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WHY TEACHERS DO WHAT THEY DO

EXPLORING TEACHER DECISION-MAKING FRAMES IN THE CONTEXT OF CURRICULUM CHANGE IN SOUTH AFRICA

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Abstract

This paper addresses the perennial policy implementation problem of why classroom practices are so hard to change. It is based on the South African post-apartheid curriculum change effort, where teachers are currently operating at the nexus of the traditional curriculum and the new outcomes-based curriculum (C2005). The study veers away from popular scholarship that simplistically explains policy failure in terms of teacher resistance to imposed reform or resource problems. Instead, it takes an in-depth look at the decision-making frames of two science teachers, in contrasting resource contexts, and demonstrates how and why the decision-making and practice of both are still dominated by the traditional pedagogy. Pre-and-post lesson interviews, as well as videotaped classroom observations of 30 lessons for each teacher provide the evidentiary base of this paper. The study firstly illustrates the multiple and personal nature of the decision-making frames that impact on their practices. Secondly, it demonstrates that the inability of teachers to exercise their considerable decision-making authority is a function of the overwhelming and multiple threat of intensification of the work. This has serious implications for the intentions of progressive policies to have greater teacher agency in curriculum matters.

Introduction

Large-scale curriculum reform efforts aimed at altering teachers' pedagogical assumptions, teaching methods, classroom organisation and assessment strategies, is extremely difficult to achieve (Spillane & Zeuli, 1999). This is particularly true for initiatives aimed at changing the "core of educational technology" (Elmore, 1996: 2) towards more progressive classroom practices. There is substantial evidence that in post-colonial countries such as Namibia and Botswana, policies to transform teachers' instructional practices from a traditional teacher-centred to a more learner-centred approach have been largely unsuccessful (Ochurub, 2001; Tabuluwa, 1997). Similarly, teachers from well-resourced, developed contexts have also been shown to struggle to implement progressive curriculum policies (Spillane & Zeuli, 1999; Cohen, 1990). The pervasiveness of this 'implementation problem' prompted McLaughlin (1998: 70) to pose the simple but incisive question:
Why are classroom practices so hard to change?

In trying to find answers to this elusive puzzle, scholars have in various ways focused on teachers' beliefs, knowledge, prior experience, context, conditions of work and so forth, to find out how these impact and shape their classroom practices. Despite the extensive research on this topic in the developed world, the question remains. More importantly, our understanding of *when, why* and *how* teachers change (or do not change) their practices in developing Southern African contexts is still very limited. Considering the currency of progressive educational policies in the Southern African region, it is alarming that there is still much that we do not know about teacher change, and the factors and forces which constrain or enable curriculum policy implementation. Following Tobin, Kahle and Fraser (1996), it seems then that a more apposite phrasing of the 'implementation problem' is: *Why do teachers do what they do?* This implies that our understanding and knowledge of teacher change can best be deepened by (i) engaging teachers themselves, right in the "complicated embeddedness" (Paris, 1993: 123) of their contexts, and (ii) in accessing the decision-making processes and forces that shape what they do.

The dialogical link between teacher decision-making and classroom practice

The decision-making focus of this study emanates from two persuasive policy implementation perspectives. These include Fullan's (1991) plea for greater recognition of the subjective *sense-making experiences* of teachers, and Darling-Hammond's (1990) notion that for teachers, policy implementation is really about *learning*.

Methodologically, the notion of 'voice' has been central in unravelling the personal meanings people attach to their experiences (Elbaz, 1990: 17). A useful and popular way of amplifying the teacher's voice has been through attempts to get "inside teachers heads", (Feiman-Menser & Floden, 1986: 510), that is, to study the architecture of teachers' minds to get a sense of the thinking which shapes their classroom practices. This *cognitive approach* (Shulman, 1990: 62) to studying curriculum change is premised on two assumptions. Firstly, that the classroom actions and behaviours of teachers are to a large extent shaped by their thoughts, judgements and decisions (Borko, Livingston & Shavelson, 1990: 40). What this essentially means is that "behavioural changes have a fundamental cognitive component" (Spillane, Reiser and Reimer, 2002: 391). Secondly, the

study of teacher thinking and decision-making, together with the context in which they operate, provides a better understanding of why teachers do what they do in their classrooms (Woods, 1996). Mitchell and Koedinger (2000: 20) contend:

> … previous efforts at curriculum and instructional reform have fallen short partly because reformers neglected to consider the decision-making processes of teachers.

Similarly Little (1993: 130), in expounding on the prevalent practice of teachers to adapt, modify and contextualise curriculum innovations, notes that:

> … for the most part, experienced teachers have seldom been invited … to explain their reasons for adopting instructional innovations to particular classroom contexts.

A major limitation to the scholarly work on teacher decision-making is that it has largely focused on elementary teachers (Sardo-Brown, 1990: 58). There is a dearth of research on the planning and interactive decision-making of secondary school teachers, especially those teaching science. Moreover, the literature on teacher thinking and decision-making, in whatever discipline, has also been limited to First World contexts, with very little in developing Third World countries (Brodie et al, 2002).

Study, Context

In this paper, the question of why classroom practices are so hard to change is pursued within the context of the implementation of the new outcomes-based curriculum in democratic South Africa (Department of Education, 1997). Under apartheid, the curriculum handed down to teachers for implementation was (arguably) experienced as very prescriptive, content-heavy, detailed and authoritarian, with little space for teacher initiative (Ntshingila-Khosa, 2001; Jansen, 1999). In practice the teaching-learning process was characterized by learner passivity, rote-learning, content-orientation, rigidity of syllabus and chalk-and-talk presentations (Christie, 1993)

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The National Department of Education marked the break from the apartheid curriculum with the announcement of an ambitious curriculum that promised comprehensive curriculum change in post-apartheid South Africa (Department of Education, 1997). Curriculum 2005 (C2005), so called because it was envisaged that it would be completely implemented and practiced by all compulsory school grades by the year 2005, was built around the philosophical principles of outcomes-based education (OBE). The new emphasis on "outcomes" instead of input, on learner centredness instead of teacher-centredness, and on activity learning instead of passive learning, signaled a revolutionary new way of teaching and learning in South African classrooms. Teachers were expected to have a more facilitative role, and to employ a variety of teaching and assessment strategies, based on learners' experiences and needs. In the minds of the policy-makers, this would afford teachers greater autonomy, responsibility and flexibility to plan and facilitate lessons in ways that suit their particular learners. This policy intent of greater decision-making authority is captured as follows:

> The new curriculum does not provide detail about content … Educators are recognized as professionals who can make curriculum decisions in the best interests of learners and who do not have to rely on the dictates of a centrally devised syllabus. (Department of Education, undated: 25).

In the light of the greater decision-making discretion of South African teachers implementing the new and challenging outcomes-based C2005, as well as my broader interest in why teachers do what they do, I posed the following research question:

What are the main decision-making frames that shape teachers' classroom practices?

Sample and Context

Following a combination of purposive and convenience sampling, I identified and studied two Grade 9 Natural Science teachers in Pretoria East, South Africa. These were two black male teachers, who were teaching in schools that were, in traditional terms, in predominantly 'white', and 'coloured' suburbs. Martin, who taught at the

previously disadvantaged 'coloured', had a 4-year composite science education degree and ten years of science teaching experience. According to the Gauteng Department of Education (GDE) grading system, Martin's school was categorized as 'moderately resourced,' although it frequently happened that the equipment or chemicals that he needed to use were either not in stock or were not working properly. Martin was very conversant with the post-apartheid curriculum reform efforts, and attributed this to the fact that he had just completed (and thoroughly enjoyed) a one-year GDE funded OBE course at a local university. Moreover, despite the fact that he was aware of the challenges and complexities of C2005, he consistently communicated a devotion to the outcomes-based principles that underpin it. Although this committal to OBE was largely pedagogical, there was an distinct political tone to it as well, as typified by the following statement he made in one of the early interview sessions:

> *I was at UWC. We threw rocks to get our freedom. OBE was instituted because we wanted to break away from the former apartheid educational system. We had to design a system that moves away from teaching students in a way where they mean nothing to society. But that is the reason why so many people criticise OBE, its mainly people that still want to cling to the previous system, that it was right.*

Thabo, who incidentally was the first black teacher at the previously advantaged 'white' school, had been in the teaching profession for five years. Consistent with the GDE grading that Thabo's school was 'well-resourced,' its website portrays the school laboratories as "*large, well equipped and well stocked."* In comparison with Martin, Thabo was not as conversant with the demands of the new curriculum, and paradoxically, believed that the new OBE was *"not different",* and was merely "*minor adjustments"* of what teachers had always been doing.

Methodology

I keeping with Woods' (1996) experience of the best way to investigate the subjective experiences and thinking of teachers, I undertook a qualitative-interpretivist approach to this research. Furthermore, I opted for the **comparative**

case study approach because of its potential for thick rich descriptions of the context wherein teachers operate.

I started off with two two-hour, *semi-structured biographical interview* sessions with each teacher. Here, invaluable insight was gleaned on their family context, teaching qualifications and experience, attitudes to and beliefs about the teaching, science, the curriculum in general and more particularly the recent curricular transformations in South Africa. I *observed and video-recorded* close to 25 lessons that each teacher gave to (or facilitated with) one particular Grade 9 class. During the lessons, critical incidents of decision-making were noted. These classroom observations had a two-fold purpose. I firstly wanted to get a picture of how the pre-lesson planning and decision-making was realized in the actual classroom setting. Secondly, I wanted to get a portrayal of the interactive thinking and decision-making of the respondents while they are actually teaching. Each lesson was preceded by a *semi-structured pre-lesson interview*, to delve into how and what teachers were planning, how the lesson was to be facilitated and why particular instructional decisions were made. Amongst others, they were questioned on the rationale behind their content selection, planned teaching strategies, use of the LSM and how the particular section was taught in the past. The chief purpose of the pre-lesson interviews was to get a clearer picture of teachers' pre-active decision-making. Following each lesson, a *post-lesson semi-structured interview* yielded data on the teachers interpretation and understanding of how the planned lesson had actually panned out, the interactive decision-making incidents he had to make and the 'frame factors' that shaped the actual lesson. This interview took the form of informal conversations, which were taped, before and after actually looking at the video replay.

The video-recordings of the observed lessons were used for *stimulated recall* sessions (Calderhead, 1984; Woods, 1996). The purpose here was to allow teachers an opportunity to provide a detailed account of their interactive practices and the causative decision-making processes and frame factors they experienced during the lesson.

To make sense of the voluminous data which emerged from this study, I took an iterative, recursive and interactional approach to data analysis (Hatch, 2002). On one

level I opted for *guided analysis* (Freeman et al, 1996), meaning that I provisionally entered the field with a priori dimensions of teachers' classroom practices (e.g. classroom organisation) and decision-making (e.g. the planning, frame-factors). These served as preliminary and adaptable guides to the unfolding analysis. This process was augmented by *constant comparison* (Silverman, 2000), that is, the qualitative comparing and contrasting of different categories, and eventually patterns, both within and across the two cases.

Findings

For the purpose of this paper, I present the findings in terms of the similarities and dissimilarities which characterize Martin and Thabo's curricular decision-making frames.

The impact of the new 'outcomes-based' learning support material

Without doubt, the most significant finding from this research was that for both teachers the dominant and pervasive influence on their curricular decision-making and classroom practice was the particular learner support material (LSM) that their respective schools had recently acquired, namely *Wonderboom.* This was a new, commercially prepared text that was 'theoretically' consonant with the new outcomes-based principles of C2005. The *Wonderboom* set comprised a separate Learner Support Book, Learner Activity Book and Teacher's Guide. The Learner Activity Book consists of a number of learner activities, primarily in the form of worksheets aimed at discovery learning, on the content, concepts and principles covered in the Learner Support Book. The latter therefore resembles the traditional textbook, although not as bulky and content-heavy.

As stipulated earlier, the new outcomes-based curriculum affords South African teachers considerable autonomy in planning and designing appropriate, needs-based learning programmes, within the broad parameters of the critical and specific outcomes, as well as the specified four strands of C2005 Natural Science. C2005, in principle at least, provides

teachers with the flexibility to select and sequence content according to the interests, developmental levels, and needs of learners. However, both teachers had resolved to primarily follow the pattern of the LSM, to a large extent using it in a mechanical and imitative manner. This meant that, apart from a few deviations from the *Wonderboom* texts, both respondents simply adopted and replicated its choice of critical and specific outcomes, themes, topics, content sequence, worksheets and, to some extent, assessment strategies. This could be seen in the way they repeatedly explained that they were doing particular topics because it was "next-in-line" in the *Wonderboom* books. For example, when I asked Martin during a pre-lesson interview why he had chosen to deal with *Abiotic factors* for his next lesson, he replied:

> *Well… once again, it is in the book that we are using, which is the Wonderboom, and we happen to do it also in that particular order.*

Similarly, Thabo explained that during the research period he did much more chemistry that the previous year, simply because the Wonderboom books dealt with it more extensively. In his own words,:

> *… the form of Chemistry that they did last year, it wasn't much of doing the periodic table and all those stuff, because we were not working from the Wonderboom books last year. We were just working from a particular textbook in which they didn't give much information into the content of Chemistry.*

Both respondents used the *Wonderboom's* ready-for-use worksheets extensively, primarily as classroom exercises after a ten to twenty minute introductory teacher talk on the day's lesson content. Thabo, whose learners all had both the support book and the activity book, consistently had them to complete the activity worksheets in class. These mostly entailed 'fill- in- the-blank- spaces' kind of questions. Martin, whose learners did not have the *Wonderboom* texts, either photocopied (when the school had paper) or duplicated the worksheet content on the chalkboard for learners to write down. The primacy of the LSM in the selection of content and instructional activities was best articulated by the following post-lesson interview extract when I asked Martin whether he had consulted other sources in preparing for a lesson:

> *No I haven't, like I say so far I have been following the Wonderboom series slavishly and not make an attempt to change it, because that is what my colleagues also do. Simply take and make photocopies and then let the learners answer those questions.*

Both teachers demonstrated very little initiative and resourcefulness in terms of altering or enriching the *Wonderboom* course. This effectively meant that there was a lack of intensive curricular decision-making on their part, and that they effectively relinquished their professional power to the LSM. This in turn meant that the teachers were not realising the C2005/OBE vision of teacher decision-making, so succinctly captured by the first post-apartheid Minister of Education: "In a learner-centred environment the teacher becomes the facilitator, guided by learning programmes that allow him/her to be *innovative and creative* in designing programmes (Bengu, 1997: 4).

At this juncture, I wish to draw attention to two very important issues that shed light on the respondents'slavish use of the *Wonderboom* books. The first issue relates to the assertive way in which they agreed with the OBE principle that teachers should not be textbook bound. Here, Thabo's assertion that "*this book is not my Bible"* succinctly captures their espoused belief, that under the new instructional dispensation teachers should be more learner-centred in their lesson planning. Both Thabo and Martin certainly demonstrated a theoretical understanding of the C2005/OBE message that the conventional approach of 'teaching from the textbook' should be abandoned. Yet, in practice, they were now 'teaching from the LSM'. This was one of numerous *"hotspots',* as Linde (1980, cited in Woods 1996: 71) terms such contradictions between a person's espoused beliefs and his/her actual practice. Martin, for example, endorsed the view that learners should be more active in the construction of their own knowledge; yet in practice he did most of the talking and teaching. Thabo, on the other hand, was of the opinion that teachers had always been practising OBE, and that C2005 was just "*making difficult what we have always done".* In his own classroom, he was the dispenser of knowledge, and depended on a pre-packaged learning programme (*Wonderboom*) to meet the needs of his unique and diverse group of learners.

This tension between teachers' beliefs and their classroom behaviour underscores Roger's (1999: 2) point that the curriculum "represents a critical interface between beliefs and action" and "a space for contention". In this study, the teachers seemed to deal with this "space for contention" by making decisions and adopting practices that were antithetical to their professed beliefs about and understandings of the extant curriculum changes.

This second inconsistency relates to their initial claims (before classroom observation and occasionally in the first few interviews) that they draw from a number of different texts to construct appropriate lesson programmes, and their actual and predominant practice of drawing only on the *Wonderboom* text. Such disjuncture between what teachers claim they do and what they actually do in class has been well-documented, more recently with regard to teachers attempting to practice C2005 in South Africa (Jansen, 2001; Taylor & Vinjevold,1999). Shraw and Olafson's (2002) findings of how some Australian teachers endorsed a conceptualist worldview, but exhibited conflicting practices, illustrate that these contradictions between claims and actual practice are not just a Third World phenomenon. What made Thabo's and Martin's abdication of their curricular decision-making authority to the *Wonderboom* texts truly intriguing was that they were equally unimpressed with its quality and relevance. When they spoke about their impressions of the *Wonderboom* activities and worksheets, they readily used negative descriptors such as *"superficial", "unchallenging"* and *"straightforward"*. It seemed therefore highly illogical that they would adopt the "superficial" and cognitively unchallenging curricular decisions made by the authors of the *Wonderboom* NS texts. There are a number of possible explanations for this observation.

Firstly, the fact that the leadership of both schools played a prominent and leading role in the acquisition of the LSM, and that all learning areas were using the same series meant that teachers were under some pressure to use it extensively. In fact, in Thabo's case, parents were surprisingly adamant and demanding that the LSM, for which they had paid a considerable sum, should be used to its full extent. Secondly, the fact that the *Wonderboom* series was approved by the GDE as an 'outcomes-based' LSM, fed an understanding in their minds that it was well tuned to the demands of new C2005/OBE policies. With such a perception, the *Wonderboom* series would indeed be very appealing, especially considering

the broad, unspecified and content-light nature of the official C2005 documents (Chisholm, 2000). For these teachers the commercially prepared curriculum texts represented a neat package of what was minimally expected of them. Ben-Peretz (1990), in her insightful book called *Freeing teachers from the tyranny of texts*, concurs with this point by stating that teachers often believe that authors of curriculum textbooks “possess valid knowledge and expertise which is reflected in their choice of the topics, themes and principles…” Thirdly, their dependence on the LSM for curricular decisions arose largely from practical and functional considerations. These include perceptions that the *Wonderboom* was a ready-made learning programme, that it saved a lot of time, and that it relieved the pressure of the complex curricular change. As I will illustrate later, this sense of *intensification of their work* pervaded much of our conversations.

It was clear that by abdicating their decision-making powers to the LSM, and following its script, the teachers in this study believed that they were, to some degree, doing what was expected of them. In this regard, Eisner (1979: 120) makes a very valid point when he asserts that for teachers “it is easier to do what is expected, even if what is expected has little meaning or personal relevance”. Schraw and Olafson (2002) extend Eisner’s (1979) observation to conclude that through this quiet conformity to another authority, “teachers have given themselves over to passivity”. This is such an apt articulation of my findings with regards to Thabo’s and Martin’s limited use of their decision-making space, that it seems entirely appropriate to characterise it as *passivity in decision-making*

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The limited nature and passivity of decision-making that came to light in Martin’s and Thabo’s engagement with the new curriculum does not seem very different from the way Jessop and Penny (1998) described their sample of rural primary school teachers in pre-C2005 South Africa. They found that the teachers were using the textbook and syllabus as “authoritative texts” and “recipes for classroom practice”, with little reflection on their epistemological or pedagogical signals. Furthermore, Jessop and Penny (1998: 399) accurately echo my findings when they explain how that their respondents “had effectively abdicated responsibility for exercising agency over what they taught, to whom, how and for what reason”.

In all, the teachers' passivity-in-decision-making, and the almost 'scriptural authority' that they afford the learning support material, cohere with Jackson's (1968: 20) finding that even in First World contexts

> … many teachers never trouble themselves at all with decisions about how the material they are teaching should be presented to their students. Instead they rely upon commercially prepared instructional materials such as textbooks to make those decisions for them.

Although Thabo's and Martin's decision-making and practice were largely framed by the *Wonderboom* texts, there were a number of other forces that, to various degrees, also had a powerful effect on the choices and decisions they made. As I illustrate in the next section, some of these secondary frame factors put more pressure on them to draw extensively on the LSM, while others encouraged them to make the occasional deviation from the *Wonderboom* texts.

The impact of departmental (GDE) directives

The frame factor that had the second most profound impact on both respondents' decision-making and practice was undoubtedly the *departmental directives*, particularly with regards to continuous assessment (CASS). This was completely understandable as all teachers in Gauteng Province were subject to the same portfolio requirements, and had to have a pre-specified range of assessment activities that were to be moderated externally at the end of the year. Whereas the learner's portfolio eventually accounted for 75% of his final promotion mark, the other 25% came from the Common Task Assessment (CTA), a kind of external question paper common to all Grade 9 learners in Gauteng. Although both respondents maintained that the CTA was quite easy and straightforward, it did seem to frame their classroom practices in terms of extra learner exercises or longer teacher talks, particularly on those aspects that were in the previous year's CTA. This is well crystallized by the following explanation by Martin on why, after completing the *Wonderboom* activities on ecological graphs, he continued with more graph work:

> *Personally, I feel that I should go back to graphs because last year a lot of emphasis was placed on graphs in the CTA, Section B. So I never thought about it, my colleagues reminded me that I shouldn't neglect it.*

The extent to which departmental directives acted as a decision-making frame in Thabo's thinking and practice, is typified by the following interview exchange:

> *Thabo: ... we are preoccupied with the assessment and thereafter you'll find that you can, after completing that, it is then you'll find that you can do the real things now.*
>
> *Interviewer: The real assessment?*
>
> *Thabo: Yes, and the real teaching, because now our teaching, as I've said, is more on helping those learners to do their portfolio work. That is why you have heard me saying that we have agreed that after finishing this OBE stuff then we will start with teaching the real Garde 9 science. Because we feel like now what we are doing is just to do those things that the Department want us to do.*
>
> *Interviewer: To play it safe for the Department?*
>
> *Thabo : Ja, to play it safe, because after all it doesn't matter whether you have been teaching effectively, your learners understand everything, but if you haven't covered what the Department wants from you, then you are not a good teacher before their eyes. Therefore you have to be a good teacher to the Department, because you cannot bite the hand that feeds you.*

This last exchange crystallises a number of perceptions that guide Thabo's curricular decision-making and classroom practices. Firstly, it was apparent that he did not regard his practice of teaching along the lines of the *Wonderboom* text, nor the assessment directives of the department, as *"real teaching"*. Thabo informed me that they reverted back to traditional content-heavy teaching during the fourth term of the previous year in an effort to prepare them for the *"real Science",* as Thabo called it on a number of occasions, of Grade 10. Secondly, Thabo believed that it was best to *"play it safe,"* just to *"cover"* what the department expects from him, and that *"you cannot bite the hand that feeds you"*. Unfortunately, the danger of this attitude, as I have seen through the analysis of learners' portfolios, is that he made no real effort to be creative and innovative with the required assessment tasks, and simply took them uncritically from the *Wonderboom* texts. Another

manifestation of his notion of ‘playing it safe’, was that these assessment tasks were not employed to inform his subsequent decision-making on what he should teach or revise – once the task was completed and marked, it was simply filed in the learners’ working portfolios. Thirdly, Thabo was of the opinion that the GDE regarded a ‘good teacher’ as one that had the documents and administration in the format that they decreed. Anything else, he believed, would earn their displeasure. He re-articulated this perception as follows:

> *You'll find that after you have done those assessment marks, you feel like I have done what the Department expects from me and if they can pop in any time I'm ready to show them the proof I've been teaching. It's like it creates this thing of shifting from the basis of teaching where it's about a learner gaining knowledge. It's a thing from more of the paper work and covering your grounds as a teacher to be safe from the Department.*

In addition to the broad departmental decrees on how teachers were to structure their assessment practices, the department occasionally sent circulars to schools to ask teachers to introduce certain subject matter or tasks into their teaching. One particular incident that stood out was when Thabo, during the time that he was busy with *Electricity,* abruptly suspended his lessons, and instead spent a few days on coordinating and facilitating learners’ projects on *Smoking.* When I asked him about this unexpected change, he referred to a circular that they had just received from the GDE. It apparently instructed all Grade 9 teachers to do this particular project on *Smoking*, and to have it completed by the end of the second term. During our discussion on this matter, he commented:

> *They have to spend at least 10 hours doing it in class. Therefore you'll find that it's not even part of the syllabus, but they have to spend 10 hours doing it in class. That means you'll have to stop some of your lessons and fit it in.*

It was interesting to note though that for both Martin and Thabo their compliance with departmental directives was largely restricted to those ‘high-stake’ ones which ultimately led to products that they knew were to be moderated by departmental officials, and which were to determine learners’ progression to the next grade. They certainly did not demonstrate the same sense of commitment to departmental expectations for the construction of learner-based learning programmes or the mechanics of C2005 lesson planning.

The impact of subject matter competence

Another similarity in decision-making frames was detected with regards to their *subject matter competence.* Coincidentally, both Thabo and Martin did not have specialised teacher training or teaching experience in the *Life and Living* (Biology) component. In class they reacted identically by sticking verbatim to the *Wonderboom* texts but in a superficial way, limiting learner discussion or queries on the worksheets and basically rushing through the Life and Living worksheets. This is one of the main dilemmas of the integrated learning area approach of C2005 – it was clear from this study that there is the real possibility that teachers' attempts to enrich or deviate from their chosen LSM texts would be limited to those strands in which they feel competent and experienced, while those Science strands in which they were not competent would be severely neglected. Rowe (1985, cited in Tobin et al, 2001: 83) concurs with my observations when he reports that in selected American schools, "lower levels of engagement occurred when teachers taught outside their specialist disciplines in integrated science … non-practical, informational approaches dominated when teachers moved out of their specialised areas…" This study confirmed that teachers gravitate more powerfully to prepackaged curriculum texts when confronted with scientific strands or topics that challenge their pedagogical content knowledge. This observation raises yet another question:

Why do teachers not spend more time and effort learning and researching those NS themes that they are not familiar with? This certainly is a pertinent question, and one that I posed to my respondents in varying ways. As I will demonstrate, Thabo and Martin strongly indicated that the tremendous increase and *intensification of their workload* had made such efforts almost impossible.

The impact of past experience

The prominence of *apprenticeship of experience* as a decision-making frame was understandable. As the case reports clearly illustrated, both Martin and Thabo at times related their teaching patterns, such as their extensive use of the chalkboard, to their own

experience as high school students. This meant that much of their instructional behaviours arose not from conscious or deliberate decision-making, but were the fruit of a kind of "socialization" (Hoadley, 2002: 46) or apprenticeship process, whereby they learned and acquired certain behavioural features from what they experienced and what they observed their own teachers doing in class. Furthermore, both conceded that the traditional 'Fundamental Pedagogics' orientation of their teacher training had certainly left the traditional, teacher-centred imprints on their pedagogical identities. This dimension of teacher decision-making is consistent with the literature, which suggests that we see, interpret and react to the world according to what we have experienced in the past. Cohen (1990: 339) captures this notion that teachers are historical beings when he concludes that teachers

> … cannot simply shed their old ideas and practices like a shabby coat, and slip on something new … As they reach out to embrace or invent a new instruction, they reach out with their old professional selves, including all the ideas and practices therein.

The impact of classroom routines

Closely linked with Thabo's and Martin's *apprenticeship of experience* was their particular classroom or instructional *routines.* These not only involved routines or "experienced structures" (Woods, 1996: 45) developed in the traditional pedagogical contexts, such as the extensive use of the chalkboard, but also those which they acquired in the short period of C2005 implementation. This latter point was well manifested in the way both respondents had fallen into the lesson routine of an introductory teaching period, followed by learners completing *Wonderboom* worksheets, and then a time for 'checking' the answers to the worksheets. Furthermore, their approach to practical or experimental work, where both of them relied largely on teacher demonstrations with minimal involvement from learners, also spoke of their preference for calling on tried and tested routines. In this regard, Martin had the peculiar routine of doing his teacher demonstrations step-by-step, linking each step with the relevant *Wonderboom* worksheet question. He would then allow learners to fill in the appropriate answer, as observed in the demonstration, before going to the next step. Based on my many conversations with Martin and Thabo, it is safe to say that a major benefit of falling back into *routines* is that, just as for their *apprenticeship of*

experience, it minimised conscious decision-making and wide-ranging mental deliberation. This applied to both planning (pre-and post-lesson decision-making) and interactive or 'in-flight' decision-making. And for them, operating in contexts that they perceived to be marked by a severe *intensification of the workload,* this was a benefit worth pursuing.

The impact of Grade 10 Physical Science

The decision-making of both respondents was to a certain degree also framed by the Grade 10 science syllabus and learner performance. Thabo, for example, responded by infusing some of the key Grade 10 Physical Science concepts into the various Chemistry and Physics lessons, and also by starting with the Grade 10 syllabus towards the end of the fourth term, after they had completed the CTA directives. His rationale behind this practice was that Grade 10 teachers were complaining that their learners, who were the first cohort that followed the outcomes-based C2005, were struggling horrendously. As is evident in the next interview extract on this subject, both he and his colleagues were convinced that these learners were struggling with the much more demanding Grade 10 NATED 550 syllabus, because of the *"superficial"* and *"simple"* Grade 9 *Wonderboom* texts.

> *The problem is they only do that shallow stuff up until Grade 9. When they go to Grade 10 they will have to face the real science. Then that's where your problem starts. I have been teaching Grade 10 myself last year. Then I knew what was happening in those classes. You'll find that most of the kids do not have even a background of basic science in Grade 9. Now they are in Grade 10. They have to do real science, but they are still in the mood of carrying on where they have stopped last year,*

Martin's was also teaching Grade 10 Physical Science, and was therefore familiar with what his Grade 9 learners were going to do, and were expected to know, the following year. He was naturally also familiar with the performance and shortcoming of the Grade 10 learners in Physical Science, and somehow tried to prepare his Grade 9 learners more solidly. These insights occasionally influenced his decisions on content selection, scope and depth, as well as on how to extend classroom exercises beyond the *Wonderboom* worksheets. When questioned on the extra-ordinary emphasis and time spent on the balancing of chemical equations, he noted:

> *Because they are in Grade 9 and they will have to do this work again next year. And it will be a bit easier, I feel they will have a background of the work and it will be easier for them it wouldn't be something completely new. And I feel that it is not too difficult.*

It was clear that Martin's concern with the Grade 10 syllabus and laying a more solid foundation with his Grade 9 learners was limited to those sections in which he felt comfortable and experienced, namely Physics (Energy and Change) and Chemistry (Matter and Materials). It was only in these dimensions that he felt competent enough to occasionally go beyond the *Wonderboom* worksheets. By way of example, in response to my question on why he chose to spend two periods on the concepts of ions, something not dealt with at all in the *Wonderboom* book, he answered:

> *I felt that it is not a difficult concept perhaps it could be seen as sort of enrichment. But then again learners would have to know it in Grade 10. They would have to know the positive ion and negative ion.*

The central theme underlying Martin's occasional infusion of concepts scheduled for Grade 10 Physical Science was his concern about the lack of content in the Grade 9 *Wonderboom* book on which he based his instructional decisions, as well as the misconception that had that OBE implied less content.

Dissimilarities in decision-making frames

There is extensive scholarship that contends that teacher decision-making is a very personal, situational process (Johnston, 1990; Woods, 1996; Bolster, 1983). In this study, the personal and situational nature of teacher decision-making could be seen in the way that particular frame factors had varying effects on Thabo and Martin, and in the way that some decision-making frames applied to one, but not the other. Schmidt et al (1987: 454), in their study of eighteen Michigan teachers, also found that "not all teachers will respond to the same types of pressures, nor were they responsive in the same ways".

The most salient differences related to the *impact of parents* on the participants' curricular decision-making. On the one hand, Thabo explained how parents were generally a major force at his school, and that they were generally very involved in, and conversant with, the academic performance and progress of their children. He was vehement in partly attributing his mechanical following of the *Wonderboom* LSM to the pressure and expectations of parents for him to use it extensively. On the other hand, parental involvement and pressure not once surfaced as a decision-making frame factor in Martin's negotiation of the new curriculum. In fact, Martin repeatedly expressed disappointment with the general apathy and disconnection of the parents at his school, and that this was most noticeable in their consistently poor attendance at parents' evenings. In my attempts to link this finding with the literature it became clear that there is silence on the powerful, though variegated, impact of parents on the curriculum decision-making of teachers. Schmidt et al (1987) report that in their study, less than 20 percent of teachers mentioned parents as influencing their content decision-making.

Furthermore, given the widely different contexts in which the two respondents worked, it is understandable that they had different experiences and 'stories' of the impact of *resources* on their decision-making. Thabo had access to "*large, well equipped and well-stocked"* laboratories, and as he noted in our very first interview, he was at a school where "*you did not have to crack your head to improvise, because everything was there"*. Lack of resources therefore did not feature in his explanations as to why he made certain curricular decisions. Yet, despite the availability of adequate scientific chemicals and equipment, Thabo still decided to approach practical work in the traditional demonstration way. What was also striking was that he limited his utilisation of teaching media to the chalkboard, even though overhead projectors, a well-stocked library, televisions and video-recorders were easily available at the school. It was clear though that his decision to privilege decision-making frames such as the *Wonderboom* books and his teacher-centred routines meant that the availability of resources made no real difference to his largely traditional pedagogical style. His degree of dependence on the 'outcomes-based' texts was on a par with that of Martin, who taught at a 'moderately-resourced', previously disadvantaged school. As I noted earlier, this designation of 'moderately resourced', given by the GDE, is wholly misleading and inaccurate. My own observations agreed with Martin's complaints

that the school was in fact severely underresourced, for much of the chemicals and equipment were either non-functional or outdated. What added to Martin's resource problems was the fact that the senior Science teachers were reluctant to provide him with certain laboratory equipment for fear that the Grade 9 learners would break it. In all, what this problem of *lack of resources* meant for Martin is that it reinforced his decision to follow the *Wonderboom* books more mechanically. In Martin's mind, it also meant that he could not venture beyond his routines of teacher demonstrations

Yet another sign of the difference in the impact of resources on their decision-making was seen in the different ways in which Thabo and Martin dealt with the availability of the *Wonderboom* books in their classes. At Martin's school, where all the learners come from the 'previously disadvantaged' communities, and where many struggled to meet the R400 per annum school fee, learners were not expected to buy the *Wonderboom* series. In practice, this meant that Martin essentially had to either copy different worksheets for all the learners or, as often happened, when there was no photocopy paper available at the school, he had to write the activity on the chalkboard. At Thabo's school, which is in prestigious area, and where most parents typically do raise the R7000 per annum school fees, all the Grade 9 learners were expected to buy the *Wonderboom* series (for most of the learning areas) at a cost of R650. In the Grade 9B class that I observed, all the learners had both the *Wonderboom* Activity Book, and the Support Book. In practice, this meant that Thabo did not have the challenge of making regular photocopies, or to duplicate the worksheets on the chalkboard. In other words, Thabo theoretically had more time for reflection, planning or decision-making available. However, in reality, there was a striking similarity in the way that he and Martin gravitated towards the *Wonderboom* texts. This similarity becomes even more salient when one considers Christie's (1999) prediction that "better resourced, historically privileged schools are more likely to manage the new policies than historically disadvantaged, mainly black schools".

Thabo's positioning as a black teacher at a well-resourced, historically privileged school, and his struggles to manage the deeper, epistemological changes inherent in C2005/OBE, underlines the fact that teacher decision-making is very *personal*, and not necessarily dictated by the level of resources in a school. It would seem that, for Thabo, decision-

making frames such as the *Wonderboom* series, his traditional teacher-centred apprenticeship and routines held more sway in his curricular decision-making than the availability of resources. This is in line with Baxen's (2001) assertion that, in the implementation of South Africa's new curriculum policies, greater care needed to be taken with "what teachers bring to the table". She links this recommendation to her research evidence that showed that in the Western Cape, both black and white teachers were not making any inroads into the new policies, but for markedly different reasons. Black teachers were hampered by the fact that their teacher training was more in the traditional vein, and that contextual factors such as large class sizes, lack of resources and lack of understanding militated against successful implementation. On the other hand, white teachers at the historically advantaged schools though trained in more progressive pedagogies did not change their practices because they were largely of the view that they had in fact always been practicing OBE. I mention this point here because of the vehement way that Thabo expressed similar sentiments.

It was noteworthy that Thabo, as a black teacher from a traditional teacher-centred background, could repeatedly and compellingly state that OBE was not very different from what teachers had always been doing. Bearing in mind that he was only in his fifth year of teaching and, by his own admission, had up to that point been largely teacher-centred in his teaching, it is more than likely that Thabo was inadvertently expressing the dominant and popular opinion of his white colleagues at the school. This highlights the powerful effect of another decision-making frame that I have not dwelt on much, namely the impact of collegial influences on teacher decision-making.

In practice, Thabo's perception that OBE has always been part of teachers' instructional approach meant that he did not challenge or seek alternatives to the dominant prevailing pedagogy at his school. Teachers were encouraged, even forced, by both the school leadership and the parents to use the *Wonderboom* LSM extensively, and to have learners complete its 'activity-based' worksheets at a steady pace. This, together with ensuring that learners completed the worksheets in groups, seemed to constitute OBE at the school. In other words, Thabo had become socialised into this superficial (Baxen, 2000) interpretation of OBE, hence his dependency on the 'outcomes-based' texts and his largely teacher-

centred handling of group work, practical work and assessment. Similarly, despite the fact that the levels of collaboration between Martin and his colleagues were minimal and superficial, uniformity (of content, worksheets, practical work, etcetera) was a prime concern for them. Hoadley (2002: 48), in her research on teacher work identities, speaks about this "'uniformity in teacher cultures", and how "teacher repertoires are the result of forms of consciousness, knowledge, sentiments and values that are socially constituted in the school". In the midst of the collective thinking, both Thabo and Martin realised that there was more to C2005/OBE than the texts they were using. They expressed an awareness that they ought to have learners more actively involved in constructing their own knowledge and should draw on a much wider variety of sources for content and strategies based on the needs of his learners. However, this awareness remained at a rhetorical level. As I will demonstrate shortly, in his mind he could not concretise these deeper lying "root changes" (Hargreaves, 1994) because of the deep sense of *intensification* of his work.

My findings on the decision-making frames that shaped Thabo's and Martin's practices are to a large extent consistent with the literature which suggests that the decision-making frames that impact on teachers' practices are *multiple* (Woods, 1996; Calderhead, 1984). In Woods' (1966) study, teachers made decisions based on, among other things, the curriculum directives, class routines, their perceptions of their students, and their beliefs and assumptions. As described, Thabo and Martin 'voiced' their decision-making frames as the various departmental directives, their subject matter competence, their apprenticeship of experience, the Grade 9 learners as well as the Grade 10 learners' performance in Science. A striking difference between our findings relates to Woods' (2003: 128) evidence that these factors are very much "interwoven", and that "typically, no single isolatable factor 'causes' a decision to be made". While his respondents consistently enumerated a whole range of frame factors when they explained the underlying thinking behind a curricular decision, I cannot say the same for the teachers in this study. While his respondents' decisions typically seemed to "evolve out of a process of weighting factors", in a "gradual process involving prior considerations, prior decisions, and the various factors underlying the prior decisions" (p. 130), the South African teachers in this study had a different approach.

Understandably, the primacy of the *Wonderboom* LSM in Thabo's and Martin's decision-making and practice meant that there was very little consideration for or deep reflection on many of the decision-making frames that Woods' respondents enumerated. Yes, there was *some* degree of connection between the limited number of decision-making frames that surfaced in the study, but it certainly does not have the same rich 'interwoven' texture. The reason for this variation, as I will argue shortly, lies in the fact that Thabo and Martin experience the implementation of the new curriculum as an overwhelming *intensification* of their work, and in order to cope with this intensification, they limit their decision-making frames and considerations to the bare minimum.

I am cognisant of the fact that the above delineation of the forces that impact on teacher's decision-making is far from exhaustive. For other teachers a different set of frame factors might affect what they decide to do in their classrooms. I am also aware that for Thabo and Martin the specified factors of influence are not static or fixed, but are subject to change. Moreover, as Calderhead (1984) correctly notes, teachers generally do not perceive *all* the influences and constraints on their practices, or for that matter, on their decision-making. However, based on my classroom observations, as well as the way the respondents voiced their 'thinking' about the decisions they made, the enumerated frame factors are those that were most intensely experienced by the respondents during the research period. Clearly, the most intensely experienced decision-making frame factor was the *Wonderboom* texts. It was also clear that most of the secondary factors, particularly the parents and their tried-and-tested routines, further fuelled their reliance on the LSM. Despite the comprehensive outline of the multiple factors that influenced Thabo's and Martin's decisions, the question that remains, and to which I now turn to, is: *Why exactly were they so quick to abdicate their decision-making authority and space to the 'outcomes-based' learning support material?*

Explaining teachers' passivity in decision-making

The preceding discussion and analysis of the evidence which emanated from this research resonate well with the 'intensification' literature, which essentially purports that all over

the world there has been a ‘bureaucratically driven escalation of pressures, expectations and controls concerning what teachers do and how much they should do within a teaching day…’ (Hargreaves, 1994: 108). Smyth (2003: 3) also shows acute awareness of the extent of the problem when he notes that “‘teachers are currently experiencing ‘difficult times’ as their work is assailed, prevailed upon, reformed and restructured by forces bent upon … intensification”.

What seems contradictory is the fact that the extant ‘intensification’ literature depicts the problem as one where the government increasingly usurps control of what happens in the classroom and the kind of decisions that teachers can make. Yet, under the banner of C2005 and OBE, South African teachers are afforded decision-making space and authority of an unprecedented nature. Given that the teachers can make appropriate choices on content, classroom activities and so on, but within the broader national framework of the pre-specified critical and specific outcomes, one could quite safely argue that they have semi-autonomous decision-making powers. Despite this apparent flexibility in curriculum decision-making, it seems as if the work of teachers currently operating at the intersection of C2005 and the traditional curriculum is characterised by the very same manifestations of intensification which Hargreaves (1992) enumerated. These include heightened expectations (outcomes-based teaching), increased accountability (CASS), more and more administrative work (portfolios), enforced diversification of expertise (integrated science) and a lack of time for proper lesson preparation and professional development.

The fact that Thabo and Martin experienced the implementation of C2005 as an immense intensification of their daily work, came through very strongly throughout the research period. The most dominant rationale of why they do what they do in their classrooms, particularly in terms of their mechanical and perfunctory use of the LSM, was that they were overworked, overloaded and that they just did not have the time to be more responsive to the C2005 intentions. Martin summed up his passivity in decision-making as follows:

> *So that is basically the problems that we are faced with, … we are overworked, we have got a lot of paperwork as well, meetings, workshops etc.*

On another occasion, he reiterated this sentiment by suggesting that the 'overload' is accentuated by the fact that there is very little time and will for collaboration amongst his colleagues:

> *Presently people feel that they are overloaded. Really. Iit will be worse now if I would go and bombard them with questions, you know, they would see it that way, that who is that guy. And when would I actually get time to go and speak to that person? In the morning people come, most of the time we have got these meetings in the mornings, this information sessions. At break people see this as a time that they like to eat and be alone, and after school people rush home because they are tire. Because myself, I've only got one free period. I teach thirty periods per week and I am quite exhausted.*

As exemplified by the following rationale for his employment of the LSM, Thabo also repeatedly alluded to the intensification of his workload:

> *The main reason is it's not time consuming, it saves you a lot of troubles and efforts to go and search information, trying to put it in such a way that the learners will understand it. Therefore you find that everything has already being cut out for you, all what you have to do is come up with extra information and answers. It saves us a lot of work and time.*

What added to the sense of intensification was the fact that very little came their way in terms of comprehensive training and continuous on-site support to help teachers deal with the pressures of classroom implementation (Chisholm, 2000). Both respondents expressed grave disappointment at the superficial, transmission-oriented approach that the few cascade training workshops took, as well as the fact that there had not been any sustained instructional support, particularly with regards to OBE. The debilitating effect of this lack of support, becomes even clearer when one considers the warning by Miles and Huberman (1984: 23) that " … large-scale, change-bearing innovations lived or died by the amount and quality of assistance that their users received once the change process was under way".

In developing contexts, particularly where OBE is pursued, the pedagogical implications of of intensification are considerable. What it essentially means is that the desired "teacher agency in curriculum matters" (Paris, 1993: 16), implicit in OBE and C2005, will not be

realised in the foreseeable future. Furthermore, when teachers' minds are preoccupied with survival, cutting corners and mere coverage of the texts, effective teaching and learning is severely compromised. What is alarming though, is policy-makers' technical-rational assumptions that teachers have the capacity and will to change their patterns of decision-making in line with the new policy directives. This was clear in that the very essence of C2005 is greater autonomy and decision-making space for teachers, yet all the official curriculum communications were characterised by a deafening silence on *how* teachers should adapt their decision-making.

What this study shows is that the threat of intensification on teachers' work, especially during complex curriculum change in developing countries, is very real. What it also demonstrates is that the resultant passivity in decision-making of teachers, coupled with their dependency on prepackaged curriculum texts, can only stifle the implementation of progressive educational policies in developing contexts.

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