and provides context for other talk” (p.7). In this study we use the phrase ‘contextual language’ to refer to words or phrases that hold a particular meaning within the context.
4. **Extra-situational background knowledge:** This refers to the background knowledge that extends beyond the immediate setting, which is necessary for an appropriate understanding of the focal event. In this study we define four aspects of this contextual background knowledge that is pertinent to the study. These are contextual signifiers, contextual rules, contextual graphs and contextual reasoning. The elaboration of these attributes (or elements, or constructs) illustrates that the contextual

language, signifiers, visual mediators and rules, are contextual resources and tools) that must be used in order to cast light on the focal event. Assessment tasks are set around particular focal events of a context, and there could be different focal events arising from a common context, but these cannot be seen as self-contained entities. In order to cast light upon the focal event and understand the background of the surrounding context, it is essential to have access to these contextual attributes.

Similarly (to the notion of conceptual domain) we can describe a contextual domain in ML as the contextual setting which has its own tools and resources, including contextual language, contextual rules, contextual objects/signifiers and contextual visual mediators. The intention in a contextual domain is to use the contextual resources to cast light upon the focal event which cannot be interpreted without drawing upon the contextual resources embedded within the contextual setting, whereas in mathematics domains, the intention is to create new (or re-create existing) narratives using mathematics tools and resources. However contextual narratives are also created as part of the process of participating in the discourse operating in the contextual setting. In order to generate these narratives, a discursant needs to be able to understand and use the contextual rules, signifiers and contextual language, as well as engage in contextual reasoning which is the reasoning, arguments, assumptions, and justifications about issues arising in the context.¹

Tools and resources of the contextual domain

In this section I present examples of the contextual tools or resources drawn from studies and educational documents. I will show that these constructs frequently differ in meaning, form and function from those in a mathematics discourse. The resources that are considered are the contextual signifiers/objects; contextual rules/procedures, contextual graphs and contextual language. These are tools which are used to participate in the discourse but also act as resources for understanding the focal event under consideration.

Contextual signifiers and objects

¹ Based on this discussion, one may argue that a mathematics conceptual domain also has a focal event around which the narratives are created, depending upon the task at hand. Hence a mathematics conceptual domain could be also be considered as one of the contextual domains of ML, where different contextual domains have different contextual resources.

Contextual signifiers and objects are the signifiers or objects used in the context to convey specific information, and which have a meaning that is bounded by the parameters of the context. I present two examples, inflation rate and infant mortality rate, taken from ML assessment tasks.

Inflation rate signifier

In the context of inflation, the figures reported in the media each month as the ‘monthly inflation rate’ figures for the Consumer Price Index (CPI) need to be examined in detail before they can be understood. For example, in order to understand the reported monthly inflation rate figure of 6.15% (March 2012), one needs to recognise that a percentage actually represents a comparison. It is essential to understand what is being compared and to differentiate the figure (percentage) from a whole number.

The CPI is the average (weighted mean) cost of the ‘shopping basket’ of goods and services for a typical South African household. Price movements on the goods comprising the basket are measured and the CPI is compiled using the price movements per product and their relative weight in the basket (Bansilal, 2011). Inflation rate figures are usually reported on a monthly basis. Note that the monthly inflation rate refers to the year-on-year rate calculated on a monthly basis and is different from the month-on-month rate.

The process can be represented simplistically as follows: If P_1 represents the current average price level and P_0 the price level a year ago, the rate of inflation during the past year is measured by

$$(I_1) = \textit{inflation rate} = \frac{P_1 - P_0}{P_0} \times 100\% \dots\dots\dots (1)$$

Taking 5.60 % as I_1 , the monthly inflation rate for May 2013, this means that P_0 and P_1 represent the price levels in May 2012 and May 2013 respectively.

A misunderstanding of what the inflation signifier represents may lead to students using the signifier as a whole number. However, in this situation the percentage denotes a relationship between the difference in the price levels ($P_1 - P_0$) and the price level P_0 . The specific quantity associated with a percentage depends on its base value, thus two percentages associated with different base values cannot be directly combined by addition or subtraction.

Infant mortality rate

A second example of a contextual signifier is provided by a task on infant

mortality rates used in the 2009 Grade 12 KwaZulu-Natal ML trial examination paper (KwaZulu-Natal Department of Education (KZNDoE), 2009). In the task, Table 1 (reproduced below) with the statistics of infant mortality between 2004 and 2008 due to different illness was presented.

Table 1: Statistics of infant mortality rates taken from KZNDoE (2009)

Year	Polio	Measles	HIV-Aids	Hep.B
2004	2	1	5	0,8
2006	1,8	1,2	3	0,9
2008	1	1,1	3	1

The information identifying the meaning of infant mortality rate appeared in a block at the beginning of a question, amongst other details, and is reproduced in Figure 1 below:

Figure 1: Meaning of infant mortality rate

Between 2004 and 2008 research was conducted to assist the government in identifying causes of high infant mortality rate (i.e. the number of infant deaths during the first year of life per thousand live births). [Other details included.]

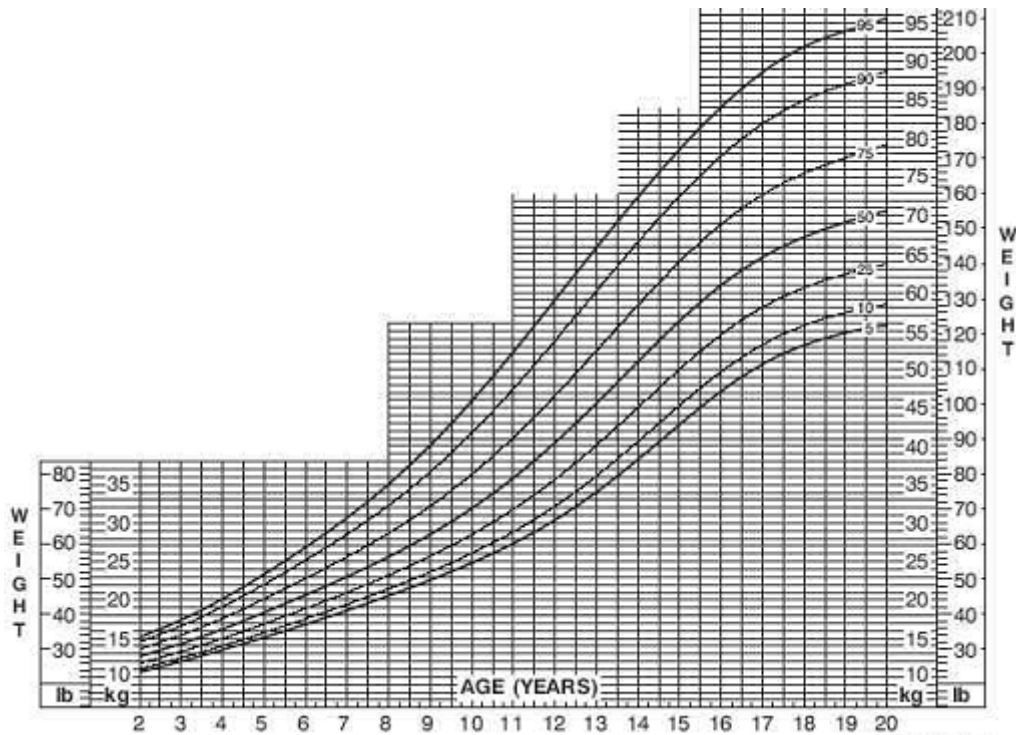
This meaning of infant mortality rate is complex. In order to answer the questions, learners needed to understand that, for example, the numeral 2 (2004, Polio) from Table 1 refers to the fact that two children out of every 1 000 children that were born (excluding stillborn) died of polio within their first year. These numerals have a specific meaning that is bound to the context, and is different from the way it is used in a whole number discourse for mathematics. These figures are not percentages or whole numbers and cannot be used as such.

Contextual graphs

The term contextual visual mediators refer to visual information presented in diagrammatic, graphical, pictorial or other non-textual representation. Here I will just discuss contextual graphs. An example of a contextual graph is the widely used weight for age graphs. One example of this is the Boys weight-

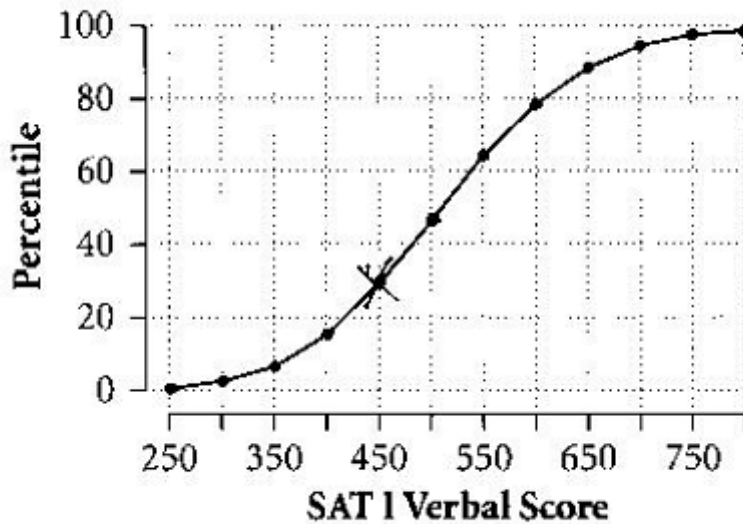
for-age percentiles which is presented in Figure 2 below.

Figure 2: Boys' weight-for-age chart (Department of Basic Education (DoBE), 2011, p.119)



Note that the way in which the percentile graphs are used here (Fig. 2) is different from the way in which they are usually used in the mathematics classroom. Here there are seven curves, showing a 95th, 90th, 75th, 50th, 25th, 10th and 5th centile plot, representing the fact that as a boy grows from 2 years to 8 years, 95% (5%) of the boys will have weight below the first (last) curve respectively. Usually a percentile graph in a mathematics context is a snapshot at a particular time, for example consider the example in Figure 3, taken from a textbook:

Figure 3: Percentile plot of score obtained in a test (Watkins, Scheaffer and Cobb, 2004, p.63)

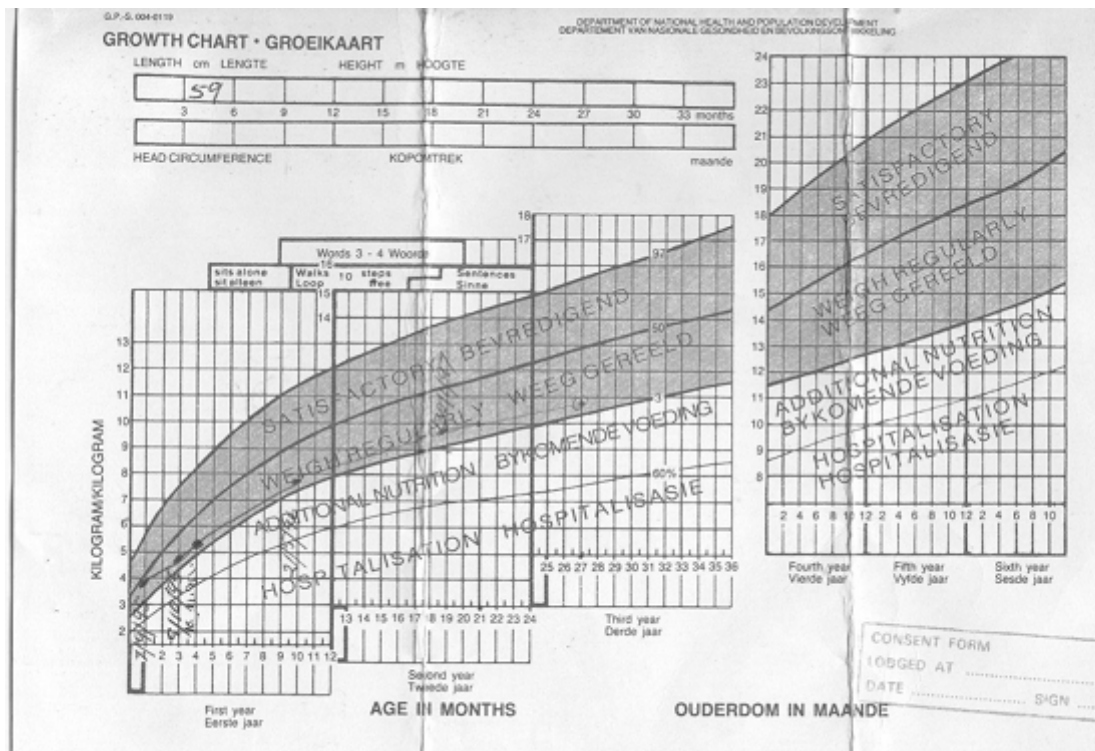


In this percentile graph (Fig. 3) the point marked with a cross shows that 25% of the group got a mark less than 450 while 60% of the group got a mark below 550. A typical question that could be posed in a mathematics class is to compare the two cumulative percentile plots for different subjects and ask why the values on these graphs differed. Another typical question could be to find the percentage of students who got a score below 350. However, in the contextual domain these charts serve a somewhat different purpose and the interpretations and use of them depend on the purpose.

Another example of the percentile plot is the weight for age chart (see Fig. 4) that is used commonly in South African clinics, different from the one used in Figure 2. A health worker may be concerned if the pattern of the weight of a particular child fell above the 97th or below the 3rd percentile curves, showing that the child’s weight was very high or very low when compared to other children. The guidelines on the use of the charts specify the following:

[If] the weights plotted of a 100 healthy children, the weight of 3 healthy children will fall above the 97th centile and the weight of 3 healthy children will fall below the 3rd centile. If a child’s weight does fall above the 97th or below the 3rd centile it does not necessarily mean that the child is overweight/underweight or sick, but rather the direction of the child’s growth that is important. However, if a child’s weight is near or below the 4th line or 60% of average weight, the child is likely to be seriously malnourished (Department of Health (DoH), 2010, p.3).

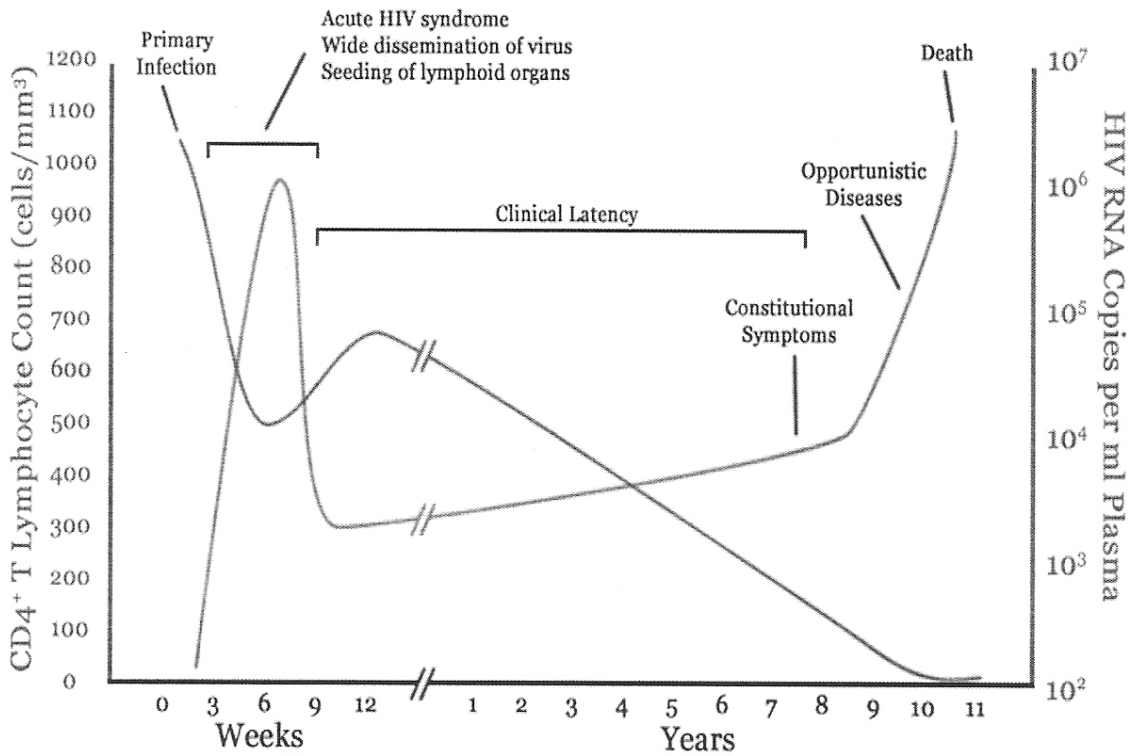
Figure 4: A typical weight for age chart, used in clinic in South Africa



In this context, the question that concerns the nurse would be whether the child’s weight for age graph lies out of the normal limits, the direction of the growth (whether the weight was changing too fast or too slowly) and whether hospitalisation was to be advised if it fell below the curve representing 60% of average weight. Thus, in this situation, it is the spaces between the curves that are used to make interpretations, unlike the typical situation in mathematics where the points on the graph receive most attention.

Another example of a contextual graph appears below in Figure 5 showing viral loads and CD4 counts over a period of 11 years.

Figure 5: Graph showing the relationship between HIV copies (viral load) and CD4 counts over the average course of untreated HIV infected infections



Source: <http://schools-wikipedia.org/wp/a/AIDS.html>

The graph in Figure 5 was used to show the relationship between HIV copies (viral load) and CD4 counts over the average course of untreated HIV infection. This graph uses measurements on three variables represented on three axes (CD count, viral load and time) – a situation that would not normally occur in a mathematics class.

In a mathematics discourse at school level, graphs of functions are used to represent relationships between two variables, one of which is independent and one which is dependent. It is often the case that the formula depicting the relationship between the variables is provided and learners are asked to sketch a graph. Sometimes the graph is given and learners may be asked to derive a formula to represent the relationship symbolically. The questions focus on identifying properties or using the properties of generic curves to solve problems. In the contextual domain, however, it is the visual information provided by the graph that is important.

Contextual rules

Contextual rules are rules or procedures that are bound to the context and need to be interpreted by the learner. These rules are used for calculations in the context. Below are two examples: the first is taken from Bansilal, Mkhwanazi and Mahlabela (2012) while the second is taken from KZNDōE (2009).

Figure 6: Calculation of transfer duty of a house

The formula that is used to calculate the transfer duty, payable by a new home owner, is as follows:

- For a purchase price of R0 to R500 000, the transfer duty is 0%.
- For a purchase price of R500 001 to R1 000 000, the transfer duty is 5% on the value above R500 000.
- For a purchase price of R1 000 001 and above, the transfer duty is R25 000 + 8% of the value above R1 000 000.

This is a rule that must be followed in order to calculate how much transfer duty is payable by a new house owner. Other examples of situations which utilise similar calculations are income tax, water bills and electricity bills. The costs that are payable are described in different levels and can be described as an example of a piecewise function, where each piece is defined by a separate rule or formula over a specified domain. The next example of contextual rules (Fig. 7) is provided by a task that appeared in a provincial examination paper (KZNDōE, 2009).

Figure 7: Calculation of points for teams playing in the FIFA World Cup (KZNDoe, 2009)

2.2 During the first round, a group of FOUR teams play round-robin matches (each team will play against every team in the group). The top TWO teams proceed to the knock-out stage of the last 16 teams.

FIFA awards 3 points for a Win, 1 point for a Draw and no point for a Lose.

The log table shown in TABLE 3 below is based on the following results.

Match 1: Spain 3 , South Africa 3
 Match 2: South Korea 2 , USA 2
 Match 3: South Africa 1, USA 1
 Match 4: Spain 4 , South Korea 2

TABLE 3: Log Table

COUNTRY	WIN	LOSE	DRAW	POINTS
Spain	1	0	1	4
South Africa	0	0	2	D
USA	0	0	2	2
South Korea	0	1	1	E

2.2.1 Spain, South Africa, South Korea and USA are in the same group. Using the FIFA awards system, calculate the numerical values.

(a) D (2)
 (b) E (1)

2.2.2 Some soccer fanatics are proposing a new format of awarding points, based on the following:

Proposed Format: Win (by a margin of 1 goal (e.g. 1-0, or 2-1, 3-2) = 3 points
 Win (by a margin of 2 or more goals (e.g. 2-0 or 4-1) = 3 + 1 bonus point
 Draw of less than 2 goals (0-0 or 1-1) = 1 point
 Draw of 2 or more goals = 1 + 1 bonus point
 Lose by a margin less than 2 goals = 1 bonus point
 Lose by more 2 or more goals = no points

(a) Using the new format, how many points will a team have if it has won one match (4 – 2) and drew another match (2-2) ? (3)
 (b) Determine the values of D and E in TABLE 3 if the points awarded were based on the Soccer fanatic’s new proposed scoring method. (4)

2.2.3 The last round robin matches will be Spain against USA, and South Africa against South Korea.

(a) Using the FIFA scoring format, is it going to be possible for South Korea to overtake Spain? Give a reason for your answer. (3)
 (b) South Africa and USA need a total of 6 points to guarantee their places in the next round. Suggest any score that will enable South Africa to move to the next round, using the soccer fanatic’s scoring system. (4)

In the task, two contextual rules can be identified. The first is the FIFA calculation formula and the second is the proposed Fanatics formula, both of which are being used to calculate the number of points achieved by the different soccer teams. It is often the case that the contextual rule is given in verbal form, like the FIFA points system. However, some contextual rules may require learners to translate the rules into mathematical language before solving the problems; for example the second rule in Figure 7 may require one to write the subtraction and the percentage calculation using mathematical symbols.

Contextual language

Contextual language refers to specific terminology or phrases that carry a meaning in the context. For example, ‘200 free kilometres per day’ in car hire scenarios may refer to the situation where the contract allows one to drive up to 200km a day without incurring additional charges; ‘Base occupancy’ in accommodation bookings refers to the number of people that can stay in the room/chalet without incurring additional fees; and ‘Win by a margin of 2 or more’ in the context of soccer goals refers to the situation where the difference between the goals scored by the winning and the losing teams is 2 or more than 2. Underlined phrases used in the contextual rule telephone billing such as “Calls are charged per minute for the first 60 seconds and thereafter in increments of 30 seconds” are further examples of the use of contextual language.

Another example of contextual language is the use of the word ‘pizza’ as used in the problem in Figure 8

Figure 8: Pizza problem

Pizza task	
At a restaurant at the Waterfront in Cape Town, tourists have a choice of different pizzas:	
<i>Base</i>	<i>Toppings</i>
Thick	Pineapple
Regular	Salami
	Tuna
	Mushroom
If a tourist buys a pizza with three toppings, how many combinations are possible? (Use any systematic counting method that you have learnt.)	

The question above requires the knowledge that a pizza is a meal that consists

of a base which could be thick or regular, with toppings which are placed on the base. This would help them understand that they first needed to choose between the bases and then make a second choice of three toppings from the four that were available. If learners do not understand what a pizza is, they would be unable to move on to working out the number of possible combinations (using mathematical rules) (Bansilal, 2008)

Discussion and concluding remarks

In this paper I have argued that the ability to participate in contextual domains requires access to the contextual resources (signifiers, rules, graphs, language). These contextual resources are necessary in order to understand the focal event around which the assessment task is set. The stance that I take is that the identification and use of these resources are often different from the mathematics-specific resources. This description of the relationship between the context and content suggests two different possibilities for the design of contextualised tasks in ML.

The first possibility is one in which the dominant discourse is that of mathematics. Tasks that take this line pose questions that require the creation of narratives that are endorsed in the discourse of mathematics. Such an approach would involve identifying the significant elements located in the discourse of the context, and using them in the discourse of mathematics. The contextual resources must now be used with objects, visual mediators and routines and narratives located in the mathematics domain in order to create a narrative that is endorsed in the discourse of mathematics. If that happens, then the elements of the two existing discourses together have been used to create a new discourse, which is commensurate with, recognised and endorsed in the mathematics domain. Thus learners who are successful at such tasks will extend their understanding of mathematics.

A second type of task is one that foregrounds the life-preparedness purpose of ML (Venkat, 2010). A life-preparedness perspective of ML implies that learners must be able to engage with issues arising from these contexts, that is the contextual resources must be used to throw light upon the focal events under consideration so that if necessary informed decisions can be made. Such an engagement could take on more serious issues such as whether a particular billing system is more affordable than another, or a more leisure-oriented issue such as figuring out how soccer league tables work. If ML seeks to develop

learners who are able to make informed decisions, then it implies that learners should firstly understand that there are different discourses associated with the different contexts. Secondly, they need to access, use, interpret, and communicate with, the appropriate contextual resources that constitute the contextual discourse. The level of authentic engagement prescribed by a life-preparedness perspective requires that learners are able to participate fully in the contextual discourse, that is, they should be able to create narratives that can be endorsed by people who work with or understand the context in real life. Learners should be able to choose between different options when deciding on purchases, recognise unfair advertising and make decisions about saving. They should be undaunted about entering and increasing their participation levels in these contextual domains. They should actively seek to 'read the fine print' in contracts, in order to understand and use the contextual recourses for their benefit.

How can learners develop skills in recognising and using these contextual resources? Should the ML teacher just present learners with a variety of contexts and hope by working with them they will gain such skills, or can such learning be scaffolded? One possibility may be to organise focal events of certain contexts according to commonalities in their contextual rules, visual mediators, language and signifiers. For example, the rule for transfer duties is similar to the one for income tax, since both are based on the notion of a piecewise function, with the income tax being more complicated with more 'pieces'. Perhaps by first working on calculations based on the transfer duty context learners may better understand the use of piecewise functions, thereby making the more complicated rule used in tax tables easier to understand. In such cases, the consistency in patterns of the contexts (Greeno, 1998; Peressini, Borko, Romagnano, Knuth and Willis, 2004) may enable learners to use their experiences gained in one context, to work in another with a similar contextual resource. Similar organisation may be possible in terms of graphs.

Many researchers (including myself) call for a greater use of real, authentic contexts in the ML classroom. Does this mean that cleaned and simplified context should not be used in an ML classroom? On the contrary, cleaned contexts have an important role to play, as a starting point for a focus on particular contextual resources. The use of cleaned contexts can allow the teacher to shift the attention of the learner to a particular contextual resource, without having to deal with the noise from the authentic, uncleaned context. A teacher can design specific tasks set around the rules or visual mediators or signifiers of particular contexts and thereafter present the more complicated,

uncleaned real-life context. It is hoped that this article has brought into focus the important role of task design in ML, since much of the learning of ML is dependant on the classroom tasks that the learners engage with.

Another issue arising from this study is the role of the mathematics domain when participating in the contextual domain. I have argued earlier that a mathematics conceptual domain can be seen as one of many ML contextual domains, within which learners need to increase their participation levels. Curriculum developers should guard against making the mathematics domain the more dominant one, as this is contrary to the life-preparation perspective. Another issue to consider is whether learners who are more skilled participants in the mathematics domain fare better in ML assessment tasks. Certainly a person with a higher level of mathematical proficiency will have access to more mathematics resources than one who is not. For example, a person who is able to work with algebraic rules in an object-driven manner may be able to encode certain contextual rules by using algebra and thereby work more easily with the rule. Some studies (Bansilal *et al.*, 2012; Bansilal, 2011) suggest that for some contextual rules, learners who are able to use the rules in the more sophisticated object-driven manner, rather than the usual routine-driven manner, can solve more complex problems based on the focal event. In such cases the more sophisticated use of the routine may help learners to deal with more nuanced issues arising from the contextual domain.

A further implication of this perspective is that assessments via examination setting do not necessarily encourage learners' participation in contextual domains, and may in fact render these aims meaningless. Research about learners' engagement with assessment tasks based on contextual domains has provided examples of learners who are disadvantaged when they do not recognise the crucial information about the contextual resources (Bansilal and Wallace, 2008. A survey of some school examinations (Debba, 2012; North, 2010) has indicated that many of the tasks require mathematically endorsed narratives. In order to create narratives that are endorsed in and appropriate to the contextual domain requires sustained engagement with the contextual resources. For learners to be able to use them productively, a more appropriate setting would be tasks that need extended periods of time, such as projects, assignments, presentations and debates, unlike the restricted setting of the 2- or 3-hour examinations.

It is likely that the purposes of ML are compromised by the country's fixation

with assessment by examinations. I hope that I have demonstrated that, in order to make informed decisions, one needs space and time to engage with the context. This is limited in an examination setting. Thus curriculum designers need to identify enabling conditions for an ML curriculum and assessment plan that can fulfil a life-preparedness orientation, rather than presenting ML as a watered down version of the real mathematics, by using pseudo-contexts to ask easy mathematics questions.

References

- Bansilal, S. 2008. Assessing the validity of the Grade 9 mathematics common tasks for assessment (CTA). Paper presented at the 5th Conference of the Association of Commonwealth Examinations and Accreditation Bodies, Pretoria.
- Bansilal, S. 2011. Unpacking mathematical literacy teachers' understanding of the concept of inflation. *African Journal for Research in Science, Mathematics and Technology Education*, 15(2): pp.179–190.
- Bansilal, S. and Wallace, J. 2008. National performance assessment in a South African context: issues of classroom implementation and task design. *African Journal for Research in Science, Mathematics and Technology Education*, 12: pp.77–92.
- Bansilal, S. and Debba, R. 2012. Exploring the role of contextual attributes in a mathematical literacy assessment task, *African Journal for Research in Science, Mathematics and Technology Education*, 16(3): pp.302–316.
- Bansilal, S., Mkhwanazi, T.W. and Mahlabela, P. 2012. Mathematical literacy teachers' engagement with contextual tasks based on personal finance. *Perspectives in Education*, 31(3): pp.100–111.
- Brodie, K. and Berger, M. 2010. Towards a discursive framework for learner errors in mathematics, In Mudaly, V. (Ed.), Proceedings of the eighteenth annual Southern African Association for Research in Mathematics, Science and Technology Education (SAARMSTE) conference. Durban: SAARMSTE, pp.169–181.
- Brombacher, A. 2010. National Senior Certificate Mathematics and

Mathematical Literacy: A Balance between Dreams and Realities. Report presented at The National Science And Technology Forum (NSTF), Proceedings Of Workshop On Science, Technology, Engineering And Mathematics (Stem) Education, April 2010, KwaZulu-Natal.

Child, K. 2012. We need to heal wounds to move forward. *The Times*, 7 June: p.15.

Debba, R. 2012. An exploration of the strategies used by grade 12 mathematical literacy learners when answering mathematical literacy examination questions based on a variety of real-life contexts. Unpublished M.Ed. dissertation. University of KwaZulu-Natal.

Department of Basic Education 2011. *Curriculum and assessment policy statement. Further Education and Training Phase. Mathematical Literacy*. Pretoria, South Africa: DoBE.

Department of Education, 2003. *National Curriculum Statement, Grades 10–12 (General): Mathematical Literacy*. Pretoria, South Africa: DoE.

Department of Education, 2007. *National Curriculum Statement Grades 10–12 (General). Subject Assessment Guidelines. Mathematical Literacy*. Pretoria, South Africa: Government Printers, DoE.

Department of Health, 2010. *The road to health chart*. Retrieved November 11, 2010, from <http://www.doh.gov.za/docs/factsheets/guidelines/health/healthchart.html>

Duranti, A. and Goodwin, C. 1992. *Rethinking contexts: language as an interactive phenomenon*. Cambridge: Cambridge University Press.

Greeno, J.G. 1991. Number sense as situated knowing in a conceptual domain. *Journal for Research in Mathematics Education*, 22(3): pp.170–218.

Greeno, J.G. 1998. The situativity of knowing, learning and research. *American Psychologist*, 53(1): pp.5–26.

Jansen, J. 2011. Sinking deeper into mediocrity. *The Times*, 23 February: p.15.

KwaZulu-Natal Department of Education. 2009. Grade 12 KZN Mathematical

Literacy Grade 12 trial Examination Paper 2. Unpublished.

North, M. 2010. How mathematically literate are the matriculants of 2008? A critical analysis of the 2008 Grade 12 mathematical literacy examinations. Conference Paper: AMESA 2010.

Organisation for Economic Co-operation and Development, 2003. *The PISA 2003 Assessment Framework: Mathematics, Reading, Science and Problem Solving Knowledge and Skills*, Paris: OECD. Retrieved September 5, 2010 from <https://www.pisa.oecd.org/dataoecd/38/51/33707192.pdf>.

Orrill, R. 2001. Mathematics, numeracy and democracy. In Steen, L.A. (Ed.), *Mathematics and democracy. the case for quantitative literacy*. USA: The Woodrow Wilson National Fellowship Foundation, pp.xiii-xx.

Peressini, D., Borko, H., Romagnano, L., Knuth, E. and Willis, C. 2004. A conceptual framework for learning to teach secondary mathematics: a situative perspective. *Educational Studies in Mathematics*, 56: pp.67–96.

Sfard, A. 2007. When the rules of discourse change but nobody tells you: making sense of mathematics learning from a commognitive standpoint. *Journal for Learning Sciences*, 16(4): pp.567–615.

Sfard, A. 2008. *Thinking as communication: human development, the growth of discourses and mathematizing*. New York: Cambridge University Press.

Venkat, H. 2010: Exploring the nature and coherence of mathematical work in South African mathematical literacy classrooms, *Research in Mathematics Education*, 12(1): pp.53–68.

Watkins, A.E., Scheaffer, R.L. and Cobb, G.W. 2004. *Statistics in action. Understanding a world of data*. Emeryville, CA: Key Curriculum Press.

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Practical knowledge of teaching practice - what counts?

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I am not arguing for not having pedagogical training – that is the last thing I want. But I claim that the facts mentioned prove that scholarship per se may itself be the most effective tool for training effective and good teachers (Dewey, 1964, p.327).

Abstract

The role of formal and systematic knowledge in socialisation into teaching is in question. There is a rising tendency towards anti-intellectualism in different quarters of the field of educational studies coupled with an ever increasing emphasis on tacit understanding and immersion in practice. Socialisation into professional practice is purported to depend predominantly on ‘doing’ *in situ*, and on learning what experienced teachers do and far less on ‘concept building’. In this paper we argue that the emphasis on immersion in the site of practice as the gateway to an understanding of the practice of teaching rests on an overstated conception of tacit knowledge which misses the crux of professional knowledge. The crux of professional knowledge, we argue, lies in specialised practice languages (Collins, 2011) which constitute criteria of professional practice and enable articulation between different reservoirs of knowledge. Emulating what expert practitioners do in practice is not central to the development of professional knowledge of teaching.

In the domain of professional education, the relationship between theory and practice and the nature of and role of disciplinary knowledge in ordering the acquirer’s understanding of the practice has occupied research for many decades. The return to this question now has a specific context. Broadly speaking, this context is characterised by a proliferation of policy evaluation research at the expense of disciplinary-based research, an attack on professional knowledge, and a turn away from a discipline-based curriculum to an inter-disciplinary practice-based one. Specific to teacher education, there are increasing calls for pre-service curricula to increase the amount of time spent in schools and to focus students’ learning on authentic assessment tasks and personal accounts from the outset of the degree. A common rationale behind these calls is the idea that it is by **actually** being in the school – in the presence of ‘old timers’ – planning, teaching and revising one’s lessons, by iteratively being involved in aspects of practice, that student teachers acquire

practical knowledge or the know-how of professional knowledge, and that this is key for learning professional expertise. In other words there is an increasing tendency to downplay the systematised conceptual reservoir of teaching and to emphasise tools for practice. In South Africa, this view is expressed in claims such as “experience is the most important bridge to practice” (Henning and Gravett, 2011, p.21) or “the enterprise of teacher education must venture further and further from the university and engage ever more closely with school” (Darling-Hammond in Osman and Casella, 2007, p.35) or that in order to bridge the gap between theory and practice, teacher educators need to develop curriculum artefacts to personalise theoretical work (Peterson and Henning, 2010). It is also expressed in policy work which advocates informal avenues for teacher development (e.g. professional learning communities) and the establishment of ‘Teaching Schools (TSs) and Professional Practice Schools (PPSs)’ in order to “ensure meaningful Work Integrated Learning (WIL)” (Department of Basic Education/Department of Higher Education and Training, 2011, p.15).

Assumed here is the belief that by having to face different modes of school organisations and cope with novel situations, in particular those that are marked by ‘uncertainty and indeterminacy’ (Schön, 2001) student teachers get access to the ‘real stuff’ to “the tacit form of personal knowledge” (Eraut, 2000, p.114). On this view, learning to be a teacher is about cultivation of practical wisdom by means of action research, personal observations, field work and continuous experience in the site of practice. With these kinds of tools, it is argued, educational theory can be demystified and amalgamated with tacit theories held by experts in the practice (Henning and Gravett, 2011, S24).

Our concern is that more and more personal reflection in and on practice and not the acquisition of theoretical knowledge, *per se*, is seen to be central to the acquisition of professional knowledge. This privileging of personal experience is very often justified by post-modernist anti-intellectualism in, for example, the position that all theories are underpinned by tacit ideological assumptions and therefore there is no privileged position outside of practice (Carr, 2006) and/or by an overemphasis on tacit knowledge in claims that much of professional knowledge consists of modes of operations that cannot be made explicit by discursive means (Dreyfus, in Selinger, Dreyfus and Collins, 2007). This overemphasis on tacit knowledge is also contributing to the growing anti-intellectualism in the approach to professional education. In different but equivalent ways the post-modernist project and the embodiment

thesis call into question the educational project of formal education. In Winch's words (2010, p.123), the educational project of "instruction, explanation, training and exemplification" is made secondary or in a worst case scenario, redundant.

A systematic interrogation of tacit knowledge is, therefore, justified. Our primary aim in this paper is to develop a conceptual clarification of the notion of tacit knowledge, what it is and what precisely the tacit knowledge argument buys us. The flip side of this interrogation is an attempt to address the question of what it is that enables the acquirer of a professional practice to see distinctions and relations in and about the practice, and why this condition of possibility rather than the amorphous idea of tacit knowledge, is key to the development of professional expertise.

The paper is divided into four parts. We begin with a brief discussion of the debate between Paul Hirst and Wilfred Carr (2005), on the role of disciplinary knowledge in ordering the practice of teaching, conceptually. In this discussion we foreground the growth of anti-intellectualism in the field of professional education, evident in Carr's post-modernist attack on the idea that educational theory has a privileged position in relation to practice. In the second section, 'the embodiment thesis', we show that in the turn to ideas such as 'intuitive cognition' (Eraut, 2000), 'reflection in action' (Schon, 2001) and 'embodiment' (Dreyfus in Selinger, Dreyfus and Collins, 2007), a different form of anti-intellectualism is developing, promoted by claims that undervalue or discount the role of deductive reasoning in making professional judgement. In this thesis, tacit knowledge is propagated as a strong obstacle to formal instruction. Tacit refers to embodied rules of practice that experienced practitioners use to recognise connections between different elements of their practice, about which they "cannot give a complete or even a reasonably accurate description" (Schon, 2001, p.7).

In the third section, 'how is tacit knowledge classified?' we turn to Collins's work on tacit knowledge (2010 and 2011). Collins's argument is central to the view of tacit knowledge we develop in this paper and to the overall argument of the paper. Collins distinguishes between 'what is not, *but* could be made explicit' and 'what is not and cannot be made explicit' (our paraphrase). This distinction narrows down the realm of tacit knowledge, questions the idea that tacit knowledge cannot be made explicit, and also helps to shed light on the role of collective representations (rather than individual experience and personal embodiment) in the acquisition of professional knowledge. In the last section of the paper, 'where to from here?' we extend Collins' argument and by looking at social realist positions of professional knowledge (Winch, 2010,

2012, Abbott, 1988 and others), we show that the crux of professional knowledge lies in specialised ‘practice language’ (Collins, 2011) which constitutes criteria for seeing distinctions and relations in the particulars of practice. Collins’ and Winch’s analyses of tacit knowledge show that this form of discrimination, evaluation and therefore judgement cannot be obtained from emulating the activities of other professionals, *in situ*.

Intellectualism and anti-intellectualism in teacher education²

In his debate with Carr (Hirst and Carr, 2005), Hirst foregrounds the difference and relation between theoretical reasoning³ and practical wisdom.⁴ Theoretical reasoning, he argues, is primarily concerned with establishing the truth of theoretical knowledge (such as relations between ideas, inferences from ideas, mastery of concepts within a subject and procedures for testing knowledge claims), and concept clarification (systemisation of ideas). Practical wisdom, on the other hand, is concerned with the pursuit of practical action and relies on the ability of human beings for discernment in particular circumstances or on contextual wisdom. Hirst argues that with the help of “structures of justified propositional beliefs” (Hirst and Carr 2005, p.616), teachers are able to find rational justification for their practices, and discard presuppositions that have been proved to be false. In Hirst’s view, practical wisdom depends on theoretical reason, “if it is to begin to be reflectively adequate to all the complexities of educational situations and their possibilities” (Hirst and Carr 2005, p.618). Hirst insists that a study of educational theory is a distinctive enterprise external to what teachers do in their day-to-day practice. Getting to grips with the internal coherence of concepts (and understanding of their exact meaning) is a prerequisite for developing rational judgement for practice. The disciplines of education, philosophy in particular, are paramount for prospective teachers because they provide them with conceptual clarity on the nature of knowledge, with ways of systematising concepts and with methods of justification that can be used to examine deep-seated beliefs, ideas from other disciplines **and** instances of practice.

² A version for this section was first written in Shalem and Rusznyak, 2013.

³ Different terms are used by different theorists to refer to theoretical knowledge and in our discussion we try to keep to the original use. Hirst and Carr (2005) refer to ‘theoretical knowledge’, Winch (2010) refers to ‘propositional knowledge’ and Collins (2011) refers to ‘scientific knowledge’.

⁴ Different terms are used by different theorists to refer to practical knowledge and in our discussion we try to keep to the original use. Hirst and Carr (2005) refer to ‘practical wisdom’, Winch (2010) refers to ‘practical knowledge’ and Collins (2011) refers to ‘practical understanding’.

In his debate with Hirst, Carr argues against the idea that theoretical knowledge can provide standards for rationality and truth: along post-modernist lines, he claims that the knowledge developed by educational theory cannot escape “particularity and contingency” (2006, p.147) and thus cannot be said to attain a higher form of rationality that “competent members of the community of educational practitioners” cannot access themselves (p.150). Educational theory is itself a social practice that is imbued with cultural norms and criteria. It is nothing more than a personal theory that practitioners develop through, a process of ‘self-reflective inquiry’ (p.141). In a subsequent article, Carr goes even further and calls for the abandonment of the pursuit of generalisable educational theory:

Educational theory is nothing other than the name we give to the various futile attempts that have been made over the last hundred years to stand outside our educational practices in order to explain and justify them. And what I am going to propose on the basis of this argument is that the time has now come to admit that we cannot occupy a position outside practice and that *we should now bring the whole educational theory enterprise to a dignified end* (2006, p.137, our emphasis).

In Carr’s position, the epistemic activity of formulating “propositions on which we can agree in our judgements of truth” (Hirst, in Hirst and Carr 2005, p.617) is replaced with reflecting on what is unacknowledged by educational theorists – the particular, contingent and the culturally specific, the unacknowledged bias.

The embodiment thesis

The anti-intellectual sentiments entailed in Carr’s post-modernist position are growing in other quarters of the field of professional education.

Anti-intellectualism is growing through the work of practice theorists (e.g. Lave and Wenger, 1991 and followers) who turn to the embodiment thesis to explain why professional knowledge relies primarily on one’s bodily access to *tacit* knowledge. The main precept of the embodiment thesis is that a large element of professional knowledge is ineffable, acquired in a ‘mode of experience’, and when using this knowledge, every individual adds her signature to it (Winch, 2010, p.121).⁵ Practice-based theorists promote the idea that “first-hand encounter with the actors in their own settings, in the midst of doing whatever it is that they do every day, with whatever is required to do it”

5

See Winch’s analysis of Oakshott’s treatment of practical knowledge.

(Miettinen, Samra-Fredericks and Yanow, 2009, p.1315) is the best way to capture “the seen-but-unnoticed” (p.1316). Tacit knowledge is the intuitive aspects of professional knowledge, which cannot be codified. These aspects can only be accumulated through practical experience, by being directly involved with objects, products and services in the workplace (Nonaka and Takeuchi in Guile, 2010, p.34, see also Sellman, 2012). By spending enough time with an old timer, criteria of good practice get transmitted, and tacitly acquired, through the process of ‘indwelling’ (Polanyi, 1966 in Guile 2010, p.49).

The practice turn view returns to two foundational claims about tacit knowledge: Ryle’s (1949) – that no amount of accumulative knowledge (knowledge that) will prepare one for practice (knowledge how) and Polanyi’s (1966) – that ‘we can know much more than we can tell.’ The following claim by Dreyfus (in Selinger, Dreyfus and Collins, 2007, p.737) points to the heart of the embodiment thesis:

You may have mastered the way surgeons talk to each other but you don’t understand surgery unless you can tell thousands of different cuts from each other and judge which is appropriate. In the domain of surgery no matter how well we can pass the word along we are just dumb.

This take on professional knowledge is that *embodied realisation precedes recognition* – practicing a thousand possible permutations of surgical cuts and doing experiments with an expert is necessary for gaining discernment of the idea (of surgery), for accessing criteria of practice. For Dreyfus then, explicit knowledge is made to depend on tacit knowledge.

What emerges from these points is that professional knowledge has an ineffable element to it, an interpretive set of criteria that cannot be formalised (and therefore cannot be generalised), and cannot be transmitted but can be experienced, in working with others who are more experienced. Somehow, day to day inductions are transformed over time into professional knowledge.

The post-modernist attack on knowledge and the embodiment thesis are disconcerting developments for the transmission and acquisition of professional knowledge. First, the former discounts the possibility of de-contextualised knowledge and the latter discounts the framing role of deductive reasoning. Second, by reducing theory to another social practice, by insisting that embodiment and personal experience are necessary for the acquisition of professional knowledge, both views overstate the case for tacit

knowledge. Thirdly, without a theory of transmission (which the embodiment theory precludes), it is not clear what criteria one should follow in order to evaluate the practical knowledge of professionals. In view of these issues, the following question requires an answer: How strong is this tacit aspect of professional knowledge? Is all of it occult, can some of it be explicated? Can it be evaluated?

How is tacit knowledge classified?

In several publications, Collins (2010 and 2011) addresses the challenge of explaining tacit knowledge and its role in the acquisition of ‘practical understanding’ (2011) of professional knowledge. His fundamental aim is to take the mystery out of the idea of tacit knowledge (2010, p.7). Collins argues that many explanations of tacit knowledge fail to interrogate what can and cannot be transmitted discursively; they fail to exclude those instances in which Polanyi’s claim that “we can know more than we can tell” does **not** fit (2010, p.4 and 2011, p.272). According to him the idea of the tacit is overstated and muddled. His analysis shows that many of the instances considered by proponents of the embodiment thesis to be tacit and ineffable are weak forms of tacit knowledge; they do not touch on “deep principles that have to do with either the nature and the location of knowledge or the way humans are made” (2010, p.86) and they could be transmitted discursively (2010, pp.91-97 and 2011, p.284). Since these instances arise in person to person interactions (formal **or** informal situations), he categorises them as “relational tacit knowledge”.

In such instances not all the knowledge needed for acquisition is spoken about. These include situations in which: neither the bearer of the practice (the transmitter) nor the novice thinks that the information requires communication because the expert is so familiar with what she knows that she does not notice it anymore (‘unrecognised knowledge’); information is withheld because the bearer of the practice does not know that the novice does not know it, and the novice does not know that she does not know it and yet it is salient for what the expert is doing (‘mismatched saliences’); information is withheld because the bearer of the practice does not want to disclose it (‘professional secrets’). In other words, the reasons for why knowledge remains unspoken are sociological or psychological and not epistemic. As he puts it “principles to do with the nature of knowledge are not at stake” in any of these instances (2010, p.98). The appropriate description of these situations is therefore different:

‘we know more than we tell’ and not ‘we know more than we can tell’ (our paraphrasing). Given the necessary will and/or contingences, more of the unspoken knowledge could be made explicit by

. . .telling secrets, by using longer strings,⁶ by finding out more about what is in other people’s minds, and by doing more science so that what is not known to anyone becomes known (2010, p.160).

As such, instances of relational tacit knowledge do not form a real threat to discursive transmission of professional knowledge and do not justify the claim that embodiment is central to the acquisition of professional knowledge.

The second type of tacit knowledge is “somatic tacit knowledge” and is a stronger form than the relational type. It refers primarily to the practical understanding used in instances such as bicycle-balancing or typing. It points to constraints and affordances of the ways our bodies and brains work. In education we would include automatised reinforcement of responses to stimuli. This form of know-how is, indeed, attained through embodied experience. Nevertheless, practical understanding of that kind is not central to the understanding of professional practice (Collins, 2010, p.117)⁷ and does not prove the claim that the practical *understanding* of professional knowledge is tacit and can only be attained by being immersed in the site of practice.

So far we have seen that the tacit knowledge argument is insufficiently differentiated and buys us very little. What then is the irreducible tacit and where is it found? Collins argues that the strongest form of tacit knowledge lies in what makes human beings distinctive. This he argues, is ‘socialness’, the ability of human beings “to feast on the cultural blood of the collectivity” (2010, p.131) and thereby to successfully instantiate actions and activities appropriate to sociocultural and socio-historical contexts. What is actually tacit is the ‘mechanism’ (2010) by which individuals draw on collective knowledge and make fine distinctions, evaluate and bring ideas and context into a relation. Collins proposes that the epistemological aspect of the tacit knowledge problem is to be found in the human ability to make meaning, to produce and act in accordance with ‘socially located knowledge’. Human beings can, in principle, interpret intelligently, that is, in concert *with what other humans are doing* because they participate in the larger organism of society (2010, p.165, emphasis in the original). What enables this socialness is

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In this he refers to computer intelligence that, theoretically, can be used to make explicit every procedure of scientific experiment.

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Over time, the human mind could develop “symbolic resources with convenient affordances” (2010, p.154), he says, and so this is not the ‘irreducible tacit’.

language – our ability to symbolise experience and knowledge across time and space – which not only manifests this tacit ability but also affords it. We participate in the language of others and make meanings of our surrounding by using their symbols.

Collins does not explicate the meaning of socialness sufficiently. The nearest to a sociologically familiar concept is a footnote on p.131, where Collins refers to Durkheim's notion of 'collective consciousness' or the idea that by definition knowledge is found at the collective, the individual is the bearer of collective representations. In this, Collins brings us back to basics by arguing that the tacit is not a constraint of professional knowledge. If human beings did not have the ability to make knowledge explicit, the idea of tacit would not exist. The *mechanism* of doing this is tacit (in the strongest sense of the word) but the *ability* to make knowledge explicit is what defines us as humans. The challenge posited by Collins is to unpack the ways symbolisation through language facilitates the process of making the practical understanding of professional knowledge explicit.

In a more recent paper (2011) Collins attempts to explain the constitutive power of language in ordering and binding a specialist's understanding of scientific practices, and to defend the claim that discursive interaction in the language of the practice rather than joint activity in close physical proximity is a necessary condition for its acquisition. His defence draws on his analysis of linguistic fluency that can be found between experts within a domain of expertise across institutional settings, division of labour, geographical space and time. The collective contributions made by different specialists in a field form a collective representation of the practice as a whole or what he calls 'practice language' which articulates, ordines and co-ordinates their situated practices across time and space. It is the practice language which enables continuity and development and deepening of the collective understanding of the practice. Put differently, if situations in professional life were predominantly reflected in, or reduced to local situated personal knowledge, and if their understanding was a matter of inductive accumulation of bodily experiences, then communication across a diverse range of expert practitioners and spatio-temporal social contexts, intergenerational transmission of specialised knowledge would be impossible, and professional judgement would not be possible. The professional domain would be reduced to a collection of silos.

Collins is clear that the 'practice language' is anchored in physical reality – if

the physical activities of the diverse range of professional specialists and the respective activities constitutive of the practice ceased to exist, then the practice language itself would also cease to exist (2011). However, practice language must entail a sufficient level of abstraction and generality to both represent and transcend developing grounded practices, if it is to enable informed judgement and the development of knowledge in practice. The crux of practice language lies in its regulatory role – it classifies what can be said in and about the practice, “what does and does not exist and what can and cannot be done” (2011, p.282) and what would count as outside of the collective enterprise of the profession. The power of practice language lies in its ability to classify and conceptually order situations, foreground and structure their salient features and place them in order of significance. The ground for practical understanding, the know-how of professional knowledge lies, then, in the collective ordering of the individual action. The new default position, Collins argues should be “that a practice can never be learned from someone else in the absence of shared language” (2011, p.279).

If these ideas of abstraction, generality and shared language are accepted then it must be agreed too that practice language is not a set of arbitrary conventions or discourses that can be manipulated to distribute different truths as the post-modernist Carr would have it.

Where to from here?

Collins invites the development of “a full theory of how language contains practical understanding” (2011, p.282). We agree with this and below we note others who make a similar call. Nevertheless, we argue that Collins’ notion of a practice language being a regulatory and constitutive feature of the practice could advance the debate much further if it is shown that the activities of specialists in a domain of practice are ordered by the conceptual structure of the subject matter at hand. In the absence of disciplinarity, the inferential power of practice language, its regulatory role, is not sufficiently explained.

Winch’s idea of ‘inferential comprehension’ (2012, p.130) is germane here. To know and communicate that something is the case (in Collins’ terms “what does and does not exist and what can and cannot be done” see above) is to understand, work with and develop inferential relationship between propositions. In his recent work on expertise (2010, p.104), Winch draws a distinction between “contingent” and “discrete propositional knowledge” that

are gained through experience, and “organised propositional knowledge” that is acquired systematically. With this idea, he explains that true understanding of a proposition commits one to also know what can and cannot be inferred from that proposition, albeit, in different degrees of breadth and depth. Winch develops the idea of inferential comprehension to defend the view that the core understanding of professional knowledge is about grasping of its conceptual structure (knowledge that) and knowing how to select methods of investigation which are appropriate for the subject matter at hand (knowledge how). At minimum, professionals are acquainted with “subject-dependent warrants”, at best they also master “the appropriate procedures for knowledge generation within the relevant subject” (2010, p.110). Winch’s ‘knowledge how’ is a very different form of practical knowledge, one that is formal and is grounded in propositional knowledge and not in everyday experience, ideological underpinnings or tacit knowledge. Winch acknowledges Carr’s point that there is a proliferation of social science explanations and the ensuing contestation between theoretical perspectives. He also concedes the embodiment thesis’ claim that reflection on action in specific situations cannot be seen to be directly dependent on thinking about the truth of ideas about action, at least not in any simple way. Nevertheless, he argues that the critics would still have to explain how “propositional knowledge might have a bearing on practice” precisely because it has a systematic structure (Winch 2010, p.102).

Winch’s reformulation of practical knowledge as an integral aspect of propositional knowledge is consistent with recent calls within the educational field to identify and develop the knowledge-base of teaching. There are arguments that this can be done inductively (Hiebert, Gallimore and Stigler, 2002) but Muller (2012) believes that it should be done deductively. He calls it “syntactic tracing” or constructing a chain of inferences, “as firm and accountable” as possible “between the ‘invariants’ of the conceptual pile and the variabilities of the empirical instance” (p.12). Lawn and Furlong (2009) remind us of the crucial role of disciplinary-based work in “breaking down problems into its own logics and mediating between public information and problems” and between these and public action (pp.549–550). Klette and Carlstern (2012) call researchers to move away from a restrictive view of professional knowledge that centres it on embodied practical knowledge and instead, advance the important work of knowledge codification. Encoded knowledge, they argue, is essential for framing decisions in practical setting; it foregrounds knowledge sources, instruments and theory-mediated objects (“object-centred relationship”) rather than informal day-to-day individual teachers’ strategies and choices (“person-centred relationship”) (p.79). There

is a key idea here about ordering principles, which lies at the very heart of these calls: concepts regulate existing forms of understanding and transform them into new possible forms, if they represent existing ideas **and** transcend their meaning in time and space. If a concept is isomorphic with ideas that are deemed insufficiently developed, it would merely describe what is already present and would lose its regulatory function (Shalem and Slonimsky, 2010). This is why the regulatory role of practice language depends on concept building.

In developing this idea Shalem (forthcoming) draws on Abbott's knowledge classification to explain the binding power of specialised professional knowledge. Professions, Abbott argues (1988), enjoy two reservoirs of knowledge classifications – academic and diagnostic. Both are formal bodies of knowledge but each is organised differently and constrains professional judgement differently. Academic knowledge classifications pull together propositions, formally, along consistent rational dimensions, thus producing relations and boundaries between ideas. They are stronger when they refer to subject-matter specific concepts that can only be explained by a singular discipline.⁸ Concepts in educational theory such as *schemata*, *working memory*, *epistemological rather than formal access*; *the pedagogic device*, *criteria of education* etcetera may provide this kind of classification. Having these kinds of conceptual classifications (Abbott refers to them as “positive formalism”, p.102) secures the jurisdiction of judgement within the profession. The second reservoir of professional knowledge is ‘diagnostic classifications’ (1988). These classifications form a far more direct resource for the working knowledge of professionals, yet do not lend themselves to a “standard sequence of questions” (p.42). They are not tips, routine skills or direct commands. Criterion reference assessment and taxonomies of learning attempt to provide such classifications to teachers. Abbott explains the way in which professionals draw on the two reservoirs of knowledge. First, they collect information about a particular case (be it a specific disease, legal case, a building design in architecture or learners’ errors in an exam) and assemble it into a complex picture, *according to certain epistemic rules and criteria* specific to the subject matter. Second, the practitioner takes the complex picture and refers it to classifications that are already known to the profession (for example, a concept in the field of law, a formal theory in architecture or a set of conceptions in a particular area of science or mathematics), and deduces the type of the case in particular. In order for a practitioner to align a specific

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Two interesting examples given by Abbott are ‘particle interactions’ or ‘underwriting’ that can only be explained by a singular discipline (Physics and Actuarial theory, respectively).

case with “the dictionary of professionally legitimated problems” (i.e. its diagnostic classifications, p.41), the practitioner needs to know “what kinds of evidence are relevant and irrelevant, valid and invalid, as well as rules specifying the admissible level of ambiguity” (p.42).

Abbott’s work on classifications and Winch’s reformulation of practical knowledge are important developments which locate practical knowledge in a formal process and not in every day experience. They point to the vertical relation between propositions, whereby the more general concept frames the relations between the subordinate concepts and in that way binds discrimination, evaluation and therefore professional judgement of the particular. This kind of work (see also Wheelahan, 2010, Young and Muller, 2010 and Rata, 2012) can be understood by reference to Vygotsky’s ‘scientific concepts’ (1987) – conceptual classifications of systematic propositional knowledge pull existing concepts into new relations of abstraction and generality and in doing so impose new orders of meaning on existing concepts. In different ways all of the above conceptual work comes to a similar conclusion that the process of building a case from different information relies primarily on having access to a reservoir of deductive propositions and on disciplinary-based knowledge of procedure – securing

and validating evidence about the particular. Only in this way, we believe, the relation between theoretical and practical knowledge can be reunited.

Conclusion

This paper raises a critique of the anti-intellectualist stance promoted by post-modernists, by practice theorists and specifically by advocates of the embodiment thesis. Our analysis shows that each contributed to the current impoverished view of the role of educational theory in socialisation into practice. Other than Carr’s explicit denouncement of educational theory, the more common view accepts that educational theory is important, **but** by arguing that student teachers cannot acquire the tacit logic of the practice without being immersed in the site of practice, doing what experienced teachers are doing, and by organising the curriculum around aspects of practice, the role of disciplinary knowledge has indeed been short-circuited (Lawn and Furlong, 2009) and the relation between theoretical and practical knowledge, has been severed (Guile, 2010).

We do not deny that the ability to execute practice requires physical and iterative practice. Of course, one needs to experience teaching to learn to teach, but practical knowledge is primarily about learning to analyse, discriminate and relate. Doing teaching or reflecting on it in practice will not help student teachers find the nuance of practice, its significance or to learn to recognise important situations. Furthermore it is overly romantic to think that mentor teachers, *in situ*, do not withhold information or that they offer a systematic account of what they do and why, or able to know what the novice needs to know.

If our argument is correct, then our conclusion is that the common view of socialisation into professional practice is wrong. The view that *we know much more than we can represent by telling*, and therefore practical understanding of professional knowledge must be acquired in experience is false. It is time that the over inflated view of the role of tacit knowledge is challenged and we hope that we began to address it.

The central claim that we want readers to take from this paper is that the heart of practical understanding is in discrimination and evaluation, which must be premised on disciplinary knowledge and cannot be obtained from emulating the activities of other practitioners. Practical knowledge develops, primarily, from learning to order ideas – to distinguish and relate between ideas, know what procedures to take to validate them and how to recognise what interpretation is most appropriate for the instance at hand. Acquisition of professional knowledge lies in access to criteria about what is permissible, right or wrong, true or false, appropriate or inappropriate, and what is better and why, in short, what counts in the practice.

Is this ‘knowledge how’ tacit? Is this what Collins means by ‘socialness’? Winch (2010), it seems to us, has got it right. For him any type of knowledge (propositional, practical knowledge and knowledge by acquaintance) has elements that are tacit, and in certain circumstances it would be more difficult to recover those. But, he argues, this argument buys us very little. And so he concludes:

Although being tacit is an important property of all three kinds of knowledge, it is neither mysterious nor does it make all practical knowledge, let alone expert practical knowledge, ineffable, nor is its acquisition beyond the reach of formal or semi-formal educational process (2010, pp.118-119).

At the end of the day, the strongest scaffold of the tacit is ‘epistemic ascent’

(Winch, 2012). What Hirst and Winch (and Vygotsky) elucidate is that the ability to order, which is at the heart of professional expertise, comes primarily from systematic work with an organised body of knowledge at different levels of abstractions, at different degrees of complexity, in and outside of specific contexts.

If one had to ask what the implications of our argument are for initial teacher education, we would direct them back to Dewey's exploration of the relation between theory and practice in learning how to teach:

Nothing I have said heretofore is to be understood as ruling out practice teaching which is designed to give an individual mastery of the actual technique of teaching and management, provided school conditions permit it in reality and not merely in external form – *provided, that is*, the student has gone through a training in educational theory and history, in subject-matter, in observation, and in practice work of the laboratory type,⁹ before entering upon the latter (John Dewey, 1964, p.336 our emphasis).

References

Abbott, A. 1988. *The system of professions: an essay on the division of expert labour*. Chicago: University of Chicago Press.

Carr, W. 2006. Education without theory. *British Journal of Educational Studies*, 54(2): pp.136–159.

Collins, H. 2010. *Tacit and explicit knowledge*. Chicago: University of Chicago Press.

Collins, H. 2011. Language and practice. *Social Studies of Science*, 41(2): pp.271–300.

Dewey, J. 1964. The relation of theory to practice in education. In Archimbault, R. (Ed.) *John Dewey on education: selected writings*. Chicago: University of Chicago Press.

Department of Basic Education and Department of Higher Education and Training, 2011. Integrated strategic planning framework for teacher education and development in South Africa: 2011–2025. Pretoria.

Eraut, M. 2000. Non formal learning and tacit knowledge in professional work. *British Journal of Educational Psychology*, 70: pp.113–136.

Guile, D. 2010. *The learning challenge of the knowledge economy*. Rotterdam: Sense Publishers.

Henning, E. and Gravett, S. 2011. Pedagogical craft and its science: Janus-faced in pre-service teacher education. *Education as Change*, 15: sup1, S21–S33. <http://dx.doi.org/10.1080/16823206.2011.6436>
Accessed 8 November 2013.

Hiebert, J., Gallimore, R. and Stigler, J.W. 2002. A knowledge base for the teaching profession: what would it look like and can we get one? *Educational Researcher*, 31(5): pp.3–15.

Hirst, P.H. and Carr, W. 2005. Philosophy and education – a symposium. *Journal of Philosophy of Education*, 39(4): pp.615–632.

Klette, K. and Carlsten, T.C. 2012. Knowledge in teacher learning: new professional challenges. In Jensen, K., Lahn, L.C. and Nerland, M. (Eds), *Professional learning in a knowledge society*. Rotterdam: Sense Publishers, pp.69–84.

Lave J. and Wenger, E. 1991. *Situated learning: legitimate peripheral participation*. New York: Cambridge University Press.

Lawn, M. and Furlong, J. 2009. The disciplines of education in the UK: between the ghost and the shadow. *Oxford Review of Education*, 35(5): pp.541–552.

Miettinen, R., Samra-Fredericks, D. and Yanow, D. 2009. Re-turn to practice: an introductory essay. *Organizational Studies*, 30(12): pp.1309–1327.

Muller, J. 2012. The body of knowledge/le corps du savoir. Paper presented at the Seventh International Basil Bernstein Symposium, Aix-en-Provence, 28 June–1 July.

Osman, R. and Casella, R. 2007. Learning through fieldwork: undergraduate research and teacher education in South Africa. *Education as Change*, 11(2): pp.33–43.

Petersen, N. and Henning, E. 2010. Design refinement tools for a teacher education curriculum: the example of a service learning course. *Perspectives in Education*, 28(4): pp.61–71.

Polanyi, M. 1966. *The tacit dimension*. Garden City, NY: Doubleday.

Rata, E. 2012. The politics of knowledge in education. *British Educational Research Journal*, 38(1): pp.103–124.

Ryle, G. 1949. *The concept of mind*. London: Hutchinson

Schön, D.A. 2001. The crisis of professional knowledge and the pursuit of an epistemology of practice, In Raven, J. and Stephenson J. (Eds), *Competence in the learning society*. New York: Peter Lang.

http://www.heacademy.ac.uk/assets/documents/resources/heca/heca_cl13.pdf

Downloaded 14 March 2013.

Selinger, E., Dreyfus, H.L. and Collins H.M. 2007. Embodiment and

interactional expertise. In Collins H.M. (Ed.), *Case studies of expertise and experience: special issue of studies in history and philosophy of science*, 38: pp.722–740.

Sellman, D. 2012. Reclaiming competence for professional phronesis. In Kinsella, A.E. and Pitman, A. (Eds), *Phronesis as professional knowledge practical wisdom in the professions*. Rotterdam: Sense Publishers, pp.15–130.

Shalem, Y. Forthcoming. What binds professional judgement? The case of teaching in Young, M. and Muller, J. (Eds), *Knowledge, expertise and the professions*. London: Taylor and Francis Books.

Shalem, Y. and Slonimsky, S. 2010. Seeing epistemic order: construction and transmission of evaluative criteria. *British Journal of Sociology of Education*, 31(6): pp.755–778.

Shalem, Y. and Rusznyak, L. Forthcoming. Theory for teacher practice: a typology of application tasks in teacher education. *South African Journal of Higher Education*, 27(5): pp.1118–1134.

Vygotsky, L.S. 1987. Problems of general psychology. In Rieberand, R.W. and Carton, A.S. *The collected works of L.S. Vygotsky. Volume 1*. New York: Plenum Press.

Wheelahan, L. 2010. *Why knowledge matters in curriculum: a social realist argument*. London and New York: Routledge.

Winch, C. 2010. *Dimensions of expertise: a conceptual explorations of vocational knowledge*. London: Continuum.

Winch, C. 2012. Curriculum design and epistemic ascent. *Journal of Philosophy of Education*, 47(1): pp.128–146.

Young, M. and Muller, Y. 2010. Three educational scenarios for the future: lessons from the sociology of knowledge. *European Journal of Education*, 45(1): pp.11–27.

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How the 'outside' becomes 'inside': the social orientation of South African teachers' expectations for learning

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Abstract

This paper reports on the investigation of teachers' expectations in two relatively high-performing primary schools in disadvantaged communities in South Africa's Western Cape province. Expectations are conceptualised as multi-dimensional, based upon school effectiveness research, and explored through Bernstein's concepts of regulative discourse and expressive order. Interviews with teachers are employed to discern how teachers' pedagogical beliefs are shaped by their expectations. Findings suggest that teachers' expectations are shaped by the ideals and values of the surrounding community. An interrelation is found between teachers at each school and between expectation dimensions, which suggests that an 'expectation orientation' is present at the level of the school. Comparative analysis reveals that these relatively high-performing primary schools respond to their external environment in different ways. Both schools regulate teaching and learning through forms of high expectation; School 1 relays its community optimism as the school is in open relation to its context, while School 2 remains 'closed yet within' its community and fosters pragmatic expectations driven by high teacher accountability.

How does the outside become inside, and how does the inside reveal itself
and shape the outside?
(Basil Bernstein, 1987, p.563)

Introduction

As the educational system in South Africa continues to progress toward an ideal of egalitarianism through changes in curriculum and policy, forms of social reproduction and very slow change in the majority of the country's schools persist (Taylor, 2008). Yet, the school has been described as a potential interrupter of social reproduction, which can give students access to other "styles of life" and "modes of social relationships" (Bernstein, 1975, p.33). It is based on this goal of providing opportunity to learn through quality schooling that this paper investigates 'what works' in schools that are situated in disadvantaged areas of South Africa's Western Cape. One of the most salient aspects related to academic performance is teachers'

expectations, and much of the relevant literature on teachers' expectations falls within the school effectiveness tradition of research (e.g. see Brookover, Schweitzer, Schneider, Beady, Flood and Wisenbaker, 1978; Brophy, 1983; Teddlie and Stringfield, 1993; Barone, 2006). This school of thought tends to suggest effective classroom and/or school-level factors in relation to learner performance, yet does not consider how and why the broader community (or society) shapes the inside workings of a school. The joining of two schools of thought, that is, the sociology of education and school effectiveness, allows for a deeper understanding of how a context or environment may shape a school's ability to produce effective practices that lead to relatively high learner achievement.

Expectations are investigated via interviews with teachers in two relatively high-performing primary schools in two, demographically different, disadvantaged contexts in the Western Cape. Each of these relatively high-performing schools is located within a quintile that is demographically similar to the majority of schools in South Africa, that is, Quintiles 2 and 3 (Christie, Butler and Potterton, 2007; Western Cape Education Department (WCED), 2011). While this study does not explicitly focus on literacy, the premise of the research assumes that 'reading to learn' is one of the most empowering skills a learner can possess in order to beat the odds of social disadvantage. Therefore, the concept of 'relatively high-performing' is based upon each school's grade 3 and grade 6 provincial-wide 2010 assessment results¹⁰ in literacy, as both schools, on average, scored eight points above their district's average pass rate (WCED, 2011).

In what follows, literature from American, British, and South African scholars is adapted for a framework that socially locates expectations and depicts the relation between society, school, teacher, and learner. Results of the study are preceded by a description of each school's community, supported by context-specific characteristics obtained from the 2001 South African Census and teacher interview data. Each school's 'expectation orientation' is then developed and substantiated by teachers' collective espoused beliefs related to their students and to their own instruction. Each orientation suggests a distinct relationship between the social condition of the community and the internal ordering of the school. In other words, this paper argues that teachers' expectations of their students are shaped by their communities, translate into

¹⁰ Although systemic test results are a limited measure of learning, it is the best and only measure in this context for selecting schools.

collective beliefs about teaching and learning, and regulate academic achievement.

Teachers' expectations

An overview

Historically, expectation/school-effectiveness scholars have suggested that intellectual development is a response to what teachers expect and how those expectations are communicated; these expectations are often based on teacher-learner interactions and prior achievement (Rosenthal and Jacobson, 1968; Merton, 1948; Cooper and Good, 1983; Dusek, 1975; Cotton, 1989; Eccles and Wigfield, 1985; Babad, Inbar, and Rosenthal, 1982). More current research conceptualises expectations across multiple dimensions as teachers intrinsically carry beliefs and perceptions about learners as well as self-efficacious beliefs related to effective instruction and curriculum (Rubie-Davies, 2007, 2010; Eccles and Wigfield, 1985; Brophy, 1982). These dimensions have the power to mediate classroom instruction, ultimately impacting on learner performance (*ibid.*).

Rubie-Davies' (2010) study, regarding students' attributes and their effects on teachers' expectations (e.g. student participation in class), concludes: "differential teacher perceptions may mediate the effects of teachers' expectations particularly when also mediated by differential pedagogical beliefs and instructional practices" (p.132). In other words, there may be a link between perceptions, expectations, and pedagogy. In relation to pedagogy, Watson (2011) investigates teachers' perceptions of students and suggests that how teachers measure their students' abilities is closely aligned with their expectations and beliefs that stem from socio-cultural constructs (e.g. the 'urban' student). Both studies suggest that teachers' pedagogy may be influenced by their expectations of learners and that expectations are shaped by cultural constructs or perceptions.

In the context of South Africa, several empirical studies suggest that expectations are related to school performance, learner performance, and classroom instruction; that is, achievement is either hindered or supported by teachers' expectations of their students and/or the school's expectations of their teachers (Christie, Butler and Potterton, 2007; Fleisch, 2008; Howie, 2005). Braam's (2004) study of language policy highlights a Western Cape

school's stratified social arrangement (i.e. Afrikaans/English language streaming) due to the hegemony of English and the Afrikaans stigma of underachievement. With an emphasis on language and its social and political dimensions, Braam concludes that the perceptions of the community were reflected in the dominant ideology of the school. If schools have the potential to relay ideals and values of the community, then teachers' pedagogical beliefs may express these expectations.

In relation to school ideology, Hoadley (2005) presents a rationale in her PhD dissertation for why differences in pedagogy may be reproduced, relayed by the teacher, and aligned with social class. Her study demonstrates how social solidarities and ideals may shape teachers' typification of learners and how each typification is dependent on context. It can be surmised from this study that teachers are inherently oriented to ways of thinking/perceiving based upon their social experiences. Put another way, teachers' social experiences may produce particular expectations. Braam (2004) and Hoadley (2005) contribute insight into the hierarchical relation between societal power, community ideals, school order, teacher perceptions, and learner performance. In addition, these studies suggest an origin for teachers' expectations (i.e. society), which produces a collective way that teachers understand the external world (Hoadley, 2005). In the next section of this paper, Bernstein's sociological theory of education is reviewed in relation to how these 'differential perceptions' may originate.

A sociological framework: locating expectations

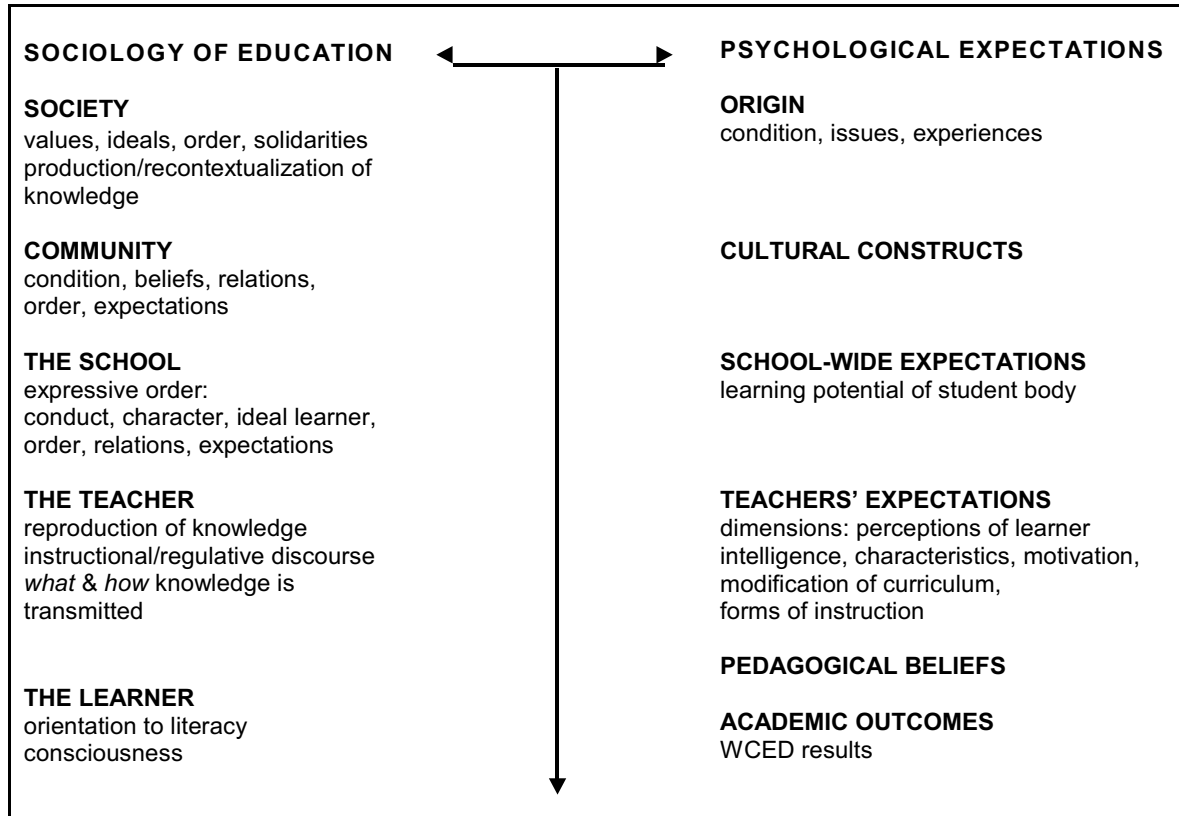
Bernstein suggests that as teachers' outside world is shaped, teachers' inside (school) world is regulated by this shaping, which may affect the structure and transmission of knowledge (1987). To address this relation between 'outside' and 'inside', Bernstein conceptualises a 'pedagogic discourse', or the rules that shape knowledge for the curriculum and its transmission in school, as constituting two discourses: instructional discourse as specialised skills and their relationship to each other, and regulative discourse as moral rules that create order, relations, and identity (1996). Regulative discourse carries what knowledge is recontextualised and how knowledge is transmitted, which essentially translates the dominant values of society (Gamble and Hoadley, 2011). According to Bernstein's theory, instructional discourse is embedded in the regulative discourse, which means that teachers' instructional theory may be embedded in their expectations for learning. Therefore, teachers' regulative discourse is adapted for this study as a carrier of expectations, which relays

'outside' or external ideals and values, and shapes pedagogical beliefs.

At the level of the school, Bernstein conceptualises an expressive order, where the community and school are bound as a distinct moral collectivity, carrying culture, values, and standards (Atkinson, 1985). Expressive order is a source of social ideologies that orients teachers' regulative discourse by transmitting valued norms made visible within practices, relationships, activities, procedures, and judgments, such as the school's notion of acceptable behavior, collective forms of pedagogy, as well as a conceptualisation of an ideal learner (Bernstein, 1975). A valued norm, such as the ideal learner, carries expectations for behavior, performance, and achievement. Valued norms relay expectations of a broader expressive order. I suggest that agents of this expressive order, classroom teachers, relay the valued norms and ideals of the broader environment through their expectations.

Based upon the preceding review of empirical research and theoretical concepts, Figure 1 below was developed for this study. The model assimilates expectations into Bernstein's concepts of expressive order and regulative discourse. The psychology of expectations and the sociology of education align into a psychosocial model, displaying how expectations originate and infiltrate into the school. The ideals, values, and moral order produced by society shape teachers' psychological expectations across multiple dimensions and on several levels. The model provides an explanation for school-level effects (e.g. relative high-performance in contexts of poverty) and a more exhaustive explanation for how and why the outside community may shape the inside performance of a school.

Figure 1: Psychosocial model for the transmission of expectations



The following section discusses the methodological approach for developing a collective expectation orientation at the level of the school and provides an overview of each school’s ‘outside’ context. Interview/census data is then presented to substantiate and explicate each school’s orientation. This paper’s aim is not to suggest one school is more effective than the other; each school is considered independently in order to explore contextual differences in relation to each school’s expectation orientation. Based upon a wealth of literature that regards teachers’ expectations as significant to effective teaching practices, this study infers expectations are related to each school’s relative high performance on the WCED literacy assessment in context specific ways (Barone, 2006; Jensen, 2009; Rubie-Davies, 2007, 2010; Eccles and Wigfield, 1985; Brophy, 1982, 1983; Watson, 2011; Rosenthal and Jacobson, 1968; Merton, 1948; Cooper and Good, 1983; Dusek, 1975; Cotton, 1989).

Methodology

To access the espoused beliefs of teachers, this study takes a qualitative approach and considers each school as a unique case study. Because schools were selected upon their grade 3 and grade 6 Western Cape Education Department literacy scores, interviews with two grade 3 and two grade 6 teachers were employed at each school. In total, fifteen structured questions were asked of participants, in association with probes to provide more detail. Each interview was recorded, transcribed, and lasted approximately thirty minutes. This study works from the premise that the espoused beliefs of teachers, regarding principles of teaching and learning, authorise access to an external social order inherent within the teacher; therefore, classroom observations of teachers' enacted instructional practices were not necessarily needed to gather data on their expectations.

A multi-dimensional concept of expectations was developed to classify teachers' beliefs regarding their students and their instruction based upon a review of relevant literature. Dimensions include teachers' espoused perceptions related to learner intelligence, the ideal learner, curriculum modifications, the degree of an individualising pedagogy, the degree of intrinsic/extrinsic motivational behaviors, the school-wide learning potential, and the community condition. The full data set of interview questions classifies teachers' expectations according to each of these dimensions. Participants were asked questions such as, 'Do you believe all of your students will pass at the end of the year?' and 'How would you describe the best learner in your class?' Teachers' responses were classified according to a coding scheme, which revealed an interrelation or pattern between teachers at each school and between expectation dimensions. This interrelation suggests the presence of a collective, school-level, expectation orientation (or an expressive order). Each school's orientation expresses forms of identity in relation to how the 'outside' community plays a role in each school's 'inside' order. When these orientations are comparatively analysed between schools, each expectation orientation highlights features that are related to context and relevant to academic success, such as a school's open or closed relation to its community.

The following section introduces each school and its social and contextual characteristics with regards to language, population, transportation, and migration. Due to the critical significance of each school's context in this study, each school's description is supported by census data from Statistics

South Africa (2001) and interview data. These contextual characteristics are referenced in the discussion of results, particularly when discussing issues that may impact on teaching and learning. Below is a map that contrasts the physical location of the schools.

Map of school 1 and school 2



Source: Google Earth, 2013

School 1 and the ‘outside’

Formerly controlled by the Department of Education and Training,¹¹ and located within national Quintile 3, School 1 (S1) rests approximately 15 km outside Cape Town’s urban, metropolitan environment (WCED, 2011). S1 also sits on the edge of a ‘Black’, majority isiXhosa-speaking, working-class township (Statistics SA, 2001). According to the principal, S1 comprises 42 teachers and 1 500 learners; 80% of learners reside in the township while the other 20% travel from nearby townships. Teacher 2 (T2) claims that all learners come from shacks, or commonly referred to by the locals as ‘squatter

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The Department of Education and Training (DET) was the national centralised system of education that controlled the curriculum, funding, and operation of Black African schools during Apartheid (Kallaway, 2002; Chisnorm and Suze, 2006).

camps', and describes the situation as thus:

You see, they live in shacks and there's no space you see? The parents come [home] late; he wants to sleep, so they switch off the lights, and it's only one room.

While the majority of learners live in conditions of poverty, teachers also expressed positive notions of the community in that some parents strongly support their children's future and desire a better life for them through education.

With a population of 49 664, the S1 community utilises numerous forms of transportation: 24% travel by foot, 17% take the city train, and 7% ride in minibus taxis. Other forms of transportation are also employed but to a lesser extent, such as cars at 3% and buses at 1.7% (Statistics SA, 2001). Because public transport is readily available and the travel distance is less than other townships outside the city, Cape Town is more accessible to the S1 community than it is to other smaller rural communities. These forms of transportation provide the capacity for social movement and generate access to Cape Town's employment opportunities. While 97% of the S1 community speaks isiXhosa, the neighbouring city of Cape Town comprises 1 199 049 people speaking Afrikaans, 808 446 people speaking English, 831 381 people speaking isiXhosa, and the remaining 2% communicate in more than 9 other languages. With regards to social movement, 85% of the S1 community is from the Western Cape province and 15% migrated from the other eight provinces in South Africa. Approximately 3 million people reside in the nearby city of Cape Town, constituting an ethnically diverse population: 48% 'Coloured', 32% 'Black African', 19% 'White', and 1% 'Indian' (*ibid.*). Not to mention, teachers of S1 explained that NGOs are widely present in the S1 community as its urban metro location is a target environment for social and educational support.

This brief description of S1 and its context characterises a peri-urban heterogeneous environment that promotes various ways of understanding the outside world. For example, the community's access to transportation may expose residents to diverse social opportunities, such as employment, and generate an awareness of different economic conditions or standards of living, therefore, creating visible social diversity. As read through the S1 teachers' espoused beliefs, the community is optimistic regarding the potential success of the school and its learners:

[Outside in the community], they've got a strong feeling that we are making or trying to produce some better learners. . . I know there's committees just outside the district of this

community, I know they've got that trust in us. They believe we can do at least better for their learners.

Doing 'better' and producing 'better' learners denotes a broad social expectation of the school and its role in the community, which is to provide a quality education so that learners may one day positively contribute to society. A relation between community optimism and school optimism is expressed, or in other words, how the 'outside' may shape the 'inside'.

School 2 and the 'outside'

Located on the west coast of South Africa's Western Cape province is the rural community of S2, approximately 14 km from the closest town of Lutzville, which is relatively small in size. Formerly under the jurisdiction of the House of Representatives,³ and located in Quintile 2, the school is situated in an isolated community that is purely Afrikaans-speaking and 'Coloured' in ethnicity (WCED, 2011; Statistics SA, 2001). The West Coast Municipality has a total population of only 282 671, as compared to Cape Town's 3 million residents (Statistics SA, 2001). Many teachers of S2 grew up in the local community and continue to live in the area raising their families. According to the principal, S2, which is the community's only primary school, is small in size with only 513 learners and 20 teachers; the majority of learners live in the community, but a small percentage travel from other communities such as Lutzville and Papendorp. It is also important to mention that the current principal of S2 recently replaced the former principal, who was a part of S2 for over 40 years and left a lasting imprint on the 'culture' of the school.

Teachers of S2 carry a collective sentiment regarding the dissociation between the school and its community. According to T1:

The parents are illiterate. That is why [only a few learners read and write outside of school], so schooling stops at school. When the bell rings, teaching or schooling stops. . . Our community, they are very selfish. . . because there's no work. And those who have money and who have work, they are very selfish.

Even though there remains a relatively unsupportive connection between the school and its community, the school acts as a buffer against prevalent social issues, such as fetal alcohol syndrome. FAS is the result of prolonged prenatal exposure to alcohol, and the effects on children vary across a spectrum of cognitive and physical disabilities (Crede, Sinanovic, Adnams and London,

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The House of Representatives (HOR) was the national centralised system of education that controlled 'Coloured' schools' operation, curriculum, and funding during Apartheid (Kallaway, 2002; Chisholm and Sijee, 2006)

2010). The west coast Winelands of the Western Cape provide considerable amounts of and access to alcohol, and more specifically, wine. Because of the prevalence of FAS and illiteracy, the relation between S2 and its community remains closed. However, because of the isolation and ethnic/language homogeneity of the community, S2 nevertheless remains within and a part of the traditional community culture, keeping social and cultural change static and transmitting local beliefs and values throughout the school. These characteristics express a 'closed yet within' relation between S2 and its community.

Learners' positive attitude toward and valuing of their school is a second socio-cultural characteristic that needs mention. Teachers of S2 attribute learners' respectfulness in school to the community, stemming from a traditional culture, and as a result of the original value system that has been transferred over time from generation to generation within the community:

[Our learners] are proud of their school. . . If you walk down [the corridor], I don't think you will see a piece of paper lying around. They are very proud of their school and they love their teachers. I have a place in my class, a corner, full of letters for me.

This transmission of values is related to contextual homogeneity, as exposure to other value systems is sealed off (to a certain degree) by the lack of social movement in and out of the community. As original values and morals are passed down and relayed within the school, attitude and behavior are shaped, thus encompassing a context-specific regulative discourse that carries particular expectations for teaching and learning.

With regards to statistical characteristics, S2's immediate surrounding community contains a population of 355, and 342 of the 355 residents have been residing in the Western Cape since birth (Statistics SA, 2001). One could speculate that these permanent residents may have also been residing in the community since birth due to its isolated and rural location. In addition, over 50% of residents claim that transportation is not applicable to their living

situation, and 28% of the community primarily travels by foot, which leaves the remaining 22% with access to cars, buses, and taxis (*ibid.*).

S2's community context can be characterised as rural, isolated, depressed, socially immobile, economically stagnant, and under-employed; yet, the community harbors and values respectful character and manner and relays these values in the school. Furthermore, the community shapes the ways

teachers account for the lack of social support as well as the ways teachers understand learner ability or intelligence. These understandings are a consequence of the high prevalence of social issues, such as fetal alcohol syndrome and illiteracy.

In what follows, a collective, school-level, expectation orientation of both S1 and S2 is presented, which pays attention to the ‘outside’ characteristics of each community and their impact on teachers’ beliefs related to teaching and learning ‘inside’ each school.

Results

How the ‘outside’ becomes ‘inside’

Three dimensions of expectations and their interrelation are utilised in the following discussion to support each school’s expectation orientation: 1) teachers’ concept of the ideal learner, 2) teachers’ concept of learner intelligence, and 3) the overall school-wide expectations (expressive order) of the student body.

School 1

To elicit the expressive order of School 1, teachers were asked, “Does your principal expect all of your learners to pass? and “What does your principal expect from you as a teacher?” Teachers’ remarks reveal a general optimism and espouse a committed energy with a focus on high marks, learner performance, and intervention committees. For example, T4 explains:

[The principal] is expecting me to teach the kids, that they must pass, each and every must progress; we must see progression from the learners.

T3 elaborates on this optimistic outlook with regards to intervention programs:

Of course [the principal] expects them to pass. But he knows the problem. That’s why we are coming up [with programs] as a management [team]. . . that we must use to intervene with those struggling learners.

S1 is proactive in its effort to remediate struggling learners; this exhibits a school-wide expectation in which all learners do have the potential to achieve,

therefore actions and energy are put forth to support this high expectation for all. A link between the school and the community can be realised here as the broad, external, social optimism may be relayed within the school. In addition, teachers' remarks suggest their instructional theory of learner remediation is embedded in their high expectations for learning (Bernstein, 1996). An *optimistic* expectation orientation can be established here, based upon the high community expectations of the school, the high school-wide expectations of the learners, and the implementation of intervention programs espoused by the teachers.

Teachers' concept of an ideal learner was revealed when asked to describe the best learner in their class. S1 teachers' responses are collective and emphasise what the learner 'can do'. For example, S1 teachers explain:

[My best learner] knows all the work that you do, and you can give them work and within ten minutes she will tell, 'Miss, I'm finished'. . . They can do the work without being helped, and they can achieve those learning outcomes. . . [The best learners] are the kids who are doing very well; if you give them work or homework, they submit on time.

To classify S1 teachers' concept of an ideal learner in relation to this study's theoretical framework, Bernstein (1996) offers a useful distinction between two types of pedagogy: a *visible* pedagogy, where rules are made explicit and expectations are related to learner performance, and an *invisible* pedagogy, where rules are implicit and expectations are related to learner competence. According to interview data, S1 teachers' conceptualisation of an ideal learner can be classified as performance-centred; teachers expect learners to produce outcomes that are recognised by explicit marks or academic achievement. This expectation for and emphasis on high achievement most likely stems from external pressures outside the school, that is, the community, the district office, the provincial education department, as well as the neighboring communities who transport their children a considerable distance by taxi or train in order to attend this particular school. Each of these external agents is situated in close proximity to S1 due to the urban metropolitan environment. S1's emphasis on performance is related to an *external* orientation to schooling; teachers and administration are more concerned with that which can be seen, measured, and demonstrated. Furthermore, an external orientation also has implications for teachers' pedagogy. For example, the implementation of remediation programs and interventions at S1 assumes that if learners are given appropriate support from the teacher(s), then learners' marks will improve over time toward the desired level of performance.

Stemming from teachers' concept of an ideal learner is teachers' perception of

learner intelligence, that is, the extent to which teachers perceive learners' abilities as 'fixed' (they either have 'it' or not) or as 'incrementally changing' (all learners can achieve, given appropriate instructional support). The majority of S1 teachers espouse an incremental perception of learner intelligence as they discuss passing at the end of the year, future matriculation potential, and the level of cognitive demand for weak learners. This expectation that all learners have the ability to achieve expresses the optimistic orientation of the school and community. For example, T3 explains:

I try and motivate them. I ask them, I ask one of them, to come and read, even the one who can't read. When you see he's struggling, I'll tell him you know what? You did well and you need to practice and then read this thing and come back tomorrow and tell me what you have read about.

The expectation that *all* learners can achieve supports the school's external, performance-centered, optimistic, and communal orientation. Teachers' emphasis on high marks and remediation/intervention programs is shaped by the perception that all learners do have the ability to produce desired results when given appropriate support. This orientation can also be linked to the social characteristics of the surrounding context, that is, an urban, heterogeneous, and socially mobile environment. These findings support Bernstein's theory of the relation between school and society; as teachers' outside world is shaped by forms of power and control, teachers' collective values and ideals relay these forms of power, which have the potential to shape their instructional theory in more or less effective ways. This means that teachers' collective expectations are a relay for these values and ideals, which impact on teachers' instructional theory.

In summary, School 1 produces an expectation orientation regulated by an urban, heterogeneous, and socially mobile context, which allows for a visible society. School 1 can be described as connected to its community through the relation between high external expectations and high internal or school-wide expectations. The prevalence of educational NGOs within the community of S1 further supports this connection. Teachers are orientated to perceive teaching and learning as communal and performance-centered; that is, *all* learners have the ability to achieve, which can be recognised through high marks or results. School 1's broad context relays visible diversity and a growing demand for a skilled labour market (City of Cape Town, 2011). The school's orientation to its environment regulates teachers' emphasis on performance and what the learner "can do." School 1 has an optimistic

orientation with regards to learner achievement. In sum, these findings suggest that the communal, external, performance-centered, and optimistic orientation of School 1 produces relatively high-performance. In what follows, School 2 expresses an entirely different orientation to expectations. Key differences reveal how school context is related to a school's expressive order, as well as how a school's expressive order regulates teachers' expectations for learning.

School 2

S2's expressive order or school-wide expectations is highly dependent on the social condition of the surrounding community. S2's small isolated location does not have the same contextual features as that of an urban community school, which provide exposure to diversity and alternative ways of life. Because of the lack of public transport, travel time is much longer to the nearest small town, resulting in a smaller amount of social migration. This immobility contributes toward a homogeneous culture. Furthermore, lack of access to employment due to minimal transport and isolation is associated with a sense of depression. Therefore, the school's order reflects this condition and compensates for the lack of social support. One of the most significant aspects of S2's community, as it relates to the school's expressive order, is the high prevalence of fetal alcohol syndrome. T1 explains why some of her learners will not pass:

Say a quarter of them, have, what do you call it in English? FAS? Alcohol Syndrome? See? So other [reasons for why some learners will not pass] are circumstances at home, poverty, mother and father are illiterate, and no work at home. And they are drinking, not interested in the children, don't even come to school. So [those] are the main reasons.

Because of the depressed environment surrounding the school, S2's expressive order carries reasonable expectations for learner achievement, which constitutes a more *pragmatic* orientation to teaching and learning. Based upon interview data, the teachers and principal are acutely aware of the local issues. According to T1:

[The principal] knows the circumstances, he knows the people, he knows the vicinity, he knows that OK, maybe it is his desire for the whole school or the whole class to pass, but in the back of his mind he knows that it isn't possible.

This unanimous espoused perception of school-wide achievement produces high teacher accountability. Teachers set and submit quarterly benchmarks and annual goals to the principal for learner improvement in each learning area, along with the instructional strategies associated with each goal. Teachers of S2 are motivated to improve their own performance as well as their learners'.

Teachers are committed to education both ‘inside’ and ‘outside’ the school:

Some of the students go to high school and we have much interest in them. We ask the teachers there, how they perform, and they know we watch what they are doing.

In relation to the presence of teacher accountability, numerous forms of collective expectations of *teachers* are present in the school, which stem from the former principal’s management of school activity: teachers must always be on time, be at school every day, emphasise time on task in the classroom, genuinely commit to education inside and outside of school, and instruction must be taken seriously. A particular ‘culture’ of teaching and learning is evidenced by these norms and standards for behavior, which shapes teachers’ theory of instruction and produces relatively higher academic outcomes.

In contrast to S1’s performance-centered ideal learner with an emphasis on high marks, S2 teachers espouse an emphasis on the internal characteristics of the learners, therefore exhibiting an ideal related to competence. The primary reasons for this emphasis on internal competencies of learners are the presence of FAS, illiterate community residents, and the static culture of the community that inhibits social movement and mobility. Teachers collectively espouse a perception that some learners have what it takes and others do not. For example, teachers may attach certain expectations to an ‘FAS child’, or in other words, teachers may generate a ‘cultural construct’ that carries expectations for particular learners (Watson, 2011). Furthermore, the homogenous context instills a competence-centered ideal learner, as the external environment appears and remains relatively the same; therefore, if a learner does stand out among the rest, it is due to the possession of some internal characteristic that not all learners have. According to T3:

[The best learner in my class] is enthusiastic. Also, wants to do more than the others, comes and asks me. . . when he’s finished with his work, he’s also busy reading. And he comes and asks me what does this mean, so enthusiastic. He wants to get the best marks, and he comes and asks me but why is this wrong, what must I do to make it. [He’s] enthusiastic [and] wants to get to the top one day. He tries to do his best.

This internal drive to ‘want’ to achieve contrasts with S1 teachers’ performance-centered ideal learner who ‘gets the best marks’. The distinction between ‘*gets* the best marks’ and ‘*wants* the best marks’ exhibits the *external* versus *internal* orientation to instructional theory and expectations. S2 teachers express a collective value for learners’ internal competencies rather than learners’ external marks or results.

In accordance with S2 teachers' internal orientation, teachers collectively espouse a fixed perception of learners' intelligence. Teachers believe learners either have the ability or not and support this position regarding why some learners will or will not pass matric with the following reasons: learners' low literacy skill levels, a lack of internal motivation to learn or desire to achieve/excel in life, fetal alcohol syndrome, and grade retainment. These reasons express the competence-centered ideal learner, the pragmatic orientation of the school as a whole, and an internal expectation orientation that positions learners on a spectrum of able or not able:

I say you must do [the task] like this and this and this. Some of them can do it. But the others, but there is some of them who will never get to that level.

In contrast, teachers who perceive learner intelligence as incrementally changing (like those of S2) would most likely believe that learners have the ability to achieve; all they need is remediation/intervention, intrinsic motivation, and/or an alternative environment that addresses the effects of FAS. These findings further support Bernstein's relation between teachers' instructional theory and collective social ideologies that orient teachers' regulative discourse; or as this paper argues, the school's expectation orientation, shaped by the outside context, orients teachers' instructional theory.

In summary, School 2 is regulated by an invisible society where the community is isolated, rural, and homogenous, lacking social mobility and educational support outside of the school. The community is neither connected nor removed from the school; teachers take responsibility for the lack of outside support, therefore accountability is high. However, S2 remains within a homogenous culture and transmits the shared values and beliefs of the community. An emphasis on internal learner competencies orients teachers' ideal learner, that is, the learner who 'wants the best marks'. The extent to which teachers believe learners can overcome social or psychological obstacles in relation to their intelligence or ability to acquire new knowledge and skills is seen as fixed, which further substantiates S2's internal orientation. This value attached to internal competencies signifies teachers' attention to those who have what it takes, or in other words, signifies an individualising orientation. Teachers differentiate learners at the level of the individual between those who can and cannot achieve. With regards to the social condition of the community, the prevalence of FAS is a serious issue that must be addressed from both an educational and political standpoint. Although S2's

contextual issues would most likely hinder academic achievement, teachers go the extra mile and take responsibility for their students' education. In the following section, the relation between 'outside' and 'inside' is further substantiated through a brief comparative analysis that points to two distinct, context-specific, ideal teachers found in each school.

The ideal teacher

As teachers carry expectations related to an ideal learner that stem from the expressive order of the community and school, an ideal teacher is similarly formed from the expectations of the community and relayed by the school, e.g. the principal. As suggested throughout this paper, the 'outside' has a way of shaping the 'inside'; because an ideal teacher is produced in context-specific ways, the school's surrounding environment aids recognition to what is expected of teachers. Firstly, the relationship between the community and the school is significant as it regulates social relations that are relevant to learner achievement. S1 is connected or in open relation to its community through NGO support, optimistic expectations, and visible social mobility/movement. In contrast, S2 is in closed relation to its community yet remains within, due to insufficient secondary sites of academic acquisition. The social immobility of the community results in a static community culture. Therefore, S2 creates a boundary between itself and the community in order to account for that which has been described as depressed and ridden with unemployment, illiteracy, and alcoholism. These types of community-school relations shape the role of the teacher in a particular way that provides what is necessary to most effectively benefit learner academic achievement in that context. The more closed relation between S2 and its community suggests that the ideal teacher is heavily accountable to the learner and responsible for the academic as well as moral development of the student population. In contrast, S1's open relation to the community, which is more permeable for outside influences on learning (e.g. NGOs), suggests an ideal teacher that holds partial accountability, as teachers believe the community should play a role in the education of its future citizens. In other words, S2 teachers are expected to act as a buffer to society, whereas S1 teachers incorporate society into their instructional theory. These school-community relations exemplify how social context shapes collective expectations that are carried within a school's expressive order and that these expectations can be realised through particular beliefs related to teaching and learning.

Conclusion

This paper demonstrates the link between expectations and the sociology of education, as these two schools of thought are often considered separate and distinct from one another. Bernstein's concepts of expressive order and regulative discourse frame teachers' expectations theoretically, while expectations are empirically investigated through the ways teachers think about their students and their instruction. Results of the study suggest that teachers' expectations are context-dependent, socially shaped by the community condition, and collectively shared at the level of the school through an expectation orientation. In addition, results suggest how and why collective expectations may impact on the pedagogical beliefs of teachers. A common thread between S1 and S2 is that both reciprocate their community in ways that parallel the social and cultural condition: S2's internal, pragmatic, and individualising orientation versus S1's external, optimistic, and communalising orientation. Although both schools produce distinct forms of expectations, this study infers that both schools regulate teaching and learning through forms of high expectation. S1 relays its community optimism as the school is in open relation to its context, while S2's 'closed yet within' relation fosters pragmatic expectations under high teacher accountability. Both are forms of high expectations but for different reasons. These forms of high expectation are in fact related to high performance in contexts of poverty. The interrelation between expectation dimensions suggests that teachers in both S1 and S2 are collectively oriented to school in society, and that high achievement is related to compatibility between environment and school order. It may be posited further that school 'culture' and community 'culture' are more inter-related than previously considered with regards to effective teaching practices.

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References

Atkinson, P. 1985. *Language, structure, and reproduction*. London: Methuen.

Babad, E., Inbar, J. and Rosenthal, R. 1982. Pygmalion, Galatea, and the Golem: investigations of biased and unbiased teachers. *Journal of Educational Psychology*, 74(4): pp.450–474.

Barone, D. 2006. *Narrowing the literacy gap: what works in high poverty schools*. New York: The Guilford Press.

Bernstein, B. 1975. *Primary socialization, language, and education: class, codes and control, volume 3, towards a theory of educational transmissions*. London: Routledge & Kegan Paul.

Bernstein, B. 1987. Class, codes, and communication. *Sociolinguistics: an international handbook of the science of language and society, volume 1*. Berlin: Walter de Gruyter.

Bernstein, B. 1996. The pedagogic device. *Pedagogy, symbolic control, and identity*. London: Taylor and Francis.

Braam, D. 2004. Community perception of change in a school's language policy. *PRAESA Occasional Paper*, 21: pp.33–34.

Brookover, W., Schweitzer, J., Schneider, J., Beady, C., Flood, P. and Wisenbaker, J. 1978. Elementary school social climate and school achievement. *American Educational Research Journal*, 15(2): pp.301–319.

Brophy, J. 1982. Successful teaching strategies for the inner-city child. *The Phi Delta Kappan*, 63(8): pp.527–530.

Brophy, J. 1983. Research on the self-fulfilling prophecy and teacher expectations. *Journal of Educational Psychology*, 75(5): pp.631–661.

Chisholm, L. and Sujee, M. 2006. Tracking racial desegregation in South African schools. *Journal of Education*, 40: pp.141–159.

Christie, P., Butler, D. and Potterton, M. 2007. *Schools that work: ministerial committee report*. Pretoria: South African Department of Basic Education.

City of Cape Town. 2011. *State of Cape Town Report 2010*.

Cooper, H. and Good, T. 1983. *Pygmalion grows up: studies in the expectation communication process*. New York: Longman Press.

Cotton, K. 1989. Expectations and student outcomes. *School Improvement Research Series: Close up (7)*. Washington, DC: Office of Educational Research and Improvement, US Department of Education.

Crede, S., Sinanovic, E., Adnams, C. and London, L. 2010. The utilization of health care services by children with Foetal Alcohol Syndrome in the Western Cape, South Africa. *Drugs and Alcohol Dependence*, 115: pp.175–182.

Dusek, J. 1975. Do teachers bias children's learning? *Review of Educational Research*, 45(4): pp.661–684.

Eccles, J. and Wigfield, A. 1985. Teacher expectations and student motivation. In Dusek, J. (Ed.), *Teacher Expectancies*. Hillsdale, NJ: Erlbaum.

Fleisch, B. 2008. *Primary education in crisis: why South African schoolchildren underachieve in reading and mathematics*. Cape Town: Juta and Co.

Gamble, J. and Hoadley, U. 2011. Positioning the regulative order. In Iverson, G., Davies, B. and Fitz, J. (Eds), *Knowledge and identity: concepts and applications in Bernstein's sociology*. London: Routledge.

Google Earth. 2013. *Map of School 1 and School 2*. Map data: Google, AfriGIS (Pty) Ltd., SIO, NOAA, U.S. Navy, NGA, and GEBCO.

Hoadley, U. 2005. Social class, pedagogy, and the specialization of voice in four South African primary schools. Unpublished PhD thesis. Cape Town: University of Cape Town.

Howie, S. 2005. System level evaluation: language and other background factors affecting mathematics achievement. *Prospects*, 35(2): pp.184–185.

Jensen, E. 2009. *Teaching with poverty in mind: what being poor does to kid's brains and what schools can do about it*. Virginia: ASCD.

Kallaway, P. 2002. Introduction. In Kallaway, P. (Ed.), *The history of education under Apartheid, 1948–1994: the doors of culture and learning shall be opened*. Cape Town: Maskew Miller Longman.

Merton, R. 1948. The self-fulfilling prophecy. *Antioch Review*, 8: pp.193–210.

Rosenthal, R. and Jacobson, L. 1968. *Pygmalion in the classroom: teacher expectation and pupils' intellectual development*. New York: Holt, Rinehart and Winston, Inc.

Rubie-Davies, C. 2007. Classroom interactions: exploring the practices of high- and low-expectation teachers. *British Journal of Educational Psychology*, 77: pp.289–306.

Rubie-Davies, C. 2010. Teacher expectations and perceptions of student attributes: is there a relationship? *British Journal of Educational Psychology*, 80: pp.121–135.

Statistics South Africa 2001. *Population Census*. Cape Town: DataFirst, University of Cape Town [distributor] [Dataset].

Taylor, N. 2008. What's wrong with South African schools? Presentation to the conference, What's working in school development? JET Education Services.

Teddlie, C. and Stringfield, S. 1993. *Schools make a difference: lessons learned from a 10-year study of school effects*. New York: Teachers College Press.

Watson, D. 2011. 'Urban, but not too urban': Unpacking teachers' desires to teach urban students. *Journal of Teacher Education*, 62(1): pp.23–34.

Western Cape Education Department. 2011. *Systemic Results 2010*. Cape Town: Western Cape Education Department.

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A pedagogy of supervision: 'knowledgeability' through relational engagement

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Abstract

This article is a response to a debate on the nature of postgraduate thesis supervision. I was an initial participant in this debate, having published an article on the topic in 2005. In this response article I offer an exposition of what I term a 'pedagogy of supervision' (PoS), which I suggest as a way of addressing the debate's silence about the link between the personal or subjective dynamics of students' thesis work and their knowledgeability acquisition processes during the supervision process. Based on my personal supervision experiences, I present three engagement moments – habitus engagement, knowledgeability engagement and data-analysis engagement – as a way of substantiating a productive PoS approach. The article is an argument for understanding supervision work as leveraging students' intellectual knowledgeability through active relational mediation, which I suggest is more likely to secure the student's ability to produce a thesis that makes a knowledge contribution to the chosen field of study.

This article is a response to a debate about the nature of postgraduate thesis supervision that crystallised in the pages of the *Journal of Education* and *South African Journal of Higher Education*. This debate was picked up in an edited book published by my department entitled *Debating Thesis Supervision: Perspectives from a University Education Department* (Fataar, 2012a), which consolidated the articles and provided space for the various authors to respond to criticisms and emerging themes on this hitherto under-researched area of postgraduate work. The debate was sparked by University of KwaZulu-Natal academic, Wayne Hugo, who wrote his 2009 article in response to two unconnected articles on postgraduate supervision by myself and my departmental colleague, Yusef Waghid. Fataar (2005) focused on the relational dynamics between supervisor and supervised, while Waghid provided an exposition of supervision as critical friendship (2005).

Hugo's (2009) article was a response to what he perceived as a silence in both our arguments, i.e. the epistemic dimension, by which he refers to "the very real need for students to submit to the rules, processes and realities of

academic communities as a precondition to finding their academic voice within it” (pp.705–706). Hugo’s article is a welcome addition to Fataar’s and Waghid’s contributions, turning as it does to the intellectual insertion of students into existing communities of scholarship and their theoretical or conceptual entailments. Nelleke Bak (2011), then a member of our department at Stellenbosch University, now Director of Postgraduate Studies at the University of Cape Town, wrote a critique of our three positions, suggesting that each of our arguments has inherent risks, an appreciation of which would bring the supervision process into sharper definition. Following on these articles, each of our responses in the *Debating Thesis Supervision* book, in turn, provided an additional platform for explanation and elaboration of our earlier positions.

This debate has brought a number of constitutive properties of supervision to academic notice. It lays the basis for deeper theoretical and empirical work, especially in the context of demand for an increase in doctoral thesis output, which is currently trumped by the stringent performative requirements by which academic work now gains legitimacy and recognition. The focus on the complex formative dynamics involved in the production of academics, in this case through a consideration of thesis supervision, is informed by the need to reinsert a more progressive development orientation into academic work. More specifically, this debate has highlighted the interplay between subjective or relational dimensions in the authority relations that govern the process, the importance and necessity of the epistemic induction dimension, and the intricacies of developing a student’s informed voice, while avoiding captivity by one set of theoretical tools or academic gurus (Bak, 2011, p.1058).

In my response to the debate (see Fataar, 2012b) I argued that a productive next step for this debate would lie in what has emerged in recent literature as a ‘pedagogy of supervision’ (see Green, 2005) with reference to the pedagogical transfer dynamics involved between supervisors and thesis students. This, I believe, takes the debate to the pedagogical heart of the supervision issue, i.e. a conceptual focus on the constitutive dynamics that inform the nature and extent of ‘student learning’ in the thesis-writing process. The emphasis on ‘critical friendship’ by Waghid, the ‘supervision relationality’ focus of Fataar, and Hugo’s epistemic induction turn get to student learning but I would suggest shadows the pedagogical or learning dimension. They never get directly to a consideration of the pedagogical conversational and transfer mechanics of what I will argue is a key constitutive locus of successful supervision. It is here that the epistemological veracity of thesis work is

established, risks taken, the authority of the supervisor asserted, the informed voice of the student cultivated and established, and where s/he learns to ‘speak back’ with growing autonomy in order to establish the degree of academic independence necessary for making a creative academic contribution to the chosen field.

Towards a pedagogy of supervision (PoS)

In my response in the 2012 book I suggested that although “relationality, dialogicality and epistemic induction” (Fataar 2012b, p.102) are constitutive dimensions of supervision, they are not sufficient or exhaustive. The focus has to shift to an explanation of the pedagogical engine of supervision, that is, the nature and complexity of the pedagogical or knowledge transfer practices involved in supervision, which I will develop here around the relationship between knowledgeableability and relationality as key to supervision pedagogy. As I explained, a ‘pedagogy of supervision’ involves working with scholarly identity processes, based on an acute awareness of, and sensitivity to, the ontological dimension of doing research, involving being and becoming, alertness to the student’s conceptual capacities, learning styles and modes of intellectual processing. I suggested that,

Productive thesis pedagogy leverages these as assets worthy of working through and building on, as opposed to a deficit view of students in need of unidirectional advice and instruction. It is to a conceptual elaboration and empirical exemplification of such a pedagogy of supervision that I think the debate on the modalities of effective supervision should now turn (2012b, p.103).

One key assumption is that a PoS proceeds on the basis of a recognition that teaching and learning in education generally are based on an attempt to close the pedagogical gap between students and their intellectual and cultural capitals (in Bourdieu’s sense), on the one hand, and their acquisition of the educational or intellectual capital or knowledge of the school or university, on the other. Pedagogy therefore always involves a capital alignment process between home or community and school or university, and in the case of this article the alignment practices between supervisors and thesis students. This is particularly pertinent in contexts such as South Africa, where the expansion of university education over the last two decades has meant that many students are black and first generation whose cultural capital backgrounds are largely un- or mis-aligned with university knowledge-acquisition expectations. This is typically expressed in my department, where most of our postgraduate thesis

candidates are first-generation, black and part-time students who have chosen to study at a former Afrikaner institution that has historically catered for Afrikaner students, based on Afrikaans as medium of instruction and whose institutional arrangements have been attuned to this cultural orientation. Currently, alignment adaptation processes are mediating sites and spaces in the university unevenly and in staccato fashion. My department, for example, has been reasonably successful in its attempts to establish a responsive intellectual infrastructure attuned to student needs that bridges the gap between the university's adapting institutional culture and the specific requirements of students (see Departmental Review Report, 2012). This is an on-going challenge and preoccupation. Such an orienting intellectual platform is meant to underpin our efforts to provide a supporting and enriching academic environment and culture necessary for our students' thesis work.

The argument for a PoS in a South African context such as our university and department is based on making educational, cultural and infrastructural alignments that provide genuine and inclusive access to a changing student profile. This involves not only Wayne Hugo's call for awareness of epistemic induction into knowledge networks, but also simultaneous engagement with the personal subjective dimensions of thesis students as they engage in their thesis work. Referring to Hugo's exemplifying case, yes, we see Brenda's insertion into a specific network or reference community and her exposure to a set of analytical tools. But we do not get to understand her intellectual and personal engagements that would explain how Brenda takes to her learning in the supervision context as she mounts her network entry and take-up of the analytical tools on offer. In other words, an explanation of the engine of the supervision relationship process, the constitutive dynamics between Brenda the student and Hugo as her supervisor, is missing. The question I am interested in is who Brenda is and how she mounts her research learning as she subjectively engages and mediates her thesis learning processes, and how she personally encounters and mediates the supervision process that gets her into a position to acquire the knowledgeability that is required to accomplish her thesis work.

Nelleke Bak's prescient warning about the implied relativism of a constructivist position notwithstanding, a PoS is based on subjective engagement and mediation of the knowledge dimension of thesis work. This is not to encourage the student to develop a doctoral voice outside the "accepted practices and rules that constitute disciplinary communities" (Bak 2011, p.1055), nor is it to ignore their induction into what Bak highlights as "two

distinct but equally necessary processes – socialization and individuation” (p.1055). Bak’s call for doctoral supervision to be organised around developing the student’s ‘informed disciplinary voice’ is precisely enabled through the supervisor’s ability to facilitate the acquisition of such thesis expertise at the intersection of the student’s subjective mediations, on the one hand, and the knowledgeability dimension, on the other. A PoS therefore locates itself at the leveraging point of this interaction, getting students to develop their knowledgeability through an active mediation by the supervisor of the student’s personal approaches to thesis work.

Lingard explains that the quality of pedagogical alignment is an important social justice issue in education (2005). He favours a view of pedagogy as involving in the broadest sense “an implicit human characteristic in relationships between the mature and neophyte members of a culture, as something which was social and collective in character, and something which was as much about social learning as cognitive gains” (Lingard 2005, p.166). The emphasis here is on learning as both social and cognitive, or as Wortham (2005, p.715) explains, “when students and teachers [supervisors] discuss subject matter, at least two processes generally occur: students become socially identified as recognizable types of people, and students learn subject matter”. The combined focus is on the imbrication of the social or subjective and the knowledge immersion dimension of the supervision process. The focus is thus on the ways in which supervisors work at the intersection of the student’s personal approaches and the impact of these on her learning adaptation to the knowledgeability necessary for thesis work.

Given this intersecting locus, a PoS is based on the view that supervisory pedagogical activity involves an authoritative relationship between the supervisor and supervised, on the one hand, and knowledge transfer practices central to thesis work, on the other. Relationality and knowledge are both accommodated. A PoS, therefore, focuses on the formative interaction between the two aspects, involving a dynamic and iterative process captured by the notion ‘knowledgeability’, in reference to the academic or scholarly comportment and know-how that a thesis student comes to acquire during the thesis-writing process. Knowledgeability is thus a referent for the intellectual capability to do a thesis. The supervision process, I argue, ought to be based on an active facilitation and acquisition of such a knowledgeability that would place the student in a position to mount the thesis process successfully.

This PoS focus is situated in a growing body of international literature on

doctoral supervision (see, for example, Manathunga, 2005, Lee and Green 2009, Hopwood, 2010). Green (2005, p.151) views postgraduate research supervision as a “problematic issue, practically and theoretically”, and therefore in need of on-going research. Green presents supervision as a distinctive kind of pedagogic practice, what he explains as a practice implicated in the production of identity as much as in the production of knowledge. Consonant with my concern for a PoS focus on the imbrication of knowledge and relational subjectivity, Green places the analytical spotlight of research supervision on “the psycho-social dynamics of struggle, submission and subjectification, including the role and significance of fantasy” (p.151). He explains that supervision has to be understood as a “[pedagogical] practice producing subjects, as directly and indirectly implicated in the socio-symbolic work of subject formation, or the discursive construction of subjectivity: the *constitution* of the academic subject” (p.151). A PoS focus is precisely intended to capture a productive view of supervision pedagogy as a discursive practice where,

Subjects are formed as an ensemble of knowledges, capacities, identities and dispositions through the interplay of specific social relations and social practices, mediated by language. This is always a fragile ensemble, a provisional settlement, with various degrees of durability. Moreover, this must be understood as necessarily a *relational* subjectivity. Academics, graduate students and their discourse / disciplinary communities are implicated in social/symbolic networks and circuits of identification and citation, repetition and renewal, learning and forgetting. . . . Doctoral pedagogy is as much about the production of *identity*, then, as it is the production of *knowledge*. At issue is the (re)production of specific research identities (Green, p.162).

Elaborating on the centrality of subject formation in the supervision process, Johnson, Lee and Green (2000, p.136) discuss the form of personhood assumed by the pedagogical practices of supervision. They identify gender problematics as intricately connected to this enterprise. They are particularly concerned with the “seemingly unproblematic status of autonomy or independence as the goal of a postgraduate pedagogy” (p.145). Instead of viewing the student as already possessing innate capacity and skills to accomplish the thesis work and therefore requiring only a light supervisory touch, they signpost a view of the goal of autonomy as that of research learning and skills development. In other words, “the autonomy sought of the student can be recognised as a set of capacities, a mode of conducting oneself, that can be learnt – and taught [during the supervision process] – rather than a capacity which already exists in the individual” (p.145). Johnson, Lee and Green go on to suggest that the supervisor no longer needs to be a ‘master’ but a teacher of particular skills, ways of thinking and writing. I would suggest

that a PoS resides precisely in the types of pedagogical processes and relationships between supervisor and student that optimise the student's opportunity to learn, where she is able to acquire conceptual skills and intellectual capacity, i.e. the necessary knowledgeability or intellectual capability that will enable her to mount the thesis process with productive intent and creative capacity. In this respect, Franke and Arvindson argue that "research supervision can be regarded as a knowledge and relational process which takes place in the encounter between student and supervised" (2011, p.8). In this process the doctoral student is given the opportunity to acquire the knowledge and skills needed to be able to work as an independent researcher. This is carefully crafted within a mediating set of dialogical processes, in terms of which the supervisor leads the student to an engagement with her unfolding academic subjectivity, unlocking the student's required knowledgeability for productive thesis work.

Three supervision pedagogy moments

I now go on to discuss elements of what I think a developing PoS approach should entail. I draw briefly on three key pedagogical moments based on emerging themes in my own supervision work. Each of these moments is meant to exemplify a key element of a PoS approach. Viewing these as (non-linear) 'moments' is meant to bring attention to the dialogicality of the supervision process. This involves a view of learning as conversation, surreptitiousness and art. But it is neither without deliberative knowledge transfer intent nor authoritative mediation by the supervisor. As I argued in my 2005 article, the authority of the supervisor is key to the conversation and learning process. This authority is established and continually negotiated during the supervision process. As I suggested, establishing one's role as a supervisor has to be based on the supervisor's "willingness to understand the specific ways in which they (students) come to the process, displaying awareness of their personal and intellectual requirements, and facilitating their immersion into the necessary repertoires" (Fataar, 2005, p.57) of thesis work. In the discussion below I throw the spotlight on a PoS as authoritative mediation, based on some of my approaches to 'align' the students' subjective orientations with the knowledge dimension of their thesis work. I will show how a PoS, by engaging the students' personal stances and approaches with regard to various intellectual dimensions of their work, is able to establish the necessary knowledgeability or 'know how' for productive thesis work.

The habitus engagement moment

This moment involves active mediation of students' intellectual approaches early in their thesis work, often while doing their proposals, but even later on. Based on a shift similar to the ones made by the two students described in my 2005 article, this moment involves shedding a normative orientation to thesis work for an analytical one. As I explained, this shift allowed them to take on a scholarly comportment which enabled them to ask appropriate research questions (2005). The focus was on how the supervision process, through dialogue, reading, intellectual mapping and active mediation by myself as supervisor, enabled the students to bring their intellectual projects into view. Building on this focus, the habitus negotiation moment is a referent for the intellectual immersion processes that students are inducted into which facilitate the acquisition of a thesis or scholarly comportment.

Relational engagement, I argue, is paramount in the student's entry into thesis work. Such engagement has a collective group socialising dimension and a personal individualising dimension, the latter encompassing one-on-one dialogue between the supervisor and student. The socialising dimension involves the student's entry into a postgraduate student community where they are inducted into the academic conversations of their student peers and academics. This forms the students' community of practice within which they initially participate peripherally but later become fully immersed in the community's academic discoursing. Facilitating entry into this community has to contend with the students' personal approaches to academic study. These communities have recently emerged in universities as one important vehicle for facilitating thesis throughput. In the case of my department our students are practising teachers, district officials or educational workers. Most of them are registered for part-time study. They are invariably committed to processes of educational improvement.

Thesis supervision has to contend with the 'field' effects of their practice-based professional identities. Their educational practices at schools or district offices represent complex interactions with their own structures, rules, preferences and discourses (see Bourdieu and Wacquant, 1992). Fields, according to Bourdieu, have their own rules, *modus operandi* and sense of autonomy. The students bring the field effects from their professional sites into the academic field of doctoral study at the university, where they now have to negotiate the structures and discourses of the academic field of the

university. Nonetheless, their practice-based professional field effects never disappear. A PoS supports the student's navigation between the practice-orientated discourses of their professional practice and induction into the academic discoursing of the thesis research community at the university.

Our students choose to do academic study as an expression of their commitment to change and improvement at their educational sites. This choice is often made in the context of their having become somewhat disillusioned and distanced from the trajectories of change at their schools and educational places of work. They express exasperation at being ensnared by a crisis management culture at their workplaces and an accountability regime that stifles their creativity. The move to becoming a doctoral student is simultaneously redemptive and a search for understandings that can improve practice. Both are in play in their emerging scholarly habituses. The supervision process has to engage both by working from within the possibilities and constraints of their habitus positions. Their scholarly identity has to emerge out of their professional habitus, not alongside it or removed from their everyday educational concerns. The moment of habitus engagement recognises the impact of their professional field effects on their approaches to the thesis work, which is invariably characterised by their commitment to social improvement based on a desire to contribute to practical improvement at their educational sites. Examples of these commitments are students' desire for leadership improvement, effective curriculum implementation, or improving student discipline. An effective PoS mobilises a conversation that leverages 'readerly' understandings of these issues. In other words, it is through encouraging focused reading and mediated conversation on these issues that an interpretive language or a language of description begins to emerge. Acquiring academic perspective facilitates the shift from a practice improvement orientation to an academic orientation towards their practice. Supervision as habitus negotiation is therefore not intended to alienate students from their practical concerns. Rather, rooted in these concerns, it aims to insert an academic language that connects directly with the student's interests, turning them into an academic enquiry orientation to thesis work.

This view draws on Reay's explanation of habitus as the "sedimentation of history, structure and culture in individual dispositions to practice" (2004, p.333). As individual disposition, the habitus develops a 'feel for the game' – in this case the feel for becoming a doctoral student during the thesis process. This disposition emerges in relation to the complex interaction of habitus and field over time. Reay points out that it is important to recognise that while a

field, such as the practice-based professional contexts of these students, does not dictate behaviour in a preordained manner, each individual is “open to infiltration and influence by a number of (disparate) forces of various influences and power” (p.333). Supervision mediation ought to proceed on the basis that thesis students are able to undergo an adjustment in their habitus centred on their immersion in the context of an academic field at university.

My department facilitates this habitus engagement by, for example, leveraging the university to become more responsive to the specific demands of part-time students, especially in making its support services available to these students after hours and on weekends. Our deliberate organisation of what we call ‘soft academic infrastructure’ to support thesis work entails, among other things, organising research days and weekends throughout the year in which we provide a combination of workshop-type opportunities for the acquisition of research skills, academic literacy, and exposure to theoretical and methodological conversations led by academics or students who are at an advanced stage of their thesis work. These research days are held every eight to ten weeks. They generate enormous enthusiasm and camaraderie, exposing students to a range of intellectual orientations, student peer work, and the personal struggles and delights associated with immersion into novel explanations and complex theoretical frameworks.

This type of academic community runs on what Collins refers to as a strong affective dimension that gets generated while the students are exposed to the academic discoursing of the group. Collins argues that such academic communities are made up of “formal ritual chains which bind members in a moral community, and which create symbols that act as lenses through which members view the world, and as codes by which they communicate” (2000, p.22). He suggests that these chains are defined by two elements, namely ‘emotional energy’, which refers to the interactive relational processes inside the ritual chains that imbue participants with the energy to focus on their academic immersion, and ‘cultural capital’, which is the academic ‘know how’ of the specific community. The quality of these two elements determines successful academic immersion. Both have to be present. Their presence would more likely lead to an enhanced academic environment with positive consequences for thesis work, while conversely low levels of either would have a negative impact.

The platform for engaging the student’s academic habitus is provided by our department’s academic socialising activities. This provides the students with

emotional energy, support networks and exposure to academic discoursing necessary for them to navigate the habitus shift required to adopt an analytical or academic comportment. An engaging supervision process facilitates this shift. But, operating in tandem, and intersecting with the collective socialising dimension of periodic departmental programmes and its soft academic infrastructural support, is the individualising intellectual-becoming dimension aimed at cultivating the knowledgeable by which thesis work proceeds (Rorty's 'individuation' as pointed out by Nelleke Bak 2011, p.1055). Emotional energy and intellectual excitement are not enough. The supervision relationship must turn on the intellectual capacitation necessary for thesis work. It is to a discussion of this element of a PoS that I move to in the next section of this article.

The knowledgeable engagement moment

While habitus engagement is intended to shift students' approaches to their thesis work from a normative to an analytical orientation, the knowledgeable moment refers to their scholarly or know-how acquisition. The intellectual capacity to accomplish the various dimensions of thesis work is the central focus of the authoritative interactions between supervisor and students. A productive PoS leverages such capacitation through dialogical interaction throughout the process. The supervisor's leveraging is centred on the students' emerging and evolving knowledge orientations and research questions. Mediating dialogue is intended to get students to do a range of strategic activities in the context of dialogue with the supervisor. What is central to this leveraging is the supervisor's sensitivity to the students' subjective or personal connectedness to the process, i.e. the personal basis on which they approach the knowledge dimension. A PoS is alert to personal or conceptual blockages that emerge during thesis work, and how, for example, the personal dimension is implicated in choosing a particular knowledge focus, methodological approach or theoretical framework. Understanding the personal motivation for, and approaches to, the particular study she chooses provides the supervisor grounds for effective engagement. Working relationally through the personal dimension requires attentiveness to the peculiar nature of the student's conceptual, methodological and other challenges that emerge over time. It also involves understanding that knowledgeable capacitation runs through the personal investments students are prepared and willing to make while they work on their theses. The student's intellectual capacity is leveraged by working through the personal

approaches at play in her thesis work.

The knowledgeability moment is a referent for engaging with the students' intellectual processes throughout the thesis process. Such engagement shifts and turns during the process, moderating at some points as students acquire their informed voice, and picking up in intensity at key moments of difficulty and challenge. Conceptual challenges or blockages are present throughout the process. Supervisors have to develop an ability to recognise and work with the specificity of these challenges as they emerge. At the initial stages the knowledgeability dimension is based on strategic academic reading by the student, facilitated by constant dialogue between the supervisor and the student. The nature, focus and extent of the student's reading and conceptual engagement change during the thesis process. I initially advise students to do some orientating reading that connects with their expressed areas of research. These might include reading newspaper articles or novels that connect with and highlight the conceptual and contingent complexities associated with their intended focus of study. Reading such popular texts provides the student and supervisor with talking points around the social nuances and complexity of such a focus, which in turn informs the way the student comes to understand the knowledge question that she might pursue. It also immediately gives them an idea of my own proclivity for working with students who are prepared to do research based on conceptually mapping such social complexity as it pertains to education. My subjectivity comes strongly to the fore as I seek to indicate the type of work I am prepared to supervise and the expected intellectual rigour of the ensuing process. Giving them my own scholarly work to read, which I also do early on, is meant to indicate the nature of the research that I am prepared to supervise as much as it is an indication of the expected qualitative engagement that they can expect during the supervision process. This is not a supervision straightjacket. It is based on setting the rules of the relational engagement about the knowledge dimensions of the thesis work. The mediating authority of the supervisor is crucial to the student's knowledgeability enhancement.

The students' informed voice comes into focus during the development of the knowledge puzzle. Growth in the students' knowledgeability emerges with greater independence as they pursue the knowledge focus throughout the thesis process. It is deliberative engagement over the nature of the study and its analytical pursuit throughout that instantiates the student's autonomy and ownership of the knowledge contribution of the thesis. The primary concern of the supervision process is therefore to keep the student focused on the pursuit

of the analytical thread that runs through the thesis work. Supervision dialogue centres on the links between the various components of the thesis, including the research questions, literature coverage, conceptual approaches, methodological preferences and data-processing modalities. Keeping the thesis work primarily focused on this thread requires deliberative and supportive engagement. Supplying advice that unblocks conceptual cul-de-sacs, suggesting further readings, advising students to get on with the data-processing work or writing are important supervisory activities that move the thesis work forward productively.

Keeping the dialogue trained on the research focus means supervisors have to be aware of the student's personal investments in this focus. My experiences with my doctoral students suggest that students invariably choose a focus that emerges from their practical concerns as educators which are filtered through their personal biographies. One of my students was motivated by the links between home, neighbourhood and school in explaining Grade 6 students' learning practices. Her interest was driven by her own schooling in impoverished circumstances. As a teacher she always made learning connections between her students' home circumstances and their classroom learning. This is where her interest in student learning as a thesis topic emerged from. My role as supervisor was to point her in the direction of literature that brought these school-home linkages to the fore. My own work on the 'spatialisation of education' was also at play in cultivating this student's focus. But it was her own pursuit of key conceptual literature focusing on students' learning connections across multiple spaces that brought her intellectual focus into view. The consequent multidimensionality and depth that she gave to the focus translated into her choice of ethnography based on deep immersion as her methodological orientation. Her emerging knowledgeability cultivated in mediated and supportive supervisory dialogue was driven by her personal investment in understanding the learning practices of students as much as it was informed by her vigorous reading, mapping and intellectual processing of the intellectual dimensions that made her study possible and gave her the necessary intellectual capital to pursue her thesis to completion.

My supervisory task was to keep the student on task throughout her research immersion, the data-mining process and analytical work. I helped her identify and resolve conceptual challenges, keeping the study modest and focused, and suggesting ways of working with her conceptual tools. What motivated the student during this three-year process and kept her on track was a tenacious

personal commitment to the study, initially driven by her own concerns for children who, like her, mounted their school learning in difficult circumstances. She became enthralled by the lives of the children she was studying, struggling at some points to establish the necessary distance to 'see' and enable the analysis. This was achieved through vigorous interaction during the supervision consultations. This enabled her to bring the analytical task into view. After she worked through the 'symbolic violence' that involved turning people's storied lives into data fragments, the student was able to get stuck into the data processing and emerging analysis.

Most of this type of thesis activity was entirely new to the student. She had never before engaged in ethnography or used theory in such a novel and unorthodox manner. She encountered many frustrations along the way, but her commitment never wavered even when at one stage I had expressed, via email, displeasure at her progress. She described receiving this email as a low point, but instead of sulking for too long she recommitted to the task at hand. Her thesis work had clearly unleashed a level of personal commitment that enabled her to stay focused on the myriad intellectual and other tasks required to accomplish her work. My task was to develop a dialogical approach based on understanding the personal and conceptual blockages that emerged from time to time, leveraging 'know-how' by providing insight into their potential resolution, and suggest new conceptual angles to resolves dilemmas.

This type of relational engagement secures the supervision process. It is based on awareness of the personal investments that students make in their thesis work, their commitments to particular orientations to the study, and the blockages and challenges experienced at various stages of their thesis work. The supervisor leverages a mediating dialogue that enables the student to develop the ability to work productively on the various elements of the thesis. As suggested, a PoS is trained on intellectual capacity leveraging that runs through these personal investments. This is further illustrated in the discussion below on supervisory dynamics that emerge at critical points during the process.

The data-analysis engagement moment

The previous section focused on thesis knowledgeability dynamics during supervisory interaction. It advanced a view of the nature of relational engagement throughout the thesis process. This section is a discussion of one

challenging occasion that arose during my supervision which played out during one of my student's struggle with data-analysis. Other examples of such challenging occasions have to do with identifying the knowledge puzzle, methodological problems that emerge during the research, the development and application of theoretical tools, and data processing. What makes these moments crucial in my experience is that they provide intellectual and knowledgeability transfer challenges that the supervisor has to confront. These are important dialogical moments that must be met with intellectual fortitude. The supervision process has to work productively through them to get the student's work back on track. Addressing them requires focused dialogical leveraging during the supervision process. It is my argument that intense subjectivity-orientated guidance by the supervisor provides the student with the platform to acquire the know-how to address such challenges.

During my own doctoral supervision experiences the data-analysis chapter invariably produces an impasse. I puzzle about my own role at play in this situation. It might be that the entire supervision process, especially from the start, has to be trained directly on developing conceptual reflexivity and intellectual capacity transfer about this important aspect, standing as it does at the heart of the knowledge contribution of the thesis. It is the ability of the student to write a successful data-analysis chapter that determines the intellectual veracity of the thesis. Every other dimension culminates in this aspect. It might be that the socialising dimension of thesis work and its intellectual individualising aspects need to focus more purposively on this thesis orientating and culminating skill.

I have come to understand that data-analysis is necessarily complex and daunting. It brings together the various elements of thesis work. The data-analysis chapter answers the main research question of the study. It is based on the theoretical framework developed earlier on during the thesis-writing process and requires the student's know-how to be applied directly to a 'reading' of the data. It also has to stand in conversation with the essential literature and conceptual strands that are related to the study. The analysis cannot stand outside of these strands. But it has to aim for an intellectual distance that guarantees the thesis its independent knowledge contribution to the existing literature on a chosen topic.

The research data play a different role in the analyses process. Whereas during the data-presentation chapters the data are presented in themes and sub-themes in response to research questions, in the data-analysis chapter the analytical

argument is primary. On the one hand, the data are meant to exemplify the argument, providing the empirical basis for the presentation of the argument. On the other hand, the argument cannot be unfolded if the data don't support it. In other words, the student cannot make an argument without data support, although the unfolding of an argument is primary. The data have a 'secondary' exemplifying role in the analysis.

The data-analysis moment can be regarded as the culmination of the student's display of his acquired knowledgeability capacity. Thesis supervision engagement is organised around the building of this capacity. The learning engagement throughout has to be trained on developing the student's capacity to do the required analytical work for the data-analysis chapter. In addition, it is arguably at this point that the supervision relationship is at its most intense and engaging. In my experience this is where knowledgeability engagement has to leverage the conceptual skills necessary for unlocking students' analytical skills and writing ability.

What is required is an understanding of complex personal dynamics at play for students during this stage. Having worked on their theses for two to three years or more, they begin to see the finishing line but are often frustrated by the enormity of the analytical task in front of them. It is often here that family and other personal dynamics begin to have an impact. Families are expected to make enormous sacrifices to support the student's doctoral work. My students often talk at this stage about the difficulty of having to manage their family's desire for them to finish the thesis. This is in addition to work-related pressures and the threat of additional financial challenges that extending their study might entail. Fatigue also plays a role in their attitude and mind-set at this crucial stage. It seems to me that the students' attitude to accomplishing the analysis chapter in the light of these personal constraints plays a major role in their personal approaches to the complex task of writing the chapter.

One crucial difficulty that characterises their struggles with the data-analysis is their apparent inability to differentiate the analytical task from the data-presentation task. Some students end up writing another data-presentation-type chapter. They also struggle to operationalise their theoretical lenses to inform the analysis, often introducing additional theoretical work that destabilises the analytical pursuit entirely. Answering the research question is another difficulty and so is the over-use of data in the writing. They struggle to proceed with a light empirical touch. In other words, they are confused about the purpose and focus of the data-analysis moment, which translates into

inchoate attempts at writing this chapter. This is notwithstanding the supervision dialogue that accompanies their initial attempts at writing this chapter.

In my experience the inefficacy of their attempts is always brought to the fore in the first drafts of this chapter. This is when I encounter the specificity of the challenge for each student, which provides me with a basis for the ensuing counteracting deliberation. What is required at this stage is an acute awareness of the nature and extent of the challenge that the analytical moment throws up. The initial draft is the mediating text for this deliberative engagement. The supervision dialogue is trained on clarifying the purposes of the analytical work. It develops an understanding of the form and intent of the analysis chapter. Getting students to see that answering the study's research question is the main aim of the chapter. Establishing the conceptual distinctiveness of the data-presentation and data-analysis chapters is crucial. I explained this distinctiveness to one of my students in an email thus:

Chapter 5 [data presentation] was a presentation of the data guided by your conceptual categories. What you successfully accomplished here was to present the data in response to these categories. This gave us a very powerful picture of the principals' positioning in their leadership field, their location in relation to their various capitals and their specific habitus formations in interaction with their school contexts [This student used Bourdieu's analytical categories]. Their practices and strategies were presented as an outflow of their field, habitus and capitals. This data was powerfully presented. It gave us rich and keen insights into how 'neoliberalism as discourse' impacted the leadership practices of these teachers, both the similarities and the differences. This chapter was comprehensive and complex.

However, chapter 6 [data-analysis] is a different chapter. It's different in form and substance. Here the key is to provide an analysis of the data presented in chapter 5, now explicitly informed by Bourdieu's categories – but fundamentally in response to the main questions and sub-questions. In your current chapter 6 draft, this disappears almost entirely as a conceptual consideration.

I wrote this email after I received a data-analysis draft that resembled the data-presentation type work that he provided in the previous two chapters. What the draft chapter clearly demonstrated was the student's misunderstanding of the purpose, form and focus of an analysis chapter. It also alerted me to the probable lack of knowledgeability that prevented the student from accomplishing this chapter in an acceptable fashion. Providing insight into the nature of the work required at this stage and leveraging the requisite intellectual know-how became decisive at this stage of the thesis process. Vigorous interaction between myself as the supervisor and Jan Heystek, former member of our department as co-supervisor, and the student, ensured

such a process. Coming to understand the nature of the student's approach to the writing as it was displayed in the first chapter draft and using this as the platform for engagement became the site of learning for the student. This particular student had until his doctoral work been immersed in his role as a successful school principal of a high school in a rural town. He did the entire thesis part-time in a very short time. It seems that his normative or practice-based professional orientation had crept back into his thesis thinking towards the end of the thesis process. He had not placed himself in a position to develop the analytical capacity to accomplish the intellectual tasks required for this decisive chapter. It is also likely that because of the speed at which he did the thesis work he had not retained or perhaps internalised the academic comportment that was necessary for him to accomplish the analytical chapter. I would argue that his was a case of doing a thesis on the basis of quick immersion grounded in enthusiasm, adaptability and a lively intelligence. The quick pace at which he was working counted against him acquiring the necessary depth of academic immersion that would have enabled him to do the data-analysis effectively. The supervision process revealed this 'lack' and proceeded vigorously to provide a knowledgeability platform to augment his intellectual capacity required for this leg of the work.

I went on in the email to explain some of the elements that he needed to concentrate on to get the chapter on track:

Get to understand what this chapter is meant to do. It is here where you set up the argument, where you frame and position the focus and tenor of the analysis, and where you inform your reader about the nature of the argument, i.e. the primary claim that the chapter (and hence the entire study) makes. This is where the hard work on your part will have to happen. You have to work differently here with your data. Given your data presentation in chapter 5, what are the main lines of interpretation you will make? This is where the main challenge for you resides. Currently this chapter does not quite get to this. You must move beyond the descriptive to the interpretive/analytical. For this you have to bring your theoretical lenses into a careful consideration of your data. Given your use of Bourdieu's lenses (field, habitus, capitals, practices, strategies), what are the lines of interpretation that you can throw on your data? How will the argumentative line flow through the thesis and how will you use your data to exemplify your argument?

What this email imperfectly illustrates is the tone and content of the knowledgeability engagement during the supervision dialogue. It illustrates the basis on which the intellectual capacity transfer proceeded. The dialogue was meant to intervene in a particular orientation to analytical work. It was aimed at getting the student to step back, gain some distance from the data and the rest of the thesis work and come to understand what academic task is required for him to accomplish the data-analysis. We facilitated this shift by

recommending books, articles and theses which we felt contained good examples of data-analysis. Vigorous discussion of some of these texts provided the student with conceptual clues about the required task. We also had energetic discussions about the argument that he then began to develop, the analytical lines he identified, and the logical flow of the chapter.

The form of the analysis chapter emerged out of deliberative dialogue during the supervision process. We choose an engaged and active leveraging approach that attempted to build recognition and capacity for the task at hand. The student worked extremely hard on turning this knowledgeability engagement into intellectual capacity to write the chapter. He spent time to read voraciously, mapped the chapter exhaustively, engaged in in-depth dialogue with us as his supervisors, and conversed with other academics and peers to understand how he needed to proceed. In the process he came to escape the limitations associated with his quick academic immersion, taking the necessary steps to capacitate himself to accomplish the analytical task. The supervision process succeeded in laying a deliberative relational basis for his evolving knowledgeability, which secured his thesis work.

The section illustrates a PoS at work in providing an understanding of the supervisor's relational engagement with specific conceptual impasses that emerge during the thesis process. I suggested that working through the personal or subjective dimensions of such an impasse is an important element in breaking through. Deliberative and directed supervision is based on understanding the personal and intellectual dimensions of these blockages. The example of one student illustrates how personal engagement with a student's particular personal orientations can lead to overcoming these periodic impasses. Supervision is focused on providing the intellectual grounds whereby students come to understand the conceptual tasks needed to complete the thesis.

Conclusion

This article is a response to a debate about the nature of thesis supervision that emerged from my department at Stellenbosch University. I wrote this article as a response to the current preponderance in the university sector for increased thesis *output*, which I believe obscures the complexity involved in academic work at this level. Each participant in this debate highlighted a number of constitutive elements in conversation with each other. This has led to a

sustained critical conversation, rare in South African education scholarship, that staked out the complexity and multidimensionality of the issues at play. In response, I developed a perspective in this article that I call a ‘pedagogy of supervision’ that attempts to throw the spotlight on the productive engine of thesis work. I argued that the nature of students’ scholarly becoming has to be brought into conversation with their intellectual acquisition capacity for thesis work. This, I suggested, points to the mediating heart of the supervision process. A PoS ought to focus on the socialising and individualising processes by which students come into their thesis work. A PoS is trained on the students’ knowledgeability acquisition during these processes by specifically focusing on leveraging the subjective dimensions by which they engage with their thesis work.

In making an argument for understanding supervision as a acquisition through relational engagement, I developed three moments of engagement to exemplify one view of a PoS approach. I argued that socialising and individualising dimensions are equally important for inducting students’ into their work. It is through these processes that the required emotional energy and intellectual capital are generated which keep students on track throughout the process. The individualising dimension of supervision is aimed at shifting the students’ habitus orientation to their research from a practical or normative approach to an analytical orientation which would most likely secure the study’s knowledge contribution. With regard to the second moment, I argued that supervision as knowledgeability engagement refers to students’ scholarly or know-how acquisition. I contended that students’ intellectual capacity acquisition is a central focus of the supervision process. The supervisor’s authoritative mediation of their personal approaches to the thesis is central to this acquisition. The final PoS moment is a focus on supervision dynamics at play in addressing periodic impasses that arise during the thesis process. The example I discussed illustrates the heightened supervisory engagement that is necessary for getting students to ‘see’ what the knowledgeability requirements are that would enable them to work through these difficult issues. Working with students’ subjective orientations with regard to these difficulties would provide clues for robust interactive supervision work that would get students to engage more effectively with the task at hand.

This article has laid out the conceptual terrain for a pedagogy of supervision that connects students’ knowledgeability acquisition to a relational mediation of their emerging scholarly subjectivity. Such an approach has a chance of generating a perspective on how supervision can enable students to produce

theses that make a knowledge contribution, thereby securing the university as a site for quality academic work.

References

Bak, N. 2011. Professionalising the supervision relationship. A reply to Waghid, Fataar and Hugo, *South African Journal of Higher Education*, 25(6): pp.1047–1061.

Bourdieu, P. and Wacquant, L. 1992. *An invitation to reflexive sociology*. Cambridge: Polity Press.

Collins, R. 2000. *The sociology of philosophies: a global theory of intellectual change*. Cambridge, Massachusetts: Harvard University Press.

Department of Education Policy Studies. 2012. Department Review Self Evaluation Report, Stellenbosch.

Fataar, A. (Ed.) 2012a. *Debating thesis supervision: perspectives for a University Education Department*. Stellenbosch: Sun Press.

Fataar, A. 2012b. Towards a ‘pedagogy of supervision’. In Fataar, A. (Ed.), *Debating thesis supervision: perspectives for a University Education Department*. Stellenbosch: Sun Press.

Fataar, A. 2005. Negotiating student identity in the doctoral proposal development process: a personal reflective account. *Journal of Education*, 36: pp.37–58.

Franke, A. and Arvindson, B. 2011. Research supervisors’ different ways of experiencing supervision of doctoral students. *Studies in Higher Education*, 36(1): pp.7–19.

Green, W. 2005. Unfinished business: subjectivity and supervision. *Higher Education Research and Development*, 24(2): pp.151–163.

Hopwood, N. 2010. A sociocultural view of doctoral students’ relationship and agency. *Studies in Continuing Education*. 32(2): pp.103–117.

Hugo, W. 2009. Spiralling reference. A case study of apprenticeship into an academic community of practice. *South African Journal of Higher Education*, 23(4): pp.703 –721.

Johnson, L., Lee, A. and Green, B. 2000. The PhD and the autonomous self: gender, rationality and postgraduate pedagogy. *Studies in Higher Education*, 25(2): pp.135–147.

Lee, A. and Green, B. 2009. Supervision as metaphor. *Studies in Higher Education*, 34(6): pp.615–630.

Lingard, B. 2005. Socially just pedagogies in changing times. *International Studies in Sociology of Education*, 15(2): pp.165–184.

Manathunga, C. 2005. The development of research supervision: ‘turning the light on a private space’. *International Journal for Academic Development*, 10(1): pp.17–30.

Reay, D. 2004. It’s all becoming a habitus: beyond the habitual use of habitus in educational research. *British Journal of Sociology of Education*, 25(4): pp.431–444.

Waghid, Y. 2005. Education, imagination and forgiveness. *Journal of Education*, 37: pp.225–241.

Worthington, S., 2005. *Learning identity: the joint emergence of social identity and academic learning*. Cambridge: Cambridge University Press.

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Teenage pregnancy and the South African Schools Act: is religion a justifiable reason for exclusion?

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Abstract

Post-apartheid schooling has seen a proliferation in private, and specifically, religious-based schools. These schools, while constituted within the South African Schools Act of 1996, can present a challenging demand, in that the customary religious practices of certain private religious schools might be seen as incompatible with the procedural ramifications of the aforementioned Act. As an instance of this incompatibility, we commence this article by examining one of South African schools' greatest challenges – teenage pregnancy. Firstly, by specifically looking at how Muslim-based schools respond to teenage pregnancies, we raise the concern that the exclusion of teenage pregnant girls might not only bring the representatives of two different constituencies – namely Muslim-based schools and the SA Schools Act – into conflict with one another, but that it might also engender the possibility of exclusion of others. Secondly, by examining whether learners of a particular religious faith can be excluded from schooling on religious grounds, we argue that a plausible understanding of cosmopolitanism propels the expectation that all diverse learners should be recognised as legitimate participants in a school republic irrespective of their violation of religious sanctity. This claim is corroborated by the argument that internal inclusion can most appropriately be realised through an emphasis on the equalisation of voice that affords even the most vulnerable in schools (that is learners) an opportunity to stake their claim to inclusion based on invoking their legitimate voices in matters that affect them.

The South African Schools Act and independent schools

The SA Schools Act (no. 84 of 1996) makes provision for the establishment of independent schools, which generally includes privately-run and religious-based schools. Subject to the Act, additional conditions attached to the registration of these schools, include: A head of department (HOD) must register an independent school if he or she is satisfied that:

- (a) The standards to be maintained by such a school will not be inferior to the standards in comparable public schools.
- (b) The admission policy of the school does not discriminate on the grounds of race.
- (c) The school complies with the grounds for registration contemplated in subsection (2), which states that “The Member of the Executive Council must, by notice in the Provincial Gazette, determine the grounds on which the registration of an independent school may be granted or withdrawn by the Head of Department” (Chapter 5, no.46)

Statistics released by the South African Institute of Race Relations (SAIRR), show that the number of independent schools is growing at a relatively rapid rate – to the extent that the number of learners attending independent schools between 2000 and 2010 increased in every province with the exception of the Free State. According to Hofmeyr and Lee (2004, p.143), while the dominant public perception of independent schools in 1990 was that of “white, affluent and exclusive”, the current reality is that the majority of learners at independent schools are black (to use the racial categories still employed by government), are religious and community-based, and charge average to low fees. The reasons for the establishment of these schools are as diverse as their religious and philosophical underpinnings. Central to the stated mission of many of these schools, however, is the contention that public schools cannot be trusted to cultivate and transmit the values and traditions at the core of respective religious beliefs.

While the South African Constitution recognises the importance of religion and religious symbols to the life of South African citizens, and therefore recognise that citizens have the right to believe in whatever religion they wish to, the Department of Basic Education’s (DoBE) policy on religion, as stipulated in the SA Schools Act, stipulates that state schools will provide only one type of education with respect to religion, and that is religion education: “Public educational institutions have a responsibility to provide Religion Education in a way that shows a ‘profound appreciation of spirituality’ but does not focus on any particular religion and does not aim to provide religious instruction” (Department of Education (DoE), 2003, p.459). Schools, therefore, explains Jeenah (2005), are expected to teach learners what religions are all about and, by doing so, increase understanding among citizens, build respect for diversity and value spirituality. Chidester (2002) describes the

approach by the Department of Education as one based on a principled distinction between the many religious interests, which are best served by the home, family, and religious community, and the national public interest in education about religion, religions, and religious diversity in South Africa. While the objective of the South African Board of Jewish Education (SABJE), for instance, is to promote and advance Jewish education in South Africa (SABJE, 1984), the mission of the Catholic Institute of Education is to enable Catholic schools to offer values-based, quality education to learners in an environment that nurtures moral, intellectual and spiritual development.

The establishment of religious-based schools, however, has not been without criticism, with Fataar (2005) contending that while the South African constitution allowed communities to establish independent institutions on condition that they did not explicitly exclude people on the basis of religion, race, or disability, the community-specific character of Muslim and other such schools, however, seemingly blocked access to groups outside of that community. Voicing a similar concern, specifically regarding Muslim-based schools, Tayob (2011) maintains that these schools appeared to propagate and preserve racial identities of apartheid South Africa, since they were overwhelmingly attended by coloured and Indian learners. Although these criticisms against independent schools seem valid one cannot deny that such schools conceived of their establishment as contributing to the enhancement of quality education in a democratic dispensation.

Inasmuch as the SA Schools Act has put in place directives to ensure that schools are free from discrimination, post-apartheid South Africa has witnessed numerous incidents of discrimination and exclusion on the basis of race, religion, language, ethnicity, teenage pregnancy, as well as the inability to pay school fees. The most recent example of religious-based discrimination involves the case of Sikhokele Diniso, a grade 10 learner from Siphamandla High School in Khayelitsha (Western Cape) who, in March 2013, was instructed to leave school and not to return until he had cut his hair. Diniso is a Rastafarian and growing his hair is considered by him as being a part of his faith. Only after the intervention of the NGO, Equal Education, was the learner allowed to return to school. In January 2013 siblings, Sakeenah and Bilal Dramat at Eben Dönges High in Kraaifontein, were instructed to remove their *hijāb* (head-scarf for females) and fez (head cover for males), respectively. While Bilal complied, Sakeenah refused, causing the school to contact their parents to fetch the children from school. Another example is that of Sunali Pillay, who, in 2010, was a learner at Durban Girls' High School. As

a Hindu, and as a religious and cultural expression of her physical maturity, she had her nose pierced and a gold stud inserted. In contravention of the school's regulation on the wearing of jewellery, her mother was requested to write a letter to the school explaining why Sunali had to wear a nose stud. After the school management refused to grant Sunali an exemption to wear the nose stud, her mother took the case to an equality court, which found in favour of the school, because Sunali's parent had signed an undertaking that their daughter would adhere to the school's code of conduct, which had clear stipulations about the wearing of jewellery. After the Equality court found in favour of the school, the Pillays successfully appealed to the Durban High Court (Du Plessis, 2009).

The first point we are trying to make is that while policies to prevent unfair discrimination are in place in the SA Schools Act, they do not preclude acts of exclusion from happening, as is perhaps, most evident in the acts of exclusion practised against pregnant school girls. These acts of exclusion are rapidly increasing for the disconcerting reason that teenage pregnancies appear to be on the increase. Our second point concerns the relationship between citizenship, religion and cosmopolitanism. While the SA Schools Act maintains clear guidelines that learners may not be excluded from schools on the basis of religious and cultural beliefs and practices, the authors of the Act, perhaps, did not foresee that the same beliefs which are protected under the Constitution and the Act would be used to exclude some learners from both public and religious-based schools. The existence of several private religious schools, which are constituted on the basis of very specific customary religious practices, presents a particular challenge to the SA Schools Act. Certainly, in the context of salient decisions pertaining to teenage pregnant girls, these schools might be seen as contravening the procedural stipulations of the Act. We shall now attend to a discussion of the latter.

Teenage pregnancy and religious responses

Statistics South Africa's 'General Household Survey 2010: Focus on Schooling Report' estimated that up to 89 390 school girls were pregnant or had fallen pregnant between July 2009 and July 2010. Stated differently and perhaps to highlight the severity of the problem, particularly in a country where HIV prevalence is 18.8%, one in three girls has a baby by the age of twenty and 124 school girls fall pregnant every day. There are many and diverse reasons South African classrooms are filled with pregnant girls and

young mothers – while some are as a consequence of rape, coercion, prostitution, and drug abuse, others are consensual and undoubtedly related to teenage sexuality, and ill-informed decisions. In addressing the unacceptably high rate of teenage pregnancy, and sensitive to the impending marginalisation of the pregnant mother-to-be, the SA Schools Act makes provision for compulsory attendance of all children “until the last school day of the year in which such a learner reaches the age of fifteen years or the ninth grade, whichever occurs first” (No. 84 of 1996, Chapter 2, 3(1)) and dramatically curtails a school’s rights to expel learners. The only provision that exists to ‘permit’ pregnant learners or young parents (if they are under 16) to be away from school is if they get exemption from the relevant provincial HOD.

While the legal directive of the SA Schools Act is clear in terms of the rights of access to schooling of the pregnant girl, what the Act did not adequately address was the rights of the school. Consequently, and in direct response to the growing number of pregnant school girls being turned away from schools, and perhaps even in recognising the glaring gap between policy and practice, the DoBE, in accordance with the Constitution, the SA Schools Act, and the Promotion of Equality and Prevention of Unfair Discrimination Act (No. 4 of 2000) developed the ‘Measures for the prevention and management of learner pregnancy’ (2007), which states that the pregnant school girl shall not be unfairly discriminated against. The ‘Measures for the prevention and management of learner pregnancy’ document aims to clarify the position of the DoBE regarding learner pregnancies, and “to provide an environment in which learners are fully informed about reproductive matters and have the information that assists them in making responsible decisions” (2007, p.1). In recognition of the responsibility of education, the document points out that The National Curriculum Statement (NCS) provides for comprehensive Life Skills programmes in the Learning Area Life Orientation, which is compulsory from grades R to 12. The Life Skills programme deals with topics that affect each and every learner and educator – ranging from human sexuality, decision-making skills, to prevention of teenage pregnancy and sexually transmitted diseases (2007).

As Morrell, Bhana and Shefer (2012) note, until the publication of ‘Measures for the prevention and management of learner pregnancy’, schools had been expected to interpret the law as best they could. The 2007 document was designed to make explicit the rights and obligations of schools, teachers, and learners, “by balancing the best interests of the individuals against those of other learners, educators, the school, and its community” (2007, p.4).

However, the original policy regarding teenage pregnancy, as well as the 'Measures' document do not seem to take into account that pregnancy is essentially a gendered process, which means that any response to it is couched in gender. To this end, when a girl becomes pregnant, she is not only confronted with the responses (and judgements) of her peers but also by the rest of her community. On the one hand, state Morrell, *et al.* (2012), the ways in which pregnancy and parenting are responded to at schools generally reflect some of the dominant discourses about gender in the broader society. That is, patriarchy and male chauvinism continue to be considered as reasons why pregnant girls or unmarried mothers are subjected to more prejudice and even condemnation than unmarried fathers. On the other hand, because of the multiple ways that policy can be interpreted, and open to exclusion rather than inclusion, it has a limited capacity to change the experiences of learners who happen to be pregnant. For instance, the two-year time constraint for pregnant school girls does not necessarily inhibit or control teenage pregnancy other than limiting the girl's return to school. Morrell, *et al.* (2012) contend that apart from policies and measures to manage teenage pregnancies, school managers, parents and other community members bring with them gendered identities and moralities (prejudices, inclinations) and practices (both at school and beyond).

Through our own project work on 'Re-imagining citizenship',⁴ we are aware that many educators either do not feel comfortable in teaching about sexuality, sexual abuse, and abortion, or they refuse to do so on the basis that they cannot be expected to teach on topics, which perhaps compromises their own religious or moral beliefs. We are also aware of two pregnancies at two public high schools in the Western Cape, where the principals, upon being informed about the pregnancies, informed the girls to leave immediately and not to return until further notice. This decision, according to both principals, was based on preserving the 'morality' of the school. The principals contend that allowing pregnant girls to remain at the school would send a message that the school condoned their behaviour. Whether the behaviour being referred to was that of premarital sex, or getting pregnant, remains unclear. At one of the

⁴ The 'Re-imagining citizenship' project is currently being conducted at five high schools in the Western Cape. Through working with Life Orientation educators, and specifically developing a manual on the teaching of citizenship, the primary objectives of the project are: (1) to explore democratic citizenship education in consonance with local practices; (2) to explore how the concept of *Ubuntu* (human interdependence) can be intertwined with deliberative and compassionate engagement; and (3) to explore possible suggestions to deal with societal conflicts.

schools the principal reported that another girl, who had been instructed to leave the previous year due to her pregnancy, had attempted to return at the beginning of the new school year. While the school generally accepted the return of teenage mothers, the principal, in this instance refused the admission of the girl because she had been married by religious rites. A married woman, he maintained, should not be at school, as she no longer had anything in common with her peers.

In two other recent cases, which started in 2010, involving two Free State School Governing Bodies, the principals were accused by the provincial education HOD of acting unlawfully when they temporarily expelled girls from school, instructing them to return after their pregnancies (Constitutional Court of South Africa, 2013: CCT 103/12). The SGBs in both instances, it would seem, were merely enforcing the school's pregnancy policy in terms of its code of conduct and were, according to them, not acting unlawfully, since the contents of the actual policy had been communicated to the relevant provincial department of education, and had not been brought into contention. Faced with appeals for assistance from the parents of both pregnant girls, the provincial education HOD, in his capacity as the employer of the principals in terms of the Employment of Educators (Act 76 of 1998), issued instructions to the principals of both schools to immediately re-admit the girls on the basis that the two SGBS had not followed proper procedure, and that the fundamental rights of the girls to access to schooling was being prevented. Both SGBs objected on the basis that the department did not have the power to instruct principals to act against the adopted school policy, and, in making a successful application to the High Court, contended that the instruction of the provincial education HOD infringed on the powers of the SGB. It is important, however, to consider the majority judgement of Justice Khampepe in contrast to the more radical judgement of Justice Zondo. Justice Khampepe found that the schools' governing bodies were empowered to adopt pregnancy policies and that in addressing his concerns regarding the policies, the HOD was obliged to act in accordance with the Schools Act, which he did not. The HOD had acted unlawfully in issuing instructions to the principals that they readmit the pregnant students, contrary to their schools' pregnancy policies. In considering the unconstitutionality of the pregnancy policies, Justice Khampepe found that the pregnancy policies were discriminatory as they differentiate between students on the basis of pregnancy, which is disallowed under section 9(3) of the Constitution. The policies also limit pregnant students' fundamental right to education, as protected by section 29 of the Constitution, by requiring students to repeat up to a year of schooling. In light

of these findings, Justice Khampepe ordered that the appeal be dismissed and that the schools' governing bodies review their pregnancy policies in light of the judgment and furnish the Court with a copy of the revised policies. In contrast to the majority's findings on the exercise of public power, Justice Zondo found that the governing bodies did not have the power to make the pregnancy policies as they were inconsistent with provisions of the Schools Act and the Constitution. As such, he found that the HOD not only had the power to act as he did in instructing the principals not to carry out or implement the pregnancy policies which were in breach of the Schools Act and the Constitution, he was obliged to do so (Human Rights Law Centre). Emerging clearly from the majority and the minority judgements, is that the exclusion of the pregnant girls was inconsistent with the provisions of the SA Schools Act and the Constitution.

So, how are religious-based schools responding to the prevalence of teenage pregnancies, which, no doubt, is as much of a challenge at independent schools as it is at public schools? Data or reports on the exclusion of pregnant girls are not readily available, since they only come to light if the parents exercise their rights to report the matter to the relevant education department, or the Human Rights Commission. However, we are aware that within the Western Cape, it is not uncommon for Muslim-based schools to expel pregnant girls, as well as the boys, if they are the fathers, on the grounds that they have contravened the Shari'ah (Islamic law), which prohibits sexual intercourse outside of marriage. Since a Muslim-based school is constituted on a particular interpretation of the laws of Islam, acts and behaviour which run contrary to these laws are considered to be in violation of the faith and, so it seems, should not be tolerated. Parents in this regard would be reluctant to challenge the school on the basis of two reasons: Firstly, they had enrolled their children at a religious-based school with the intention of exposing their children to a specific religious ethos and environment, which, we are sure, they had hoped would have assisted their children in not indulging in premarital sexual activities. To therefore take the school to task for merely enforcing not only its policy on teenage pregnancy, but for also respecting the moral norms of its religious doctrine would seemingly for them be untenable; secondly, as stated earlier, when a girl becomes pregnant, she is not only confronted with the responses (and judgements) of her peers, and the rest of the school community, she is also brought into reckoning by the community of her 'situatedness'. Her parents, if they were to hold the school to account in terms of the SA Schools Act or the Constitution, would face a precarious predicament within the 'situatedness' of their community. In other words, in

disagreeing with the school for expelling their daughter or son on the grounds of a premarital pregnancy, they are bringing into disrepute their own connection and agreement with a community, who might stand in agreement not necessarily with the policy of a school, but certainly with a particular interpretation of Islamic law, which states that an unmarried pregnant girl has committed an adulterous act deserved of being punished. What emerges here is that the decision of a Muslim-based school to expel a pregnant girl might be seen as incompatible with the procedures of the SA Schools Act that not only brings the representatives of two different constituencies (Muslim community and democratic government) into conflict with one another but also engenders the possibility of exclusion of others – that is, pregnant learners.

Of course, we have to consider the school's argument of a moral basis, as well as the rights of the school as opposed to the rights of the pregnant girl. But, does the preservation of morality necessarily have to translate into a notion of exclusion? Can the act of excluding pregnant girls from school be considered as an act of morality? And should schools be allowed to impose religious doctrines on learners simply because these schools enjoy the privilege of being private? The challenge that emerges is that the decision of a Muslim-based school to expel a pregnant girl might be seen as incompatible with the procedures of the SA Schools Act. And this incompatibility not only brings the representatives of two different constituencies (Muslim community and democratic government) into conflict with one another but also engenders the possibility of exclusion of others – that is, pregnant learners.

We are aware of a precedent for 'acceptable discrimination' in the case of *Wittman v Deutscher Schulverein, Pretoria* (1998(4) SA 423(T)), which recognised the right of private schools to determine admissions based on religion. In this matter the court had to decide, *inter alia*, whether the freedom of religion clause in the *Constitution of South Africa, 200 of 1993* (the interim Constitution) afforded parents a right to exclude a scholar from attendance at religious instruction classes and observances at school. The court held that section 14(2) of the interim Constitution did not apply to the relationship between the parent and the school, as the latter is not a state aided institution or an organ. Du Plessis (2006) explains that the court argued that religious observance is an act of religious character, for example, the daily opening of a school by prayer, whilst religious education is not. Moreover, even if religious instruction were a religious observance, the 1993 Constitution granted the rights to conduct religious observances at state and state-aided institutions and that right could not be nullified by those who had the right to abstain from

them but chose not to. The religious instruction classes at the school were therefore not unconstitutional. However, the right to freedom of religion, thought, belief and opinion entailed that attendance of the religious instruction classes be voluntary. Also of particular interest in this case is that while the school is a private one, and received state funding, the court held that this did not mean that the state was in control of the school. The *Wittman v Deutscher Schulverein* is a key judgement that legitimised religious freedom in private schools in South Africa, and by so doing, endorsed the right to discriminate. But, can religious-based schools legitimately exclude learners from school on the basis of an alleged contravention of a religious code of ethics?

Towards internal inclusion

In this section, we argue that the expulsion of learners under the aegis of conforming to religious doctrine together with imposing a community's desired forms of morality are incommensurable with the notion of internal inclusion. Firstly, to expel learners from school on the grounds that they have contravened a religious code of ethics is to be oblivious of the fact that all mainstream religious practices are very favourable to giving 'sinners' a second chance, that is, religions' advocacy for forgiveness and compassion. In fact, to act morally means that one has developed compassion and care for the other who has experienced a vulnerability and which he and she might even already regret. And to punish learners further by denying them access to schooling on the grounds of having dishonoured a rule is tantamount to acting immorally without being intrinsically connected to the norms and practices of internal inclusion.

Regarding inclusion, Young (2000) avers that any human being has a legitimate right to engage with others about important decisions that affect them – that is, every person has a right to decision making because they are affected by the decision-making processes and thus have a right to influence the outcome. However, learners who are expelled from school – in this instance for contravening a religious law, and the code of ethics of a school, do not engage in the formulation of the rule which excludes them. That is, learners have simply been excluded on the basis of not having been considered matured enough by those in authority to deliberate the rule's implications. Moreover, if one considers that inclusion involves bringing into the sphere of deliberative activity those individuals who previously were not included (Biesta, 1999), it follows that denying learners access to schooling on the

grounds that they have violated a rule is to exclude them from a fundamental requirement for inclusion, that is, to be unconditionally included.

Unconditional inclusion means that a person cannot face stereotypical judgement on the grounds of having contravened a religious law but rather that every person deserves to be heard, and at least considered equally in deliberation. Biesta (1999) makes the distinction between two assumptions with regard to inclusion, namely internal inclusion, which refers to how we can make our practices even more inclusive, and external inclusion, which looks at bringing more people into a deliberative sphere of engagement. Whereas the first assumption is focused on making individuals even more attentive to dissimilarity, the second assumption demands of those who are in a deliberative space to bring more individuals into that sphere so that they may engage with reason and tolerance.

In our view, by denying learners access to school on the grounds that they have contravened a rule is not only to deny them the possibility of redemption by engaging with fellow learners and educators possibly on what can be done to build communities of trust and recognition of the other (irrespective of their acts of supposedly wrong doing). In fact, by internally including learners we might engender greater opportunities for learners and educators to become persuaded by the norms and practices of their religions rather than dismissing them prematurely from the sphere of engagement that schooling can and might offer. The educational potential for internal inclusion is to cultivate more opportunities for inclusivity that can possibly prevent contravening religious rules. The point about internal inclusion is that dissimilarity or to have acted out of consonance with the prescribed norms of the school and religion might just be the catalyst to rally a school community around the issue of morality they so deeply cherish and endeavour to uphold. And, following the art of deliberation, it does help to talk over and over again about matters of public, more specifically religious communities' concern. It does not make sense to exclude learners who merely become more vulnerable in society because of having already been victimised. Internal inclusion requires that we continue to engage them (and allow them access to schools) as to nurture relationships that can be informed by their voices in the deliberative sphere of an inclusive school. It is in this regard that the SA Schools Act remains a tenable framework in terms of which internally included spheres of pedagogy and morality can be harnessed. So, it does not help to expel learners who are pregnant and married. This brings us to a discussion of cosmopolitanism and inclusion.

On cosmopolitanism and inclusion

To Benhabib (2011), a conception of cosmopolitanism cannot be realised without contextualisation and articulation through self-governing entities. Based on this understanding, Benhabib contends that individuals are rights-bearing not only in virtue of their citizenship within states, but by virtue of their humanity in a global world. Consequently, posits Benhabib, “cosmopolitanism involves the recognition that human beings are moral persons equally entitled to legal protection in virtue of rights that accrue to them not as nationals, or members of an ethnic group, but as human beings as such” (2011, p.9). In their explanation of whether there are individuals or groups with whom cosmopolitanism is incommensurate, Merry and De Ruyter (2009) make two assertions. Firstly, that cosmopolitanism is not tantamount to secularism, and hence that it would be incorrect to assume that religious beliefs and cosmopolitanism are in discord. Secondly, they differentiate between what they term ‘religious people in general’ or ‘spiritual believers,’ and ‘deeply religious’ or ‘literalists’, which includes fundamentalist and orthodox individuals. The ‘deeply religious’ are defined as individuals who are strongly committed to a belief in a transcendent Being or Ultimate Reality, and who draw a clear division between those who are right and therefore on the inside, and those who are wrong and are therefore on the outside. The ‘religious people in general’ are also motivated by their beliefs, but rather than focusing on what is right and wrong, emphasis is placed on what is good. According to Merry and De Ruyter, the pragmatic approach of the latter group follows from a different moral obligation to that of the former. While the ‘religious people in general’ are often motivated by religious convictions as they aspire to realise cosmopolitan ideals, the ‘deeply religious’ do not generally demonstrate an empathic openness to learn or to respect others, and act on questionable motives, which leads Merry and De Ruyter (2009) to conclude that the ‘deeply religious’ fall short of being cosmopolitan.

Clearly, in any school environment – public or private – we will encounter educators, school managers, learners and community members who are either ‘religious people in general’ or ‘deeply religious’ – as was found during our project work when certain educators showed a reluctance to teach about sexuality, homosexuality, and abortion, on the basis that they cannot be expected to teach on topics, which perhaps compromises their own religious or moral beliefs. While any individual, in terms of the Constitution, has the right to practise his religious and cultural beliefs, these same beliefs cannot, however, infringe on the rights of others – and this includes the rights of

learners to be taught about difference, and topics, which might not resonate with the beliefs or values of the educator. Similarly, while public schools have an obligation to teach about different religions, so that diversity is both recognised and respected, private religious-based schools have the right to promulgate a particular religious tradition, but within a clearly defined balance between the individual as a religious being, and the individual as a citizen – that is, without encroaching a person’s right to be human. This balance ought not to be seen as a separatist construction of identity, but rather as an acknowledgement and recognition of a multiplicity of identity. Schools, even when constituted on private principles of religion, or any other philosophical belief, have the responsibility that they are preparing learners for a public, heterogeneous and democratic space. Religion, therefore, cannot be used to preclude the learner from enacting his or her right of access as a public citizen. Given the prevalence of discrimination and exclusion at public and private schools, schools would seriously need to consider the promotion of inclusion in their schools – both via the curriculum, and policies, such as the Code of Conduct. Teaching about different religious beliefs, and cultural practices, or about homosexuality, or teenage pregnancy cannot be addressed in the absence of a clear articulation and understanding of inclusion. We are not arguing that educators need to accept, and therefore need to teach their learners to accept all forms of difference. But, learners, if they are to participate in a pluralist and democratic society do need to know how *not* to exclude those who are different to them.

Critical to our argument for an inclusive form of citizenship is that the same expectation that religious-based schools have in exercising their autonomy as privately run institutions, needs to be extended to learners as autonomous beings, and as autonomous citizens. Cosmopolitanism along the lines of hospitality to strangers will work as this will ensure the non-marginalisation of teenage pregnant girls. Likewise cosmopolitanism as hostility will also work as teenage girls can disrupt their exclusion. Meting out a system of judgement, which says that a pregnant school girl does not have the right to attend school, leads to exclusion not just of an individual, but places religious-based schools on a trajectory, which runs contrary to the democratic agenda of a society of which these same schools are a part. This argument has been confirmed by the Constitutional case: *Head of Department, Department of Education Free State Province v Welkom High School and Another* (2013), in which it was found that the exclusion of the pregnant girls was inconsistent with the provisions of the SA Schools Act and the Constitution. On the one hand, then, these schools exist because of a pluralist and cosmopolitan understanding of citizenship –

that individuals have the right and protection of the state to exercise their beliefs. And on the other hand, these schools use the same right to practise a form of discrimination. Surely, the right of these schools to exist, as constituted in the SA Schools Act, is constitutive of a conception of inclusive cosmopolitanism, which all religious-based schools, for the sake of their own existence, ought to protect and promote. To discriminate against learners on religious grounds undermines the spirit of inclusive cosmopolitanism that initially contributed to their existence. Thus, building a democratic school with an inclusive and cosmopolitan ethos does not necessarily restrict religion but does countenance the exclusive ways in which religions are and can be used to demoralise difference, in this instance, instigated by teenage pregnancy.

In this article, we have shown how the SA Schools Act has attempted to ensure that learners at schools are free from any form of discrimination, and in recognition of diverse beliefs – religious or otherwise – has also made provision for the existence of independent and religious-based schools. We have shown, through citing various examples, that regardless of the various policies, some learners have been and continue to be on the receiving end of various forms of exclusion. In turning to the central concern of this article, we highlighted the exclusion of pregnant school girls at Muslim-based schools, where the implementation of a particular interpretation of Islamic law has meant the barring and marginalisation of girls, who are pregnant outside of marriage. We have argued that this type of exclusion not only brings the representatives of two different constituencies (the SA Schools Act and religious-based schools) into conflict with one another but also engenders the possibility of exclusion of others. Moreover, we have argued that if one considers that inclusion involves bringing into the sphere of deliberative activity those individuals who previously were not included (Biesta, 1999), it follows that denying learners access to schooling on the grounds that they have violated a rule is to exclude them from a fundamental requirement for inclusion, that is, to be unconditionally included. Internal inclusion, we have argued, requires that we continue to engage them (and allow them access to schools) as to nurture relationships that can be informed by their voices in the deliberative sphere of an inclusive school. Finally, the deliberative and constitutive value of the SA Schools Act is not only dependent on how well its current policies against discrimination are implemented, but how well they recognise and respect difference, and the extent to which all forms of being and beliefs are included, whether in public or independent schools, because, ultimately, what we teach and learn in schools, is what we become in society.

References

Benhabib, S. 2011. *Dignity in adversity: human rights in troubled times*. Cambridge: Polity Press.

Biesta, G. 2009. Sporadic democracy: education, democracy, and the question of inclusion. In Katz, M., Verducci, S. and Biesta, S. (Eds), *Education, Democracy, and the Moral Life*. Washington: Springer, pp.101–112.

Catholic Institute of Education
<http://www.cie.org.za> Accessed 4 April 2013.

Chidester, D. 2002. Religion education in South Africa: teaching and learning about religion, religions, and religious diversity. Report: Teaching for tolerance and freedom of religion or belief. Preparatory Seminar, Oslo, 7–9th December.

Constitutional Court of South Africa. 2013. Head of Department, Department of Education, Free State Province and Governing Body of Welkom High School, and Harmony High School, Case: CCT 103/12.
www.saflii.org/za/cases/ZACC/2013/2 pdf. Accessed on 14 March 2013.

Department of Education of South Africa. 2003. National Policy on Religion and Education. Pretoria. *Government Gazette*, Vol. 459, No. 25459.

Department of Basic Education. 2007. Measures for the prevention and management of learner pregnancy. Pretoria: Government Printers.

Department of Basic Education. 2012. General Household Survey (GHS) 2010: Focus on schooling. Pretoria: Government Printers.

Du Plessis, A. 2006. The fulfillment of human rights related to religion: some current challenges in South Africa. Paper prepared for the ICS Workshop on Secular and Religious Sources of Human Rights Law, Berlin. 17–20 May 2006.

Du Plessis, L. 2009. Religious freedom and equality as celebration of difference: a significant development in recent South African constitutional case-law (Per 17). *Potchefstroom Electronic Law Journal*. www.saflii.org.za Accessed 4 April 2013.

Fataar, A. 2005. Discourse, differentiation, and agency: Muslim community schools in postapartheid Cape Town. *Comparative Education Review*, 49(1): 23–44.

Hofmeyr, J. and Lee, S. 2004. The new face of private schooling. In Chisholm, L. (Ed.). *Changing class: education and social change in post-apartheid South Africa*. Johannesburg: HSRC Press, pp.143–174.

Jeenah, N. 2005. Religion and schools. In Ramadiro, B. and Vally, S. (Eds), *Education rights project*. Johannesburg: Wits Education Policy Unit, pp.1–19.

Merry, M.S. and De Ruyter, D.J. 2009. Cosmopolitanism and the deeply religious. *Journal of Beliefs and Values*, 30(1): pp.49–60.

Morrell, R., Bhana, D. and Shefer, T. 2012. Pregnancy and parenthood in South African schools. In Morrell, R., Bhana, D. and Shefer, T. (Eds), *Books and babies: pregnancy and young parents in schools*. Pretoria: HSRC Press, pp.1–27.

South African Board of Jewish Education: Constitution. 1984.
www.sabje.co.za Accessed 4 April 2013.

South African Institute of Race Relations: South African Survey 2010/2011: Education. Pretoria: SAIRR.

Tayob, A. 2011. Islamization for South African Muslim independent schools. In Tayob, A, Niehaus, I. and Weisse, W. (Eds), *Muslim schools and education in Europe and South Africa, religionen im dialog*. Berlin: Waxmann, pp.39–54.

Young, I.M. 2000. *Inclusion and democracy*. Oxford: Oxford University Press.

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Exploring the recontextualisation of the discourse of geography in textbooks

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Abstract

The review of textbook studies shows that cursory attention has been given to the representation of the nature and structure of the parent discipline in textbooks. This study focuses on how the discourse of geography, is recontextualised in four grade 10 textbooks: two state approved textbooks that support the new curriculum (CAPS), an older pre-1994 textbook and a UK textbook. The analysis has been framed, at a macro-theoretical level, by Bernstein's concept of recontextualisation and Bourdieu's theory of symbolic forms. At the micro analytical level the discourse of Geography as conceptualised by Wignell, Martin and Eggins (1993) has been drawn on. A qualitative approach enabled in-depth multi-dimensional analysis that uncovered explicit and implicit similarities and differences in the texts.

This paper articulates and illustrates an analytical framework for analysing the representation of the knowledge structure of geography in textbooks. It illustrates this framework by analysing the same sub-section: *the structure and composition of the atmosphere*, in the texts. Data analysis shows that the textbooks recontextualise the discourse of Geography differently. Of the two textbooks developed to support CAPS, one recontextualises the discourse of Geography in a more coherent and differentiated way than the other. It is argued that greater divergence from the discourse of Geography increases possibility of gaps in knowledge and understanding. On the whole the paper points to paying attention in textbook studies to how the nature and structure of the parent discipline is recontextualised in textbooks.

Introduction

School textbooks are seen as fundamental for supporting curriculum enactment in schools. Textbooks, firstly, set out the parent discipline as "textbooks expound the body of accepted theory [of a discipline], . . . illustrate many or all of its successful applications, compare these applications with exemplary observations and experiments" (Kuhn, 1962, p.10) and "aim to communicate the vocabulary and syntax of a contemporary scientific language" (Kuhn, 1962, p.136). Secondly, textbooks are key resources for directing what students learn. Apple (2004) holds that textbooks "dominate

what students learn”, they “set the curriculum” and present “the facts learned in most subjects” and as such “participate in no less than the organised knowledge system of society” (p.182). Thirdly, textbooks present the socially accepted body of knowledge of a discipline. Since the entire universe of knowledge of the parent discipline cannot be represented, what knowledge is selected to be included is influenced not only by national curriculum specifications but also by the ideologies of the selectors. Thus Apple holds that “textbooks signify through their content and form, particular constructions of reality” (Apple, 2004, p.182):

Textbooks . . . signify through their content and form, particular constructions of reality...they participate in creating what a society has recognised as legitimate and truthful. They help set the canons of truthfulness. . . (Apple, 2004, p.182).

However, textbooks are not just curriculum tools nor mediums for the transfer of ideological messages but also commercial products and economic commodities that compete with other textbooks in the market. Thus, since the 70s, Apple’s ‘highly influential work’ in books such as *Teachers and Texts* (1986) and *Official Knowledge* (1993) reveals through critical analysis “the hegemonic processes that characterise the production and consumption of textbooks both inside and outside the US” (Crawford, 2003, p.18).

Another quote cited by Apple (2004) encapsulates varied views of textbooks:

Textbooks, for better or worse, dominate what students learn. They set the curriculum, and often the facts learned, in most subjects. For many students, textbooks are their first and sometimes only early exposure to books and to reading. The public regards textbooks as authoritative, accurate and necessary. And teachers rely on them to organise lessons and structure subject matter. But the current system of textbook adoption has filled our schools with Trojan horses – glossily covered blocks of paper whose words emerge to deaden the minds of our nation’s youth, and make them enemies of learning (Apple, 2004, p.183).

While the public expects textbooks to be ‘authoritative, accurate and necessary’, the above quote points out that the ‘quality’ of textbooks have been declining, or worse textbooks are viewed as subversive. The metaphor of the Trojan horse leads one to think about textbooks as ‘something that is meant to disrupt, undermine, subvert, or destroy an enemy or rival, especially somebody or something that operates while concealed within an organisation’. The quote also cautions against being fooled by the appearance of the textbook. Textbooks reduced to ‘glossily covered blocks of paper’ . . .that lure selectors may ‘deaden the minds of students and make them enemies of learning’.

Textbooks have been studied from a variety of lenses. Marsden's (2001) three distinctions: of matter, refers to the content of textbooks; method, refers to the context of curriculum and pedagogy within which they are used and mission, refers to wider conceptions of schooling and society, indicates aspects that could be analysed. Nworgu (cited by Emereole, 2007) developed six indices for the evaluation of the content of science textbooks: *topical coverage index* that provides an estimate of the extent to which the textbook covers the prescribed syllabus; *learning activity index* that measures participation of learners; *study questions index* that measures the extent to which learners are required to think or to receive knowledge; the *illustration index* that measures the extent to which learners are required to engage in an activity or to view/observe the illustration; and the *chapter summary index* that measures the extent to which a more permanent understanding of the text is promoted. Stradling (2001) developed four categories of analysis, of which the first deals with the evaluation of textbook content that includes questions on coverage, sequencing of curriculum, space allocation, the incorporation of multiple perspectives, cultural and regional identity and omissions. The second deals with the textbooks pedagogic value that includes questions on students prior knowledge, on whether the textbook encourages memorisation or skills of development, on the use of charts and pictures, on the explication of historical concepts in the text and on the facilitation of comparative thinking. In Pingel's (1999) list of criteria for analysis of content, factual accuracy, completeness, errors and extent of differentiation are identified. Collada and Atxurra (2006) analysed how the objective of the curriculum of democratic citizenship within the European framework and Spanish educational reforms is represented in textbooks. From the assessment perspective, Yang (2013) compared assessments in older syllabus-based geography textbooks with new standards-based junior Geography textbooks used in Mainland China. Yang found that the new books abandoned the "overwhelming repetition drills", "the application of geographic knowledge and skills is valued", "higher order thinking assessments became more numerous" and that "the general quality of assessments in the newer standards-based books improved" (Yang, 2013, p.66). Many textbook studies focus on the social representation of marginalised groups. Emereole (2007) added the under-represented population index, to Nworgu's five indices, for measuring the extent to which women and cultural and ethnic diversity is represented in neutral or biased ways. Sleeter and Grant (1991) analysed how America's diversity was projected to children through the school day. They examined the question: "how have the writers and publishers. . . selected knowledge of various American racial, social class,

gender and disability groups?” (p.281). McKinney (2005) investigated to what extent textbooks are appropriate for diverse learners in SA and found inequity in gender representation, “significant under-representation of rural, poor, disabled and working-class social worlds, though racial diversity was better represented” (p. xi). Johnston (2006, p.286) analysed human geography in several textbooks and concluded that “their use as political tools in attempts to promote particular visions of human geographical practices”. Textbooks can and have been studied from a range of lenses, and this study introduces a further category of analysis: the recontextualisation of the parent discipline in textbooks.

Bernstein’s description of the recontextualisation of knowledge from its context of production to its reproduction in schools (Bernstein, 1996) provides the overarching conceptual framework for exploring how geographical knowledge is recontextualised in textbooks. Bernstein’s (2000) conceptualisation of this process is analysed in his theory of the ‘pedagogic device’ that sees knowledge as being recontextualised from its parent discipline through to the ‘official curriculum’ and to its ‘reproduction’ in schools and in undergraduate tertiary education. The recontextualisation of biology in the South African Life Sciences curriculum has been explored by Johnson, Dempster and Hugo (2011). In line with these authors and Muller (2007) this study is based on the premise that for specialised forms of knowledge to be reproduced the school subject ought to recontextualise the generally accepted basic knowledge structure of the parent discipline as closely as possible. While the *process* of recontextualisation from the context of production of knowledge to its reproduction context in schools may be studied, this study hones in on *what knowledge* has been recontextualised in textbooks. In this regard Bernstein (1990) argues that the basic question to be asked with reference to the privileging pedagogic text is:

Does the text focus upon the pedagogic subject’s relation to this text in terms of social class, gender, race attributes or any other discriminating attribute or does the text focus on the internal constituents of the privileging text in the process of its transmission and acquisition at the level of the classroom or school (p.173–174).

The relevant point for this paper is the analytical distinction between social representation (class, gender, race attributes) and knowledge representation (‘internal constituents’) that could be used as lenses to categorise textbook studies. While the context in which the textbook is used has an impact on representation of content, inaccurate, incomplete, incoherent and insufficiently differentiated knowledge contents would impair understanding in contexts

where both teachers and students depend on the textbook as the main resource for teaching and learning the curriculum. In this regard factual accuracy, completeness, errors and extent of differentiation of content may be analysed (Pingel, 2000).

The object of this analysis is on knowledge representation or the ‘internal constituents’ of textbooks that were developed to support the new curriculum (Department of Education, 2012) and to compare them with a UK textbook and an older textbook used prior to democratic change in 1994. The analysis has been framed at a macro-theoretical level by Bernstein’s concept of recontextualisation and Bourdieu’s theory of symbolic systems as ‘structuring structures’, ‘structured structures’ and as ‘instruments of domination’. With reference to the specific nature and structure of geography, the discourse of geography as a discipline concerned with making order and meaning of the experiential world, through observing, classifying and explaining phenomena (Wignell *et.al.*, 1993) was drawn on. This paper articulates an analytical framework for evaluating the knowledge structure of geography textbooks. It also proposes a fundamental general criteria to judge textbook quality – the extent to which the essential link between knowledge represented in a school subject textbook and its parent discipline is maintained.

Geography, symbolic forms, social functions

The social function of symbolic forms of knowledge as ‘structured, structuring structures’ has been highlighted by Bourdieu (1991). As structuring structures the symbolic forms are instruments for making sense of objects and experiences symbolically. In Bourdieu’s words they are “instruments for knowing and constructing the world of objects, as symbolic forms. . . thus recognizing . . . the active aspect of cognition” (Bourdieu, 1991, p.164). As structuring structures symbolic forms enable symbolic power, “a power of constructing reality” and one “that tends to establish a gnoseological order” or an order based on knowledge where “the immediate meaning of the world depends on what Durkheim calls logical conformism, that is, a homogenous conception of time, space, number and cause, one which makes it possible for different intellects to reach agreement“ (Bourdieu, 1991, p.166).

Durkheim designates the social function of symbolic forms explicitly in that he “makes social solidarity dependent on the sharing of a symbolic system”. Thus Bourdieu states:

It is an authentic political function. . . symbols are the instruments par excellence of ‘social integration’; as instruments of knowledge and communication they make it possible for there to be consensus on the meaning of the social world. . . a consensus which contributes fundamentally to the reproduction of the social order. Logical integration is the precondition of moral integration (Bourdieu, 1991, p.166).

An additional social function of symbolic forms is that “they make it possible to reach consensus on the meaning of the social world, a consensus that contributes to the reproduction of the social order” (p.166). Furthermore, that logical integration is a prerequisite for moral integration is yet another argument for symbolic forms of knowledge.

These structuring functions of all symbolic forms is echoed by Wignell *et al.* (1993), who conceptualised the discourse of geography as a discipline concerned with making order and meaning of the experiential world, through observing, classifying and explaining phenomena. The **first** procedure to uncover this order and meaning is to observe and describe the experiential world through a technical lexis. The technical lexis refers to the use of terms or expressions within a specialised field that have a field specific meaning. The technical terminology that is core to the field is the means, not only for making sense symbolically, but also for more generally accepted geographic meaning to be attributed to objects and experiences. The technical terms are either unique to the field (mesas and buttes), borrowed from other fields (condensation and transpiration) or drawn from vernacular taxonomies (weather). The vernacular terms acquire a new meaning because they are part of a geographic taxonomy. As instruments of knowledge, “symbolic structures“ can exercise a structuring power only because “they themselves are structured” (Bourdieu, 1991, p.166). This aspect aligns with Bourdieu’s symbolic forms as ‘structuring structures’ that refers to the use of the language and structure of geography to construct meaning of the experience. This first step of relating to students experience, or directing their experience, aims at rooting the symbolic description that follows in an individual perceptual experience.

The structuring power of geography as a symbolic form arises from its structure. Wignell *et al.* (1993) hold that the structure of geographical knowledge is that it is made up of many taxonomies. A taxonomy:

Is an ordered, systematic classification of some phenomena based on the fundamental principles of superordination (where something is a type of or kind of something else) or composition (where something is a part of something else)? (Wignell *et al.*, 1993, p.137)

Taxonomies arise from two principles of classification: super-ordination where something is a kind of or type of something else and composition where something is a part of something else. This binomial classification ‘tells little about the thing itself’ but enables it to be placed in an ordered system of oppositions in relation to other things. An example of superordination is: there are three types of rocks – igneous, metamorphic and sedimentary rocks. This principle of classification extends a general concept into its specific types. The principle of composition refers to where something is classified as being a part of something else. It gives detailed description about something but nothing about its relationship to other similar things. Take for example the following extract from a textbook:

Rocks are classified according to their origin. There are three categories of rock: igneous rock: rock formed when molten rock material cools and hardens. Sedimentary rock: rock formed from fragments of other rocks that have been compressed and hardened. Metamorphic rock: rocks that have been altered by heat or pressure.

In the above extract both principles of classification apply: superordination in which the three categories or types of rock are stated and the accompanying information on each type of rock illustrates the principle of composition – the properties of each type of rock is described in greater detail.

The distinction between vernacular taxonomies that are either specialised or every day and formal scientific taxonomies (Wignell *et al.*, 1993) provides a further criteria to analyse the properties of knowledge statements in textbooks. According to Wignell *et al.*, phenomena classified formally and scientifically ‘already have vernacular names and vernacular definitions’. But scientific taxonomising is a process or renaming in order to reclassify the vernacular that also reorders it. For example, with reference to the section on weather and climate, everyday words and vernacular taxonomies are used to describe the weather, which are related to experience of the weather at that particular time – cold, windy, cloudy, etc. It includes a personalised and connotative dimension. However a formal definition of weather ‘weather refers to the state of the atmosphere at a local level, usually on a short time scale minutes to months’, is not only general, precise, denotative and depersonalised but it also sets up its difference from the term – climate. From geomorphology, a landform could be described as a kind of hill with steep sides and a flat top. But by naming the landform a mesa, a technical name has been created for the landform and has classified it in a taxonomy that distinguishes it from other related landforms such as buttes.

Critical sociological perspectives have pointed out that symbolic forms are 'instruments of domination'. Often, such critiques do not give due cognisance to the logical structure and cognitive function of symbolic forms. Schmaus argues that the sociology of scientific knowledge must include cognitive goals and not always reduce knowledge to non-cognitive goals and interests (Schmaus, 1994).

The **third** geographic procedure to uncover this order and meaning is to explain how phenomena came to be the way they are through implication sequences of cause and effect. Technical terms are introduced and defined through an identifying relational clause: an x (technical term – mesas) is a y (definition). Technical terms are also defined through causal relations between phenomena. In elaborating on a technical term an additional task is explaining how it got to be that way.

Where taxonomising tends to focus on things. . .explaining tends to focus on processes. The emphasis shifts from things in place to things in action. To explain how things are, or came to be the way they are, it is necessary to use processes, participants and circumstances. These tend to be arranged in clause complexes which will be called implication sequences (Martin, 2006, p.157).

Martin provides an example of an implication sequence that explains what cold fronts are, the processes by which frontal rainfall occurs and the clouds associated with cold fronts:

Cold fronts. A stream of comparatively cold, dense air tends to move along close to the ground as it flows towards regions in which warmer, less dense air is rising. This rising air becomes cooler . . .if it is humid, condensation of water vapour will take place. The resulting clouds are usually of the cumulus type. The front edge of the cold air mass is known as a cold front. Much of the rain that falls in Australia occurs as a result of cold front conditions (p.41).

In explanation sequences causal resources such as logical connectors are deployed, such as, if, as a result of, resulting in. Wignell *et al.* (1993) points out that transition networks maybe used to model implication sequences. The basic components of transition networks are states (represented by circles) and arcs (represented by arrows showing the direction of change). An example of a transition network linked by arrows shows air containing water vapour, rising, resulting in adiabatic cooling to dew point temperature, resulting in water vapour condensing and cloud formation.

The field of geography is thus made up of field specific technical terms for what is observed and experienced, a number of interrelated taxonomies that

orders what is observed and experienced and sets of implication sequences that explain ‘how things are’ or ‘came to be that way’. The major task of the geography textbook is to represent its logical structure or its technical taxonomy and enable students to make sense and explain the experiential world in geographical ways (Wignell *et al.*, 1993, p.165).

Context and methodology

In the democratic South African era, changes in curriculum policy on knowledge content and organisation set in motion a flurry of new textbooks. Against the background of three major waves of national curriculum reforms in South Africa in the post-apartheid period: Curriculum 2005 (C2005) implemented in 1998, the Revised National Curriculum Statement (NCS) implemented in 2002, and the recent National Curriculum and Assessment Policy Statement (CAPS) implemented in 2012, this paper presents an analysis of new grade 10 geography textbooks to see how the nature and structure of geography are recontextualised in these textbooks, in comparison with a UK textbook and an older textbook widely used during the apartheid political dispensation.

A qualitative approach was employed as the aim was to subject the same content to an in-depth analysis of how the discourse of geography is represented. In this study four textbooks were analysed. Two of these textbooks supporting the new curriculum (CAPS), were published in 2011 and 2012 and have been approved by the Department of Education for use in schools and cost R154. The same section in an older textbook used before C2005 and a UK textbook were also analysed. The unit of analysis is the same section *the structure and composition of the atmosphere*, an aspect of weather and climate within physical geography in all the textbooks. The knowledge statements in the textbooks were analysed according to the extent to which the terminology, taxonomy and implication sequences of geography are evident. Nicholls (2003) advises that researchers ‘must formulate a framework or criteria for the analysis. The analytical framework, see Table 1 has been derived from Wignell *et al.*’s conceptualisation of the discourse of geography. Table 1 below shows the attribute of geography, the intellectual process that accompanies it and the main questions that guided the analysis.

Table 1: Analytical framework

Attribute of geography	Intellectual process	Analytical criteria
Making meaning of experiential world	Observation, identifying, describing, naming	The extent to which each textbook requires students to observe and make sense of the experiential world?
A technical lexis	Naming	The extent to which the technical lexis is represented
Ordering the experiential world	Ordering/taxonomising/classifying: classification based on superordination and compositional principles	The extent to which the geographic taxonomy is represented
Explaining experiential phenomena	Implication sequences - network diagrams that represent the taxonomic relationship	The extent to which phenomena are explained

Visual images and diagrams to illustrate the section were also analysed. Each heading, subheading and sentence was analysed for the extent to which content has been differentiated in terms of classification and compositional taxonomies.

Data analysis and discussion

Overview of the four textbooks

Table 2: Headings, sub-headings and alternate semiotic modes (numbered as in the texts)

The four textbooks	Textbook A	Textbook B	Textbook C	Textbook D
Heads and sub-headings	Topic 2 The atmosphere	Module 1 The atmosphere – weather, climate	Weather and climate	2 Climatology
	Chpt 1 Composition and structure of the atmosphere	Unit 1 Composition and structure of the atmosphere	Structure and composition of the atmosphere 1. Troposphere 2. Stratosphere 3. Meosphere 4. Thermosphere	2.1 The atmosphere 2.1.1 What is the atmosphere? 2.1.2 The composition of the atmosphere 2.1.3 The structure of the atmosphere 1. Troposphere 2. Stratosphere 3. Mesosphere 4. Thermosphere 2.1.4 The physical properties of the atmosphere – mass mobility compressibility
	Unit 1 Importance of the atmosphere	The importance of the atmosphere		
	1. What is the atmosphere?	Composition and structure of the atmosphere Troposphere Stratosphere Mesosphere Thermosphere		
	2. Why is the atmosphere important for life on earth?			
	3. The composition of the atmosphere. Gasses, liquids, solid particles			
	4. The structure of the atmosphere Troposphere Stratosphere Mesosphere Thermosphere			
			Atmospheric gasses	
Total headings	11	7	7	10
Number of tables	1 (the gasses and their importance)	0	1 (the composition of the atmosphere)	0

Number of diagrams	3 (the composition of gasses in the atmosphere, the structure of the atmosphere, a simple line graph)	3 (the composition of the atmosphere, the vertical structure of the atmosphere, temperature changes in the atmosphere, the ozone in. . .)	1 (the vertical structure of the atmosphere)	4 (the structure of the atmosphere, gravitational pull, mobility, compressibility)
Images, photographs	2 (the Arctic icecap; polar temperatures are colder than equatorial temperatures, volcanic ash from an eruption in Iceland in April 2010)	1 (polar stratospheric clouds)	0	3 (meteosat image, barograph and barometer, anemometer)
Total alternate semiotic modes	6	4	2	7

The number of headings and subheadings in the texts range from seven to eleven. Text A differentiates the sections into four main sections that are numbered from one to four and seven subsections (gasses, liquids, solid particles, troposphere, stratosphere, mesosphere and thermosphere) that are written in bold print. The headings indicate progressive focussing on the more specific concepts. Text A differentiates the section into seven headings and sub-headings. A higher level heading ‘Composition and structure of the atmosphere’ is repeated verbatim later.

Although not part of the object of analysis the multisemiotic modes of representation are indeed striking and impressive. The use of alternate semiotic modes ranges from two to seven across the textbooks. The three SA texts use alternate semiotic modes to a larger extent than the UK textbook. The new CAPS geography textbooks and the older text book used before C2005 (text D) show a greater multitude of figures and narrative images consisting of photographs, satellite images, graphs, diagrams that illustrate and explain textual meanings. The use of different colours in the new CAPS texts are not only appealing aesthetically but also illustrate factual details better. Diagrams in a variety of colours support linguistic explanations. For example, the use of differing spacing between drawings of air molecules to show gravitational

force and compressibility of the atmosphere provide an additional semiotic mode to convey meaning. The photographs and images provide a strong link to the empirical and perceptual/experiential. For example, the photograph of clouds and the barometer provide learners with a direct link to the perceptual and empirical. This is consistent with Marsden's (2001) observation of the "move away from the dominance of text to the use of visual material as complementary" to text (p.317). The common sections are the composition and structure of the atmosphere, the importance of the atmosphere. All four books provide a diagram that illustrates the vertical structure of the atmosphere.

Observing and making sense of the experiential world

Of the four textbooks analysed, just one, (textbook A) required students to engage in empirical observation and to make sense of such observations geographically. This has been done by setting exercises or activities requiring students to observe their environment and to respond to questions on the basis of their observations. Two examples will be used to illustrate this aspect. Firstly, students need to do fieldwork to understand that the atmosphere is composed of solid particles:

1. Find a shelf in your classroom that can be left untouched for a few days.
 - 1.1 After three or four days, examine the shelf – wipe your fingers across it. What do you notice?
 - 1.2 In your geography workbook, write a brief report. . .

The aim of the activity is to enable students to link the dust particles that settle on surfaces to the concept of microscopic solid particles being part of the atmosphere.

Secondly, to enable understanding of the concept of reflection of solar insolation, students were required to observe and name objects that cause glare:

- 1.1 When you walk around at school (or at home) what objects cause so much glare that they hurt your eyes? List them

1.2 Why do these objects cause glare?

The second task requires students to identify objects that reflect light and to draw on what they learned on depletion of insolation to explain absorption, scattering or reflection of light. With reference to observation and explaining the experiential world, this textbook includes everyday experiences that are subjected to scientific observation and inquiry. Both examples link common experiences to geographic terms, concepts and processes. It thus enables a key function of symbolic forms, ‘structuring structures’ (Bourdieu, 1991) that enable scaffolding of students’ cognition towards more objective geographical sense-making. It also establishes the link between phenomena and experiences to their symbolic representation. A possible explanation for lack of such activities in the three other textbooks could be that authors see this type of activity as a pedagogic responsibility of the teacher (Young, 2010), thus making assumptions about the specialised capabilities of the teacher that might disadvantage students taught by less qualified and competent teachers. In this regard Bernstein (2003) noted the social class assumptions that underpin invisible pedagogies in which knowledge criteria are implicit.

Defining key technical terms

All four texts provide definitions of key terms. For example a key term in this section – atmosphere – is defined as:

The atmosphere is an envelope of transparent, odourless gasses held to the earth by gravitational attraction (text C)

The atmosphere is the gaseous layer which envelops the earth and is essential for the maintenance of life on earth (textbook D)

The atmosphere is the layer of gasses that surround earth. The main gasses include nitrogen, oxygen, argon, water vapour and carbon dioxide (textbook A)

However, text B differed in four ways. The meaning of key terms such as ‘composition’ and ‘structure’ in the heading are taken for granted as self evident. Then, statements that contain a number of technical terms are not further explained. For example, ‘the separation into layers based on thermal characteristics, chemical composition, movement and density’ is not defined or elaborated on further in terms of how chemical composition, movement and density differ in the four layers. In an accompanying keyword box the term thermal characteristics is defined as ‘temperature changes – how hot or cold something is’, which is a definition of temperature. In this definition ‘thermal

characteristics' is conflated with temperature. Key words (insolation, terrestrial radiation, radiation, latent heat) defined in keyword boxes in the margin of the page actually belong to the section heating of the atmosphere or energy in the atmosphere. These disconnections point to incoherence between the specific section and the keywords being defined. Lastly, unlike the other three books, text B includes in its representation vernacular terms (Wignell *et al.*, 1993) more frequently than technical terms, such as 'sun block' in the sentence 'If all the sun's rays were to strike down on earth, there would be no life, so the atmosphere acts as a 'sun block'.' In this example the use of the vernacular term 'sun block' is not co-extended to its scientific term. Further, it's the ozone layer and not the entire atmosphere that performs this function. The excessive amount of 'greenhouse' gasses in the atmosphere in large cities results in the 'greenhouse' effect and to global warming. These aspects point to factual inaccuracy and incompleteness (Pingel, 1999).

Representing the technical taxonomy

Contextualisation in disciplinary area

The texts analysed differ in positioning the section within the parent discipline. Textbook C links the section of 'structure and composition of the atmosphere' to weather and climate and to meteorology which is defined as the study of atmospheric phenomena. It then proceeds to define 'weather' and 'climate'. The definitions maintain the link with the atmosphere: 'Weather refers to the state of the atmosphere; it emphasizes aspects of the atmosphere that affect human activity...' It then goes on to emphasise that both weather and climate refer to states of the atmosphere or the 'behaviour' of the atmosphere at local and short time scales, whereas climate explains the long-term behaviour of the atmosphere.

In Text B the section *composition and structure of the atmosphere* is not contextualised within the section weather and climate and within meteorology. This leads to lack of focus and cohesion. It does state: 'in order to understand weather and climate we need to know about the atmosphere'. This sentence indicates the reason for studying the atmosphere, however, the taxonomic relation across weather and climate and atmosphere, that we study the atmosphere in order to understand weather and climate that are experienced on a daily basis, are not established. The section thus appears disconnected to the experiential and to the broader section weather and climate and to the science

of meteorology. The content present under the heading *importance of the atmosphere* is general and not related to importance of the various components of the atmosphere for weather and climate. The disjointedness and lack of connection compromises the knowledge structure being represented.

Textbook C contextualises the section *moisture in the atmosphere* within *weather and climate* and the further within *meteorology* whereas textbook D contextualises the section within *climatology*. In text C, the ‘structure and composition of the atmosphere’ is orthographically marked by bold and larger font and a different colour. The first line defines the atmosphere as ‘an envelope of transparent, odourless gasses held to the earth by gravitational attraction’. The next sentence gives its dimensions and that since ‘most’ of the atmosphere is concentrated within 16 km of the earth’s surface at the equator and 8 km of the poles, weather and climate is also concentrated in this zone. It goes on to then indicate that while atmospheric pressure decreases with height, temperature changes within the atmosphere are complex and based on such changes the atmosphere is divided into four layers from the earth’s surface upwards. A graph is used to illustrate the vertical structure of the atmosphere – its temperature and its pressure. A table shows the composition of the atmosphere and the importance of each for weather and climate. It distinguishes permanent, variable and inert gasses. Its relevance is established as ‘importance for weather and climate’. These multi-semiotic modes of representation provide a range of resources for students to grasp the symbolic meaning and structure of the content more accurately.

The two new textbooks (A and B) locate the section in ‘the atmosphere’ and not in weather and climate or meteorology or climatology. This indicates disconnection with the disciplinary context in the two new CAPS textbooks as well as possible disconnection with more specialised meanings to follow in grades 11 and 12 and tertiary education.

Coherence and differentiation of headings and sub-headings

Textbooks A, C and D show productive coherence and differentiation between headings and subheadings. Text A references the technical lexis of geography. It effects adequate differentiation by listing the significance of the atmosphere separately and by distinguishing between composition and structure and between permanent and variable gasses. It defines key terms such as atmosphere and structure that are connected to the section. Text B, however, shows lack of differentiation of main and sub-headings that also lead to lack of

differentiation of the taxonomic structure of geography. This book opens in unit one with the heading composition and structure of the atmosphere and repeats this same heading as the second sub-heading. Further, two excerpts from text B are illustrative of incoherence between the heading and the content presented:

The importance of the atmosphere

Heat energy and the way in which it is transported in the atmosphere forms the basis of our weather. The atmosphere is vital for the transport of energy around our planet. Since the earth is neither warming up nor cooling down, there must be a balance between the amount of incoming insolation and the amount of outgoing terrestrial radiation.

The content under the heading describes heating of the atmosphere or energy in the atmosphere. Due to the mismatch, the ordering of key content is again compromised – there is lack of statement of the prime source of energy, of short wave radiation and of its link to weather and climate.

Secondly, under the heading ‘composition and structure of the atmosphere’ the following appears:

Composition and structure of the atmosphere

You need to study the atmosphere to see how energy is transported in the atmosphere. If all the sun’s rays were to strike down on earth, there would be no life, so the atmosphere acts as a ‘sun block’. It allows just the right amount of heat energy needed to maintain life on the planet (p. 2).

The correct heading for the content presented would be ‘the importance of the atmosphere’.

Classificational principles

Of all four texts analysed text B does not represent the core taxonomy of the section analysed. While all three books represent gasses as permanent and variable, text B does not classify gasses into permanent and variable gasses, nor does it define these types of gasses and give examples of each. With regard to the discourse of geography, in Wignell *et al.*’s terms, the classificational and compositional taxonomy are not represented. Further,

there is insufficient differentiation between different aspects – composition and structure – as both are represented under one heading.

An example of a piece of text that illustrates the taxonomic structure of concepts according to both principles of classification and composition from text A is provided below:

Gasses

The atmosphere consists of two main categories of gasses: permanent gasses and variable gasses. Permanent gasses do not change significantly in proportion while variable gasses vary from time to time and place to place. . .

The first statement is an example of the superordination principle where gasses – a general concept – is classified into two categories and the composition principle where there is further elaboration of the properties of each type of gas. In the above example the coherence across the analytical distinctions of ‘two main types of gasses’ and then what ‘permanent gasses’ and ‘variable gasses’ are is robust and explicit. In Wignell *et al.*’s terms, the taxonomic structure of geography as indicated by classificational and compositional taxonomies has been maintained. Text A, C and the older textbook used during the apartheid era reflect the taxonomic structure of geography in similar ways.

Explaining the experiential world

The texts include explanations of processes throughout it. Technical terms are introduced and defined through an identifying relational clause. For example, **weather** refers to the state of the atmosphere at a local level and short time scale. Processes are explained through the use of causal relations through the use of logical connectors such as *because*, *caused by* and *is due to*. For example, ‘temperatures in the troposphere decrease by 6.4 degrees C with every 1000m increase in altitude. This *is because* the earth’s surface is warmed by incoming solar radiation...’

The incoherence in text B that arises from insufficient differentiation of its structure impacts negatively on explanations of processes. The text is characterised by more narrative descriptions (Bernstein, 2003) rather than the analytical code (Bernstein, 2003, Taylor, 2009) that characterises scientific

knowledge. Consistent with Wignell *et al.*'s point, all four textbooks also do not represent explanations through transition network diagrams.

Table 3: Summary of findings

Attribute of geography	Intellectual process	Textbook A	Textbook B	Textbook C	Textbook D
A structuring structure: make meaning of experiential world	Observation, processing, collating and presenting fieldwork findings	Activity set based on empirical observation	Not investigative – more content based. Very little reference to the experiential	Not investigative – graded content based. Very little reference to the experiential	Not investigative – more content based Very little reference to the experiential
A technical lexis	Naming	Defines key terms, atmosphere and structure. Key concept definition connected to section	Key terms not defined. Less connected to section (compromises the compositional principle)	Defines key terms, atmosphere, structure. No definitions alongside text.	Evident
A structured structure	Taxonomising: classification based on super-ordination and compositional principles.	Distinguishes between composition and structure. Distinguishes between permanent and variable gasses.	Lack of contextualisation in meteorology – represents both under one heading. Gasses are not distinguished into permanent and variable gasses.	Main and substructure evident – meteorology, weather and climate, atmosphere, composition and structure. Distinguishes between permanent and variable gasses.	Main and substructure evident – climatology, weather and climate, atmosphere, composition and structure. Distinguishes between permanent and variable gasses.
Implication sequences – explaining processes	Use of causal resources. Transition network diagrams.	Evident Not used	Weakly evident Not used	Most evident Not used	Evident Not used

Conclusion

This paper articulates and illustrates an analytical framework for analysing the representation of the knowledge structure of geography in textbooks. It has deployed Wignell *et al.*'s analysis of the discourse of geography in the analysis of a section in four geography textbooks. While it is specific to the discipline of geography it proposes that studies of textbook content also pay attention to the rigour of recontextualisation of the knowledge structure of the parent discipline in the school subject textbook. As Muller says: "if recontextualisation totally severs any relation (between the parent knowledge structure and the recontextualised school subject), then how are specialised knowledges ever reproduced?" (2007, p.80). With reference to recontextualisation of knowledge, it suggests that drawing on theories of the nature and structure of the specific subject enhances the general sociological views of knowledge as put forward by Bourdieu and Bernstein. In other words, the use of macro theoretical formulations that provide the framework for studying the functions of symbolic forms and the processes by which they are recontextualised, together with micro analytical frameworks enable more specific analyses of the knowledge structure of symbolic forms thereby enabling establishing the relationship between the macro and the micro and the social implications of micro representations.

The textbooks analysed indicate different recontextualisations of the nature and structure of geography without a single text representing all three aspects of geography. Of the four texts analysed, three recontextualise the subject adequately, whereas text B falls short on representing the terminology, taxonomy and implication sequences of geography. It fails to represent basic, general, universally accepted classifications of the core knowledge structure of geography, is incoherent and factually inaccurate. In this regard Johnson, Dempster and Hugo (2011) note that "curricula need to reflect their parent discipline to a reasonable degree, if the reproduction of specialised knowledges is not to be undermined" (p.27).

Given Apple's (2004) view that textbooks 'dominate what students learn', 'set the curriculum' and present 'the facts learned in most subjects' the variations in the textbooks would lead to inequalities in students understanding of the subject and in performance in national examinations. It would disadvantage students who come from lower income backgrounds who might depend more heavily on textbooks for the 'facts' about the subject. For these children the

school is most often the only site of acquisition of the ‘analytical code’ (Bernstein, 2003) and well-structured textbooks a necessary resource. As such, the use of text B to support curriculum delivery may impair the cognitive interest (Schmauss, 1994) and effect symbolic domination (Bourdieu, 1991). Uncovering the social class positioning of students using this text has been beyond the scope of this study. Given that both text A and B cost the same, the injustice is even greater. Just one of the four texts directs students to observe phenomena as starting points for learning its conceptual explanations. The absence of this in the remaining three texts may hinder students from linking their own experiences and observations to geographic terms, definitions and explanations in order to progress to learning how to make sense of objects and experiences geographically. Text C represents the technical and taxonomic structure most cohesively and it explains by the use of implication sequences. Its weakness lays in not representing geography as a symbolic form that takes its starting point from empirical or experiential objects and in limited multisemiotic modes of representation.

The weaker differentiation of concepts in text B when representing the taxonomy of geography is not only factually inaccurate but also incomplete. This would undoubtedly place students using this textbook at a disadvantage in understanding and concomitantly in performance in national examinations. Muller (2000) notes that “divisions and distinctions of ideas become knowledge only once they have become systematized or connected to each other i.e. once they become formed into *schemes of classification*. . .” (p.1). Given Bourdieu’s theory that the learning of symbolic forms enable social reproduction of symbolic forms of knowledge, then the lack of activation of the active cognitive construction of common experiences into general symbolic representations, may impair coherence across experience and symbolic form, thus impairing the ‘structuring structure’ role of symbolic forms.

Finally the implications of the findings point to the need for high quality textbooks to be developed that represent the knowledge structure of the parent discipline well. This analysis shows, firstly, that a high quality text would: contextualise the section within its overarching discipline; number the main and sub-headings that correspond to the accepted core structure of subject; represent the facts accurately, represent the classificational and compositional taxonomic structure fully, provide full descriptions of the properties of each category, require students to reflect on their perceptual experiences; use multisemiotic modes of representations such as diagrams to illustrate

concepts, tables that summarise the text and include images and photographs that make linguistic descriptions real. Secondly, that choice of texts to support public education be based on an objective evaluation of the extent to which the nature and structure of the discipline is represented. Thirdly, that textbooks be developed by writers adequately qualified in the discipline who would be able to represent the structure of the subject better. Given that the majority of South African schools are ineffective (Taylor, 2009) high quality textbooks create the possibility of disruption, even if at the level of individual exceptions, of the “correspondence between social structures and mental structures” (Wacquant, 2007, p. 7) that is evident in the social universe.

References

Bernstein, B. 2000. *Pedagogy, symbolic control and identity: theory, research, critique*. Revised edition. Oxford: Rowman.

Apple, M.W. 1998. *Teachers and texts: a political economy of class and gender relations in education*. London: Routledge.

Apple, M.W. 2004. Cultural politics and the text. In *Official knowledge*. London: Routledge pp.179–195.

Apple, M.W. and Christian-Smith, I. 1991. *The politics of the textbook*. New York: Routledge.

Bernstein, B. 1990. *Class, codes and control. Volume IV, The structuring of pedagogic discourse*. London: Routledge.

Bernstein, B. 1996. *Pedagogy, symbolic control and identity: theory, research, critique*. London: Taylor and Francis.

Bernstein, B. 2003. *The structuring of pedagogic discourse, volume IV: class, codes and control*. London: Routledge.

Bourdieu, P.1991. *Language and symbolic power*. UK: Polity Press.

Bourdieu, P. and Wacquant, L. 2007. *An invitation to reflexive sociology*. Cambridge: Polity Press.

Collado, M. and Atxurra, R. 2006. Democratic citizenship in textbooks in Spanish primary curriculum. *Journal of Curriculum Studies*, 38(2): pp.205–228.

Crawford, K. 2003. The role and purpose of textbooks. *International Journal of Historical Learning, Teaching and Research*, 3 (2): pp.5–10.

Department of Education. 2003. National curriculum statement for grades 10–12 (general). Physical Sciences. Pretoria: Government Printer.

Emereole, H.U. 2007. Comprehensive content evaluation of science textbooks: an 8-point model. Paper presented at the Southern African Association for

Research in Mathematics, Science and Technology Education (SAARMSTE), Maputo, Mozambique.

Johnston, R. 2006. The politics of changing human geography's agenda: textbooks and the representation of increasing diversity. *Transactions of the Institute of British Geographers, New Series*, 31:(3), pp.296–303.

Johnston, K., Dempster, E., Hugo, W. 2011. Exploring the recontextualisation of biology in the South African life sciences curriculum, 1996–2009. *Journal of Education*, 52: pp.27–57.

Kuhn, T.S. 1962. *The structure of scientific revolutions*. University of Chicago Press: Chicago.

Martin, J.R. 2006. Construing knowledge: a functional linguistic perspective. In Christie, F. and Martin, J.R. (Eds), *Language, knowledge and pedagogy: functional linguistic and sociological perspectives*. London: Continuum, pp. 34–64.

Marsden, W.E. 2001. *The school textbook. Geography, history and social studies*. London: Woburn.

McKinney, C. 2005. *Textbooks for diverse learners – a critical analysis of learning materials used in South African schools*. www.hsrapress.ac.za

Muller, J. 2007. *Reclaiming knowledge – social theory, curriculum and educational policy*. RoutledgeFalmer: London.

Nicholls, J. 2003. Methods in school textbook research. *International Journal of Historical Learning, Teaching and Research*, 3(2): pp.11–26.

Pingel, F. 2000. *UNESCO Guidebook on textbook research and textbook revision*. Hannover: VerlagHahnscheBuchhandlung.

Schmaus, W. 1994. *Durkheim's philosophy of science and the sociology of knowledge*. Chicago, II: University of Chicago Press.

Sleeter, C.E. and Grant, C.A. 1991. Race, class, gender and disability in current textbooks. In Apple, M.W. and Christian-Smith, L.K. (Eds), *Politics of the textbook*. New York: Routledge.

Stradling, R. 2001. *Teaching 20th century European history*. Strasbourg: Council of Europe Publishing.

Taylor, N. 2009 The state of South African schools. Part 1: Time and the regulation of consciousness. *Journal of Education*, 46: pp.9–32.

Wacquant, L. 2007. Towards a social praxeology: the structure and logic of Bourdieu's sociology. In Bourdieu, P. and Wacquant, L. 2007. *An invitation to reflexive sociology*. Cambridge: Polity Press, pp.1–6.

Wignell, P., Martin, J.R. and Eggins, S. 1993. *The discourse of geography: ordering and explaining the experiential world*. In Halliday, M.A.K. and Martin, J.R. *Writing science: literacy and discursive power*. The Farm Press: Washington DC.

Young, M. 2010. The future of education in a knowledge society: the radical case for a subject-based curriculum. *Journal of the Pacific Circle Consortium for Education*, 22(1): pp.21–32.

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Notes for Contributors

Journal of Education will appear at least twice per year.

Submissions

Unsolicited papers are welcome for consideration and should be addressed to the Editor of the *Journal of Education*. Submitting authors should note that a per page fee of R100 will be levied on published submissions. Institutional Research Offices of higher education institutions usually pay this type of fee. Authors whose affiliated organisation may not have instituted this practice are asked to contact the Editor, as the levy is a means of sustaining the journal, and is not intended as a deterrent to aspiring authors!

Articles and review essays are reviewed by anonymous external referees. Appropriate papers will be refereed for significance and soundness. Papers are accepted on the understanding that they have not been published or accepted for publication elsewhere.

Articles and essay reviews (maximum 6 000 words); debate, discussion and research notes (2 500 words); book reviews (2 000 words); and book notes (200 words) will be considered.

Contributors should submit an electronic version of the article by e-mail to the Editor at JoE@ukzn.ac.za. This should not be formatted, and preferably not use a variety of fonts and font sizes or use paragraph styles. Where necessary, however, authors may wish to indicate levels of subheadings (i.e. first level, second level). Each paper should be accompanied by a 100–150 word abstract. Footnotes should be kept to a minimum, and authors are asked to keep tables and diagrams to the most feasible level of size and simplicity. Tables and diagrams should also be sent in separate files. The name(s) and full address(es) of the author/s should appear on a separate sheet.

Each author will receive a copy of the journal in which the paper appears.

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Referencing style

Journal of Education style of referencing is a requirement. References in the text should appear as follows:

No country in the world can afford the schooling its people want (Reimer, 1971) and it has been argued that “of all ‘false utilities’, school is the most insidious” (Illich, 1971, p.60).

The references should be listed in full at the end of the paper in an acceptable standard format, preferably the following:

Books

Surname(s), Initial(s). Year of publication. *Title: additional title information*. Edition (if other than the first). Place of publication: Publisher.

Chapters in edited or compiled books

Surname(s), Initial(s). Year of publication. Title of chapter or article. In Surname(s), Initial(s) of editor(s) or compiler(s). (Eds). or (Comps). *Title of book*. Edition (if other than first). Place of publication: Publisher. Inclusive page numbers of the chapter.

Journal articles

Surname(s), Initial(s). Year of publication. Title of article. *Name of journal* volume number (part number (if there is not continuous pagination)): inclusive page numbers.

Articles and reports in magazines and newspapers

Surname(s), Initial(s). Year of publication. Title of article. *Name of magazine or newspaper* day and month: inclusive (and additional) page numbers.

Book reviews

Surname of reviewer, Initial(s). Year of publication. Title of review (if there is one). [Review of] *Title of book reviewed* by Name of author in its most familiar form. *Name of periodical* volume number (part number) or date (if applicable): inclusive page numbers.

Theses and dissertations

Surname, Initial(s). Year. Title: additional title information. Description of work. Location of university: name of university.

Seminar papers

Surname, Initial(s). Year. Title: additional title information. Unpublished seminar paper. Location of university: name of university, name of department, programme or unit.

Conference papers (unpublished)

Surname(s), Initial(s). Year. Title: additional title information. Description of occasion (including the nature and subject of the conference or meeting, name of the society or group, the place at which it was held and the date(s) on which it was held).

Duplicated materials

Surname(s), Initial(s). Year. Title: additional title information. Description of material. Location of issuing body: name of issuing body.

Interviews

Surname of person interviewed, Initial(s). Year. Interviewed by initial(s) and surname of interviewer. Place where interview occurred, further details of date (day and month). Details of location of transcript, if available.

Personal communications

Surname of person with whom communicated, Initial(s). Year. Description of communication, further details of date (day, month).

Microforms, audio-visual material, CD-ROMs etc.

As for works above but with the addition of the format in square brackets at the end of the reference, e.g. [Microfilm] or [Videotape] or [CD-ROM], etc.

Online sources of information (published or unpublished)

Surname(s), Initial(s). Year of publication. *Title*. Version (if any). Place of publication: Publisher.

<Address of web page between> Day, month (and year if different to publication year) of visit to site.

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Frequently asked questions

Is the Journal of Education SAPSE accredited?

Yes

How many issues per year?

In terms of a recent policy decision, we aim to produce at least two ‘normal’ editions of the journal each year in addition to at least two special issues (one of which will be the Kenton Special Edition).

Most journals now have a per page fee which contributors are required to meet should their articles be accepted. Does the Journal of Education levy such charges?

Yes. This step was necessary to cover the costs of the increased number of issues each year. A levy of R100 per page will be applied to successful articles submitted to our office. The central research offices in most institutions of higher education routinely arrange for such payments to be made. We encourage individual authors who do not have such cover to contact us.

Are articles peer reviewed?

Yes. Our goal is for articles to be refereed by three experts in the field.

What is the waiting period after submission?

Referees provide their crucially important service for no reward, and are sometimes unable to oblige on time but we endeavour to respond within three months.

Can I send my submission by e-mail?

Yes. The electronic version of the article should be sent as an email attachment.

To what extent should an article being submitted be presented in ‘the style’ of the journal?

Citation and referencing should be in the style of the journal (see the previous section ‘Notes for Contributors’). Authors are not expected to reproduce the particular fonts and font sizes used in the journal, but the levels of headings and subheadings should be clear. With regard to the electronic version of the article, we prefer as little formatting as possible.

Does the journal have a policy to encourage and support budding novice researchers?

Unfortunately not – this is simply beyond our capacity. While we welcome extended comment that referees may be able to offer, we cannot impose on their good services beyond the expectation of an overall judgement on the article, together with brief justification of that judgement.

What is the rate of acceptance/ rejection?

The following statistics for 2008 and 2009 provide an indication of the pattern of acceptance/ non acceptance:

Year	Accepted with no or minor revisions	Accepted after revisions	Not accepted
2011	4	24	58
2012	1	11	30

Even an increase in the number of issues each year will not keep pace with the ever-increasing number of submissions. We can do little to mitigate the competition engendered by state funding policy and the kinds of incentive schemes that have become a feature of the higher education landscape.

Is there an appeal mechanism should my article not be accepted?

Beyond summarizing reasons for rejection – where applicable – we regret that we are unable to enter into detailed discussion on decisions reached by the Editorial Committee on the basis of referee reports.

The journal describes itself as providing “a forum for scholarly understanding of the field of education”. What does this really mean?

We understand this as implying that articles should represent a rigorous enquiry (conducted through argumentation or empirically) into the understanding of educational issues. Such inquiry originates in a problem rather than a solution, and it is rare for such enquiry to have no reference to, or engagement with, a broader literature and theory. Advocacy in the form of prescriptions or ‘how to do it’ recipe knowledge for practitioners seldom finds favour with referees. The question of audience is key. The assumed audience is the collective body of researchers rather than those more narrowly concerned with the effective implementation of specific policies.

Recent non-acceptances include a high proportion of undeveloped research reports, summaries of dissertations, and even sound but small-scale case studies that are purely context specific and unconnected with broader issues, literature or theory. Similarly, even a successful conference paper is usually in need of further development before it merits publication.