Teachers' sense-making and enactment of curriculum policy

Sylvan Blignaut

Abstract

The South African educational landscape has undergone dramatic educational changes in the previous decade, impacting heavily on the roles of teachers in the classroom. This article explores the complex sense-making frameworks of three teachers working in three diverse South African educational contexts. Using the construct cognitive sense-making, the article suggests that teachers adapt a curriculum rather than adopt it as is, and that their prior understandings and beliefs about knowledge, assessment and what constitutes effective teaching, combined with the contexts in which they work, frame their classroom practices to a large extent, explaining the disjunction between policy and practice.

Introduction

One of the most controversial issues in education in the recent past has been the process of development and implementation of Curriculum 2005 (C2005). C2005 is significant both because of the immense practical and symbolic legacy that it attempts to address as well as the weight that is attached to what it aspires to achieve. Not only is it expected to overcome centuries old educational practices, social inequalities linked to educational difference, and Apartheid-based social values, it is also expected to place South Africa on the path to competitive participation in a global economy. For many, curriculum carries the burden of transformation in education (Chisholm, 2003).

The new curriculum was put forward by the National Department of Education as a radical move away from the school curricula of the Apartheid dispensation. In official documents, the so-called 'old' curriculum and the 'new' curriculum are contrasted in a language of binaries: for example, one is teacher-centred, the other learner-centred; one is content-based, the other skills-based. In addition, there are frequent references to a 'paradigm shift'. I agree with Meerkotter (1998) when he asserts that paradigm shifts occur gradually as more and more practitioners come to see their practice in a different light. He explains this concept by saying that a new 'paradigm' grows out of a previous 'paradigm' and that it builds on previous practices and understandings.

In the light of the far-reaching changes that South African teachers are expected to implement as well as my broader interest in why it is so difficult to translate curriculum policy into classroom practice, the following question was posed: Why are teachers' sense-making of curriculum policy critical to the translation of policy into practice?

Constructing a cognitive sense-making framework

Scholars have increasingly applied a cognitive framework in studying the policy process (Sabatier, 1998; Surel, 2000). Cognitive frames have also been used in studies of policy implementation in education (Ball, 1994; Spillane, 2000), public policy (Yanow, 1996), political science (Hill, 1999; Lin, 1998; 2000), sociology (Marris, 1975), and social psychology (Kunda, 1999; Weick, 1995). Under rubrics that include 'interpretation', 'cognition', 'learning', 'sense-making' and 'reading', these scholars argue that how implementing agents understand or interpret policy is a largely neglected area of the implementation process.

In this article, this work is built on by drawing on cognitive sense-making as advanced by Spillane, Reiser and Reimer (2002). The integrative framework that they outline consists of three core elements: the individual implementing agent, the situation in which sense-making occurs, and the policy signals. Although the framework was useful there were occasions that it was difficult to apply a framework for policy analysis that had its genesis predominantly in policy frameworks grounded in the Western liberal democratic tradition. This paradigm takes for granted a well-established educational infrastructure and an educated teacher supply base. It does not take account of the different levels of chaos in which new policies emerge in postcolonial societies. It also does not adequately account for the unequal educational contexts that South Africa inherited from Apartheid. What was particularly limiting is the way 'situation' is understood in this framework as only referring to the nature and quality of relations in institutions. It does not take account of the differing contexts in which the three teachers worked and thereby providing a more complete picture of context. They argue that what a policy means for implementing agents is constituted in the interaction of their existing cognitive 'scripts' (including knowledge, beliefs, and attitudes), their situation (the context), and the policy signals. How the implementing agents understand a policy's message(s) about local behaviour is defined in the interaction of these three dimensions (Spillane et al., 2002).

Building on the work of Spillane *et al.* (2002), the article focused on how teachers noticed and interpreted policy and how prior knowledge, beliefs and experiences influenced the construction of new understandings. In the context of this article, these constructs were combined and subsumed by a broader collective term, namely teacher epistemologies. Secondly, I considered how aspects of the situation influenced what teachers noticed and how they interpreted what they noticed about a specific policy, namely, C2005. And, thirdly, the policy messages inherent in C2005 were unpacked. I will begin by giving an exposition of the cognitive sense-making framework.

The elements of the cognitive sense-making framework

The implementing agent as sense-maker

Individuals assimilate new experiences and information through their existing knowledge structures (Schank and Abelson, 1977). Viewed from this perspective, what a policy comes to mean for teachers depends to a great extent on their repertoire of existing knowledge and experience. According to Spillane (2006), teachers' prior beliefs and practices can pose challenges not only because teachers are unwilling to adapt to new policies, but also because their existing subjective knowledge may interfere with their ability to interpret and implement a reform in ways consistent with policymakers' intent. The fundamental nature of cognition is that new information is always interpreted in the light of what is already understood. An individual's prior knowledge and experience, including tacitly held expectations and beliefs about how the world works, serve as a lens influencing what the individual notices and how the stimuli that are noticed are processed and subsequently interpreted (Spillane et al., 2002). What is new is always seen in terms of the past or as Spillane et al. (2002, p.395) put it, "what we see is influenced by what we expect to see". Similarly, one could argue that practices advocated in policy may be at odds with teachers' tacit knowledge¹ about teaching or simply what they know about teaching derived from their socialisation into it. The approaches a teacher deems 'suitable' will depend largely on her own understandings and beliefs of what good teaching is. If, for example, a teacher believes that appropriate strategies are structured lecturing and individual work, this may be contrary to a policy expectation. To implement such a

There is a considerable body of literature acknowledging the potency of teachers' tacit knowledge. It is frequently invoked as the reason for the failure of educational change.

policy will then be difficult if teachers perceive it to be alien to their ways of knowing teaching, or their tacit knowledge.

A sense-making framework acknowledges the concomitant difficulty of major restructuring as part of learning. Piaget (1972) emphasised the significance of what he termed 'accommodation', or restructuring of existing knowledge. On the other hand, 'assimilation', or programming stimuli into existing knowledge frames, is often the central part of perception and action. According to Flavell (1963, p.50), assimilation is a conserving process, as it strives to "make the unfamiliar familiar, to reduce the new to the old". A sense-making framework implies that learning new ideas such as instructional approaches may require restructuring a complex of existing schemes, as new ideas are often subject to being seen as minor variations of what is already understood rather than as different in critically important ways (Spillane, 2006). Therefore, new ideas either are understood as familiar ones, without sufficient attention to aspects that deviate from the familiar, or are integrated without restructuring of existing knowledge and beliefs, resulting in piecemeal changes in existing practice. This emphasises the primacy of the teacher in educational change and how her epistemology mediates curriculum implementation.

The teacher as sense-maker clearly underscores the idea that teachers' ways of knowing and thinking are vital dimensions of their practice.

Context

There is a considerable body of literature that emphasises the importance of context as school teaching does not take place in a vacuum, but is part of a unique context (Lortie, 1975; Bryk, Lee and Holland, 1993; Louis and Kruse, 1995). Each school operates in a different context that will impact differently on the teachers working in those diverse contexts. In this article, careful attention was given to the school contexts in which teachers were working as teachers' classroom practices are shaped by, amongst others, the school contexts in which they work.

That teaching practices cannot be judged in isolation but rather as taking place in particular contexts, is vividly captured by the following words of Morrow, "... no practices can be maintained for any length of time unsustained by institutions; without institutions the practices would gradually dissipate,

institutions are the bearers of practices" (1988, p.254). Teaching is enacted in classrooms, which are the ultimate focus of the schooling system, the terrain where the purpose of schooling – teaching and learning – reaches fruition. But classrooms are situated in a web of institutions and systems: the school itself, the culture of which is critical to the quality of classroom work; district offices which supply and support schools; teacher appraisal systems; and curriculum processes and products which are constructed, delivered and closely watched by interested parties and institutions throughout society. Teachers' work is thus constrained and enabled by a myriad of influences, which emanate from all directions in the web of public schooling. The focus of this article, however, was limited to the institutional contexts in which teaching and learning take place and will, therefore, not investigate the broader education system.

A focus on context is further informed by my contention that public constructions of expected teacher roles are contested, and recontextualised at the level of the school and classroom. Understandings and beliefs about instruction and subject matter are worked out in the context of instructional practice. As a result, McLaughlin's (1990) adage that 'belief can follow action' takes on greater significance. For this reason, a cognitive approach is combined with context to provide a richer account of how teachers approach teaching.

In the next section, the third leg of a cognitive sense-making framework is outlined, namely, the policy messages contained in C2005.

Policy messages of curriculum 2005 and their implications for classroom enactment

To achieve the education shift envisaged by C2005 requires not only changes in policy, organisation and practices of education, but also significant changes in the philosophy, principles, beliefs and underlying assumptions about people and knowledge. Assumptions about knowledge as objective, value-free unchangeable facts need to be replaced with a recognition of knowledge as being developed and promulgated by people in particular socio-political contexts with particular value assumptions. Based on these assumptions, different ways of teaching and learning need to be acquired. Because a curriculum is primarily concerned with knowledge, understanding how teachers view knowledge has a significant influence on curriculum practices.

If knowledge is presented to teachers or organised in a way that does not conform to their particular framework of how knowledge is constructed, it may lead to internal cognitive conflict.

The next section focuses on the envisaged curriculum changes in terms of the three critical curriculum dimensions that constitute the focus of this inquiry vis-à-vis content, pedagogy and assessment.

Content and pedagogy

A careful study of policy documents highlights the importance attached to concepts such as 'active learning', 'understanding', 'group work', 'learner-centredness' that are contrasted with concepts such as 'passive learners', 'rote learning' and 'teacher-centredness' (DoE, 1997a; DoE, 1997b).

However, when it comes to content, there is very little by way of specific guidance for teachers. The lack of guidance is exemplified in the following excerpt:

Teaching will become a far more creative and innovative career. No longer will teachers and trainers just implement curricula designed by an education department. They will be able to implement many of their own programmes as long as they produce the necessary outcomes (DoE, 1997a, p.29).

Although C2005 is highly prescriptive in terms of policy and pedagogy, it is extremely vague in the area of content. The shift from a curriculum framework based on the traditional disciplines of knowledge and selected content, to one which is based on pre-determined outcomes to be achieved through eight learning areas with no specified content, is a fundamental and far reaching change.

What complicates the issue of content are the new roles that the teacher is expected to play in implementing the new curriculum policy. Because content is not prescribed, teachers are required to develop their own learning programmes. In the previous dispensation, the responsibility of developing material to support classroom teaching rested mostly on publishers of textbooks.

However, the core of C2005 is the integration of content which should take place across all eight learning areas instead of the insulated teaching that was characteristic of the traditional subject approach.

C2005 also requires a change towards more complex and demanding teaching methodologies, in contrast to the traditional, transmission-orientated teaching based on content-laden textbooks aligned to a fixed curriculum. Rather, C2005 emphasises teaching that is "learner-centred, with emphasis on group work and developing the ability of people to think critically and research and analyse things for themselves" (DoE, 1997a, p.9).

Assessment

Assessment in C2005 is considerably different to what teachers were accustomed too in the previous curriculum. Teachers are expected to indicate in advance the outcomes to be achieved. Outcome statements indicate what learners must be able to do when they have successfully completed a specific learning programme. From the learners' perspective what has to be learned is made explicit, spelt out in clear segments that are embedded, as far as is possible, in their everyday life-worlds. Formative assessment is fore-grounded in policy documents and summative assessment is de-emphasised. Teachers are required continuously to gather information about how learners are learning. The information gathered should be used to provide feedback to learners on their strengths and on areas that need development and support (DoE, 1998). The assessment policy introduces a shift from a system that was dominated by public examinations, which were 'high stakes' and whose main function was to rank, grade, select and certificate learners, to a new system whose aim is to improve the curriculum and assessment practices of educators.

What are the implications for teaching of this curriculum reform at a practical level? Put differently, how will teachers make sense of these complex reforms at the precarious confluence of policy and practice? These questions suggest that teachers may not be equipped to meet curriculum reform challenges. The international literature indicates clearly (see Blignaut, 2005) that curriculum policy is often not congruent with the classroom practices of teachers for a myriad of reasons. On the basis of this evidence, it is likely that South African teachers will experience the same problems as their international counterparts in the implementation of the new curriculum policy.

Research methodology

The research methodology employed a qualitative research approach and drew on the interpretive research tradition. The research was explorative in nature and represented an attempt to access teacher thinking with regard to knowledge, content, learning, teaching and assessment and how these understandings mediated their interpretation of C2005 and how this act of interpretation was practiced in their classrooms. This study was not an evaluation of C2005 or its impact on teachers, nor was it focused on cause and effect in terms of some predefined set of expected outcomes. Instead, it explored why teachers' sense-making of curriculum policy is critical to the translation of policy into practice. Such a process is not easily or usefully quantified and quantification at the expense of a rich understanding of these factors would be problematic.

Research design

The research design could be described as a triple-sited case study that focused on three Grade nine teachers working in three secondary schools in the Port Elizabeth Metropolitan area of the Eastern-Cape Province in South Africa. To access teacher thinking on aspects such as their views on content, learning, teaching and assessment, semi-structured interviews were held. To ascertain how these understandings were used to make sense of C2005 at the classroom level, observation sessions were also conducted. These observation sessions were followed up with post-lesson interviews to clarify meanings.

Data collection

Each teacher and class was observed for four weeks (a total of twelve weeks). Observations were limited to Human and Social Sciences learning area in Grade nine. Over the entire research period fifteen lessons from each teacher were observed (a total of 45 lessons).

Data analysis

Data were sorted and classified according to categories or themes. Naming the categories came from myself as the researcher, the respondents and the literature. Categories were analysed in terms of their 'properties' such as frequency, extent, intensity, and duration.

Many themes emerged from the dialectical processes of induction and deduction with the data, which were strongly influenced by the conceptual lens through which I was looking. The theoretical constructs of teacher

'scripts', context, and policy messages focused the data collection process and played a central role in making sense of the data. We give meaning to what someone says by first anticipating what they will say. We see with a theory or as Bruner (1986, p.110) puts it: "Looking and listening are shaped by expectancy, stance, and intention." Thus, there was a measure of tension between the conceptual framework and a grounded theory approach.

Theoretical frameworks always structure and guide research, therefore one can legitimately ask the question: 'can research ever be truly grounded?' Adler (2001) concludes this debate unambiguously when she proclaims that, "the analysis is neither one of unspoilt or unframed grounded theory. Nor is it an attempt to fit data into pre-existing categories. It is rather a dialectical process that involves both induction and deduction, theoretically informed theory generation" (p.108).

Comparing and contrasting cases

All three teachers² in the case studies exhibited a predominantly teacher-centred pedagogy, hardly made use of integration, and own learning programmes were not designed. In addition, their assessment practices largely did not reflect the intent of curriculum policy; instead they favoured summative assessment at the expense of the more developmental function of formative and diagnostic assessment.

Views of knowledge

Jonathan³ and Sipho's⁴ views of knowledge could be characterised as leaning more to an objectivist view of knowledge or in Habermas's (1972) terms, knowledge constituted by a technical interest. Jonathan viewed knowledge as ideally having the potential to lead to a 'better world'. Through this characterisation the utility value of knowledge was accentuated. Sheila's⁵

The names of all three teachers have been changed and pseudonyms are used.

Jonathan teaches in a school that has the basic infrastructure but library facilities are absent and other resources are not always available.

Sipho teaches in a school with only the bare minimum of facilities available.

Sheila is an English-speaking, white female teacher that teaches in a modern, well-resourced school.

views of knowledge, was more difficult to characterise, as she was aware of the social construction of knowledge but also emphasised the utility or pragmatic value of knowledge. She described knowledge as 'something that you can argue about over and over again'. Her comments revealed an awareness of the social constructedness of knowledge and scepticism of whether one could ever arrive at an accurate and final knowledge of reality. Although it is difficult to categorise her views of knowledge definitively, it can be concluded that in terms of Habermas's three cognitive interests, she exhibited an interest that reflected a practical interest. In exploring respondent's views on knowledge, I realised that it was difficult to pigeonhole teachers either as having an objectivist view of knowledge or a more interpretist view of knowledge as their responses were varied and much more nuanced in practice.

Pedagogy

Although Sheila's classroom practice could be characterised as predominantly teacher-centred, it was not as pronounced as that of Jonathan and Sipho. This difference could be explained in terms of her view of knowledge, which was more nuanced and leaned more to the interpretive paradigm.

All three teachers practised a teacher-centred mode of teaching, initiating most of the talk and orchestrating most of the interaction in the classroom. They seldom made use of the learners' prior knowledge and use of learner-centred teaching, especially group work, appeared to be non-existent. After observing another lesson by Jonathan where no group work was evident I asked him if he ever did group work. He answered thus:

The problem is your groups are too big. That is your first big problem. Secondly, you do not have material. There are no textbooks. You cannot leave the pupils on their own. The third problem is that pupils cannot read and write so he/she will hide in the group and the stronger candidates will speak. . .

Many other South African studies came to similar conclusions (See Jansen 1999; Harley and Wedekind 2004; Stoffels 2004). In the contextual factors and main findings I develop further explanations for these practices.

Content

For all three teachers, knowledge was regarded and treated as discrete bits of

information and learning as the acquisition of this information through processes of repetition, memorisation, and regular testing of recall. During revision of lessons Jonathan made sure that learners comprehended the facts by asking mostly factual questions. Examples of these included the following: 'To which country was the Saar given to exploit the coal mines for 15 years?' 'What was the name of the harbour city that was given to Poland?' When asked if memorisation has a place in learning Jonathan answered with almost irritation: 'You have to memorise. That is what learning is all about, you understand?' There is clear evidence that Jonathan favoured the accumulation and memorisation of facts. This was also clearly visible in his teaching and assessment. The teachers' presentation of subject matter also appeared to be mediated by his/her understanding and stance towards knowledge. One might hypothesise that teacher-oriented conceptions of teaching originated from the presence of corresponding conceptions of learning and knowledge. Jonathan though, emphasised the mastery of facts more and most of his 'tests' were an attempt to achieve the standards expected at Grade 12 level.

Assessment

None of the teachers ever referred to outcomes in their teaching, which implies that their assessment possibly continued to rely on static, decontextualised, unidimensional standardised tests, not linking assessment and instruction. Learning was thus represented as the mastery of discrete skills, which can be measured in a comparative fashion through formal, teacher-directed standardised tests and procedures. The opposing view of assessment as more of an informal, long-term monitoring process that provides an indication of learner competence on various types of authentic activities and is used to guide instruction, was not adhered to. During one lesson that dealt with the discovery of gold Sheila gave a revision test to ascertain whether learners had comprehended the work. There were approximately six girls who either had nought, one or two out of five questions right but Sheila did not concentrate on them but continued and taught the whole class. Learners' needs were thus not accommodated through individualised teaching and learning strategies and assessment tools. In the sections that follow, explanations are suggested as to why teachers taught the way they did.

Contextual factors

A number of contextual factors were identified based on the analysis of the data collected in the three case studies. These factors, when read in conjunction with teacher epistemologies provide a partial explanation of why teachers' classroom practices do not conform to policy prescriptions. I do not suggest that they are exclusive, nor do I suggest that they are generalisable to all teachers in all contexts. I believe, however, that they represent an analysis of the context that many teachers will recognise as compelling. In developing descriptions of and explanations for the importance of these factors, I draw on examples of teachers' practice and discourse found in the three case studies. These contextual factors function as limitations or constraints on teaching and thus on curriculum implementation.

Competence of learners

The teachers perceived the competence of their learners to be the most important constraint on their classroom practice and the reason for the difficulty of translating curriculum policy into practice. This is illustrated by responses such as that more and more learners 'could hardly read or write'; that learners have to master 'the basics first,' namely, the facts, and that then methods such as group work that are required by an outcomes-based approach could be included; and that weak learners needed more teacher assistance whilst the more 'gifted child' could be given projects and would benefit from discovery methods.

Sheila felt that learners who come from the primary school were very weak and compared badly with previous years learners. This was supported by a comment that she would not do an OBE lesson that specific day as the learners were badly in need of 'solid' teaching. This observation resonates with a similar finding by Harley and Wedekind (2004) on how a well-known independent school runs an Outcomes-based Education (OBE) programme alongside traditional subject lessons where the 'OBE' programme has a time allocation of only three periods a week. In another case cited by Harley and Wedekind (2004, p.202), a teacher in a rural KwaZulu-Natal secondary school summed up the position of his school vis-à-vis C2005 by stating: 'OBE is a good policy – but it's not for us'.

The three teachers' views on knowledge, teaching and learning and their views about their learners' competence as illustrated by the data are not congruent

with and do not share the romantic naturalist view of the child and learning (Burnett, 1991) where children are assumed to be innately curious, spontaneously self-active, and driven to learn by their 'inner organic powers' (DoE, 1997c). McLaughlin's (1990) assertion that students are the workplace context of greatest consequence for teachers when they talk about their classrooms and their commitment to teaching is corroborated by the findings of this study.

Resources

In two cases, lack of resources was advanced as a reason for using a formal and traditional approach to teaching. This included the unavailability of textbooks and materials, and the lack of adequate library facilities, which hampered efforts to implement group work meaningfully.

Lack of resources, however, appears to be an enduring and obvious difficulty that historically disadvantaged schools have to contend with. In addition, inherited disadvantage is compounded by large classes that inhibit a learnercentred approach. Whilst Sipho had 47 learners in his class, Jonathan had 37 learners. Two of the schools do not have enough funds to employ additional teachers to the same degree as the third school where 22 additional teachers were appointed by the governing body to reduce the number of learners in each class. For example, Sipho's school had 1140 learners and 37 teachers and Jonathan's school had 900 learners and 29 teachers compared with Sheila's school who had 715 learners and 40 teachers. Big classes and heavy workloads may also explain why all three teachers de-emphasised diagnostic and formative assessment. In one case, an abundance of resources gave the teacher latitude to assign innovative and creative projects that learners could easily execute in their state-of the-art IT centre and up-to-date library. However, the availability of resources appeared to make no real difference to this teacher's largely traditional pedagogical style of teaching.

Resources, however, may not be the only stumbling block in implementing more learner-centred teaching, like group work. The lack of discipline appears to be a contributory factor.

The need to maintain control/discipline

One respondent described the need to maintain control when learners got

carried away and made the task of controlling them difficult. This concern was raised especially with regard to the execution of group work. Discipline problems appear to be exacerbated by group work, which may militate against its practice. Sheila verbalised this difficulty as follows: "I do group work, but I don't do a lot of it because the lack of discipline sometimes worries me". Policy edicts often ignore these realities of school and classroom life. There is a persuasive body of literature that argues that teachers often revert to 'lecturing' or teacher-centred teaching to prevent discipline problems in their classrooms. In his research in British schools, Woods (1990) attributes various teacher strategies to the crucial need simply to establish and maintain control which he calls 'survival strategies'.

The data supports the view that a traditional, predominantly teacher-centred pedagogy may be explained inter alia in terms of the need to maintain discipline.

Time constraints

The issue of time pressure arose in connection with content coverage, group work, the designing of learning programmes and assessment. Group work was viewed as 'time-consuming' and anxiety seemed to arise as to how the teacher would cope with coverage of subject matter in Grades 10, 11 and 12. The designing of learning programmes likewise led to a time problem, 'In actual fact, our lives are getting to the stage now, where you don't have time'. The time factor seemed to be exacerbated by all the marking teachers had to do. Sheila expressed this difficulty as follows:

I got two sets of work in from my matrics, I have promised it to them for tomorrow morning which is quite a lot of marking, because the two sets come to 50 marks... I've got to mark my Grade 9 tests that they wrote yesterday. And then, on top of that, you have still got to prepare lessons and you've still got to go to meetings.

The new curriculum does not take temporal constraints into account that teachers are faced with on a daily basis in their classrooms. Time constraints, compounded by large classes and heavy marking loads may lead teachers to strike a balance between the requirements of curriculum policy and their daily realities.

The role of tradition in the socialisation of teachers

All three teachers' personal histories and backgrounds as learners and their experiences during their teacher education years appeared to be important influences on their thinking and classroom practices. Sheila said her teaching style was influenced by the way that she was taught. Sipho also admitted that his years at school influenced him and he proudly referred to a certain teacher who was his mentor.

All three case studies were reminiscent of Lortie's (1975) 'apprenticeship of observation' that attests to the view that teachers learn more about teaching from the thousands of hours spent as learners in classrooms. This portrayal suggests that tradition plays a pivotal role in the socialisation of teachers and that often it is not a question of getting new ideas into teachers' heads, but rather of getting old ones out.

The preceding contextual factors are conceptually aligned to the construct, teacher epistemologies, discussed in the conceptual framework and appear to exert a strong influence on teachers' classroom practice and how they make sense of curriculum policy.

Main findings

The section below reflects critically on the most salient themes and patterns that emerged and on the basis of this reflection, I extract three key findings into how and why the three teachers' sense-making of curriculum policy is critical to their translation of policy into practice.

The influence of teacher epistemologies

On the basis of the research evidence presented thus far, it seems probable that the teachers' 'scripts' or epistemologies exert a controlling effect on how they made sense of curriculum policy. Teachers' prior views (about teaching and learning) and beliefs, namely, their extant understandings interfere with their ability to interpret and implement the new curriculum policy in ways consistent with the policymakers' intent. All three teachers' views, experiences, and knowledge structures played a critical role in their construction of meaning from C2005 policy. The new curriculum policy messages were often interpreted in light of what they already understood or

the knowledge base they already had. As the teachers had definite views about what constituted good teaching and learning, these views influenced them and were clearly visible in their classroom practices. One teacher was adamant that 'lecturing' was the core of what teaching was all about and that memorisation constituted an important part of learning. These views were thus incorporated into his classroom teaching irrespective of the policy requirement that foregrounds learner-centred teaching.

Two of the teachers' views on group work also contradicted the intent of curriculum policy and one of them stated openly that she did group work only twice a term. Consequently, group work was often not incorporated into classroom teaching. Clearly, the new practices suggested by curriculum policy were in conflict with teachers' epistemologies and influenced the construction of new understandings. It is my contention that the majority of South African teachers' epistemologies were shaped by a markedly different education system and that those influences act as powerful mediators (filters) of why teachers make sense of C2005 as they do. These teachers are products of a system very different to the one in which teacher roles are now prescribed. Majone and Wildawsky's (1978) argument that what is in policies is dependent on what is in the readers (teachers) of such policies, is significant and instructive and corroborated by this study as teachers assimilated new experiences and information through their existing knowledge structures. From this perspective, what a policy comes to mean in terms of the three dimensions of curriculum for implementing agents depends to a great extent on the teachers' repertoire of existing knowledge and experience. Baxen (2001) makes a similar point when she warns that in the implementation of curriculum policies in South Africa, greater care should be taken with 'what teachers bring to the table'.

On the basis of the data analysis, it can be concluded that the practices required from teachers in curriculum policy often challenge their epistemologies of teaching practices. The three cases provide evidence that teachers have strongly held views about key aspects of teaching and learning as well as the content and structure of knowledge that exert an authoritative influence on their classroom practices and how they make sense of curriculum policy. When teachers' epistemologies interact with other factors such as their own socialisation as teachers and how they were taught as learners, an even bigger obstacle is presented for the successful translation of policy into practice. Educational innovations often focus on changing the visible structures within schools and tend to ignore the prior knowledge, beliefs, attitudes, experiences, norms and values of teachers within schools. Fullan

(2001) concurs and states that changing formal structures is not the same as changing norms, habits, skills and beliefs as 'restructuring is not the same as reculturing'.

The discrepancy between policy aims and school practice should cause little surprise: policy aims can be taken as just that – goals and intentions to aim for, rather than expressions of the *de facto* situation. We can rely on McLaughlin's (2000) well-grounded proposition that 'policy can't mandate what matters', because 'what matters' requires local capacity, will, expertise, resources, support, and discretionary judgement. The concept that the user is simply engaged in obedient execution of the instructions for a canned product is dated and should be rejected. It might have been appropriate in more stable times. Rather, the person, in a school, brings coherence to a new idea, during the process of recasting it and connecting it to the immediate working context. As McLaughlin (2000) so aptly reminds us, what happens as a result of a policy depends on how policy is interpreted and transformed at each point in the process, and finally on the response of the individual at the end of the line.

The reforms presented by C2005 propose dramatic changes to teachers' classroom practices, which appear to be resilient to change. A possible reason is suggested by Spillane (1999) who points out that changing the core dimensions of teaching, such as the knowledge represented in classroom tasks, classroom discourse patterns, roles and responsibilities in the classroom, is arduous and complex. The findings of this inquiry are also in line with Cohen and Ball's (1990) and Cuban's (1993) research, namely, that teachers' beliefs, dispositions, and knowledge about students, subject matter and teaching, as well as their prior practice, influence their willingness to change their practice in response to reform and their ability to practice in ways suggested by reformers. They also resonate with Spillane and Zeuli's (1999) findings that during curriculum change teachers often practise only the superficial, behavioural regularities of innovations, but hold on to the epistemological regularities of the old. A key finding of this inquiry is that there is a general discrepancy between the participating teachers' epistemologies and the more constructivist and socioculturally-based principles underlying C2005. Whilst curriculum policy reflects a more experiential, meaning-oriented direction, the classroom practice of teachers continues to reflect a more reductionist orientation.

The role of context

A second finding of this study is that teachers' contexts or 'zones of enactment' determine to a great extent how they will implement instructional reform and revise their practice.

In the three classrooms observed there was evidence of reformed practice but it did not represent extensive change required by the curriculum policy regarding pedagogy. Two of the teachers in this study referred to contextual constraints as reasons for not teaching in a more learner-centred way, whilst the third teacher's context allowed for richer learning opportunities to be included but her practice was not learner-centred. Lack of materials, large classes and poor library facilities were factors that plagued schools and contributed to a more traditional, teacher-centred way of teaching. When teachers' epistemologies meet the world of practice, contextual constraints are used as justification for classroom practices and given as reasons for the teachers' traditional approach to assessment, application of content and a teacher-centred pedagogy. Contextual constraints appear to reinforce prior held cognitive 'scripts' which become a justification for classroom practices. Therefore, a powerful interplay exists between the teachers' contexts and their classroom practices or, teachers' epistemologies are mediated by their contexts and influence how they make sense of curriculum policy and how it is ultimately enacted in classrooms. This suggests strong relationships between views of knowledge, situational constraints and interpretations of curriculum policy.

The lack of resources and materials in the 'zone of enactment' may thus be a reason for teachers' practices. Johnson, Monk and Hodges (2000) come to a similar conclusion in their study that found that the choice of strategies that are used by teachers tend to be constrained by the resources available. Therefore, context often exerts a constraining effect on teachers' actions. However, when teacher epistemologies are fused with their context, it becomes a pungent raison d'être for why teachers do what they do and how policy is made sense of. In other words, what a policy means for teachers is constituted in the interaction of their existing cognitive structures, their context, and the policy signals. Teachers' epistemologies and contexts thus, play a key role in take-up. New practices stand a much better chance of surviving if there is a fit with teachers' epistemologies and their contexts. Based on my observations in at least two of the schools, it is clear that the conditions and context for effective implementation of C2005 were not in place. The context in which these teachers had to work is characterised by

difficult educational and social circumstances that did not support the kind of practices suggested by C2005.

There is a view that teachers in disadvantaged schools have to be creative in mustering additional resources and inventing alternatives, but without sufficient resources to sustain their efforts, this is akin to providing teachers merely with a 'lamp and three wishes' (Vally, 2003).

With policy focusing so intensively on the desired effects of curriculum proposals, constraining realities with respect to curriculum implementation are easily overlooked. A commitment to a vision of *what should be* has undermined the ability of policy to consider seriously *what is*. In short, the harsh inequalities and contextual realities of South African schools appear to have been overlooked.

This study, therefore, suggests that context serves a powerful mediating function between reform initiatives and practice. Context though is a necessary but not a sufficient condition for change to occur. The case of Sheila seems to lend credence to this argument as she taught in very favourable circumstances, yet taught in a very teacher-centred way.

The natural tendency to view new policy as minor variations to what is known and practiced

When teachers are faced with new policy ideas, assimilation of these ideas into existing knowledge frames is required. Data from this study suggests that the teachers understood the policy (C2005) as not being radically different to what they already knew. This is supported in Sheila's assertion that she found very little change implied in C2005 for her classroom practice as she always tried to get learners to think for themselves. However, she predominantly taught in a teacher-centred way and derided group work. In addition, as Sheila viewed planning under C2005 as *slightly* different, she did not plan according to the requirements of curriculum policy. This phenomenon of former model C-teachers, viewing C2005 as being not much different from what they had practiced in the past, is well documented in South African studies (Jansen, 1999; Baxen, 2001; Stoffels, 2004).

Jonathan, also felt that as outcomes are not significantly different from the aims and objectives of the previous curriculum, he did not spell out any outcomes in his lessons. This could explain his emphasis on content and the

mastery of facts at the cost of outcomes. As long as teachers consider coverage of a prescribed curriculum and the mastery of discrete skills as being of paramount importance, implementing a 'mindful' (Bredekamp and Rosegrant, 1992) and 'thinking' (Darling-Hammond, 1994) curriculum will remain problematic. Teachers striving to implement such a curriculum will often struggle to meet the requirements of two incompatible systems, based on widely differing philosophies of education and feel caught between content coverage and making sense of a new policy.

There is enough evidence to suggest that teachers conserve existing frames, rather than radically transforming them. New ideas are either understood as familiar ones, without sufficient attention to aspects that deviate from the familiar, or are integrated without restructuring existing knowledge and beliefs, resulting in piecemeal changes in existing practice. The primacy of the teacher in educational change and how her epistemology mediates curriculum implementation was often supported and demonstrated in this study.

In summary

This article suggests that policy needs to consider adequately, either at a conceptual level or at the level of policy implementation, the process by which teachers make sense of a curriculum. Teachers respond to policy constructions in complex ways, adopting some practices contained in policy and contesting other meanings and practices. Given teachers' epistemologies, public constructions of teacher practices are contested and recontextualised at the level of the school and classroom. This observation resonates with Hoadley's (2002) assertion that institutional constraints and the cultures established in the school make possible certain definitions of 'doing' teaching and 'being' a teacher. The study on which this article is based supports the assertion that teachers often bring their own personal habits, thoughts, sentiments and predispositions to the act of teaching, while at the same time being constrained by institutional arrangements. The school often also structures teachers' work and strategies through the limited resources available to them, such as materials, time, class size, and learner competence. Hoadley (2002) concurs and cites Denscombe who argues that teachers' work is essentially constituted as a practical response to perceived exigencies of the situation. Essentially, teachers deploy strategies to deal with difficulties encountered in the school based on their interpretation of the situation and their interaction with learners. This article demonstrates that teachers' 'scripts' or epistemologies, in conjunction with workplace factors, account to a great extent why they do

what they do. As teachers' epistemologies are rooted in, strongly related to and formulated through practice, they together with the teaching context, inform what teachers do in the classroom and determine to a great extent how they make sense of the policy message or 'external accountability' system. Teachers' epistemologies thus determine the way in which they act selectively on policy messages and work off a personalised set of internalised standards. Therefore, what it means to be a teacher and to teach is defined at the confluence of teachers' epistemologies, the context and the policy message.

Finally, this article also demonstrates how teachers conserve their existing frames rather than radically transforming them, with the result that new ideas are seen as minor variations of what is already understood rather than as different in critically important ways.

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Sylvan Blignaut Faculty of Education Nelson Mandela Metropolitan University