

## Chapter 4

### 4. Classroom Observations

#### 4.1. Introduction

The findings of the experimental tasks in Chapter Three highlight the importance of the social and cultural context of learning and development in shaping and influencing subjects' performance on the tasks. Although the subjects had acquired the specific concepts and mode of thinking that the experimental tasks measured, they continued to make use of the methods and modes of thinking that did not conform to the tasks' demands. This performance suggests that the school learning experiences to which the subjects were exposed do not generate full mastery of concepts and mode of thinking that the experimental tasks presuppose. In order to test this hypothesis, the concrete learning activities of the subjects' schooling was observed.

Formal schooling comprises a context of development, within which the development of the forms of thinking and concepts manifested by the subjects during their experimental tasks performance takes place. Schooling is, itself, further shaped by the practices of the society and culture in which it is located. The institutional practices of schooling, and the practices of classroom teaching and learning, are therefore shaped and influenced by the social and political setting in which they occur. Context involves the interaction, and the developmental relations, that exist between the present practices of classroom teaching and learning on the one hand and their cultural-historical and institutional processes on the other.

South African is going through rapid social and political changes that have directly impacted on, amongst other things, its schooling system. The impact that the 1994 social and political dispensation had on the practices of schooling can

be understood from the perspective of the radical changes that the new national curriculum framework introduced to the entire schooling system. The *Outcomes Based Education* curriculum ushered into the South African schooling system a radically new context of schooling and classroom teaching and learning. The social and political goals of the new curriculum framework included overhauling the practices and the restrictions of the previous, apartheid, schooling and society to create a new non-racial and democratic dispensation. For example, the White Paper on Education and Training (1995) in South African states that:

[S]uccessful modern economies and societies require citizens with a strong foundation of general education with the desire and ability to continue to learn, adapt to, and develop new knowledge, skills and technologies, move flexibly between occupations, take responsibility for personal performance, set and achieve high standards and work cooperatively (Chisholm, et. al. 2000).

This could be understood as constituting the opposite of what the previous system of schooling had achieved.

Macdonald (2005a; 2005b; 1990c; 1990d) observed, within South African primary school classrooms during the apartheid era, practices that were likely to inhibit learners' successful learning and cognitive development. The forms of classroom practices that dominated apartheid schooling are represented below in Table 4.1.1.

**Table 4.1.1. The dominant modes of classroom practice in South African Black primary schools prior to the introduction of the country's new curriculum framework.**

<b>Teachers</b>	<b>Learners</b>
<ul style="list-style-type: none"> <li>• Transmission of facts</li> <li>• Rewarding accurate recall</li> <li>• Giving a clear exposition of facts</li> <li>• Accurate account of how the environment functions</li> <li>• Information given out in successive units</li> <li>• Ensuring children's attention</li> <li>• Never require learners to give their own views and opinions</li> <li>• Emphasis on form over the meaning of tasks</li> <li>• Discouraging pupil questions</li> <li>• Reproduction of textbook language</li> </ul>	<ul style="list-style-type: none"> <li>• Memorisation of facts</li> <li>• Listening to the teacher</li> <li>• Committing orthodox views of teachers into memory</li> <li>• Recalling information when required to do so by the teacher</li> <li>• Reproducing the facts acquired from the textbook or teacher during assessment tasks</li> <li>• Reproduction of textbook and teacher's language.</li> </ul>

Macdonald suggested that the above practices derived from the African traditional practices of teaching and learning. Further, Macdonald asserted that classroom teaching and learning might evolve into a culturally consonant form of practice. For example, the oral and narrative form that characterised apartheid schooling and classroom practice may have been related to the dominance of oral culture in learners' pre-school and non-school social settings where peers and grandmothers, or other adults, engaged children in folk tales and thereby inculcated moral values. Authoritarian approaches to classroom teaching and learning were also viewed as a pan-African phenomenon that is currently characterised by the widespread administration of corporal punishment and the general perception by teachers that their training has provided them with professional authority (Macdonald (2005a; 2005b).

The historical context of schooling and classroom teaching and learning briefly outlined above should not be understood as belonging to the past. This context,

and the past practices should be understood as continuing to shape the present practices of schooling while they are transformed through the present societal and institutional means. As a result, the focus of analysis in the present chapter is on the relationship between the immediate practices of classroom teaching and learning and the societal and institutional context that shapes and influences them. The context of schooling, conceived from a socio-cultural perspective, comprises not only the present but also the past forms of social and cultural relations and their mediational possibilities (Wertsch, 1998; Cole, 1996).

In this chapter the observed school practices are reported and analysed to illustrate the ways that teachers were trying to implement the new national curriculum in the context of the persisting influences of previous apartheid practices. The Foundation Phase classes, Grade One to Grade Three, had been implementing the new curriculum for the past three years and were, therefore, expected to reveal a different mode of emergent practice to that expected in the grades beyond this level, where teachers had not yet been officially required to integrate the new curriculum into their teaching. In the Grade Four to Grade Seven classrooms the teaching practices were expected to be fundamentally different from those encountered among the Grade One teachers. These two contexts of school and classroom practice presented two distinct but interrelated worlds of the pre-democratic, apartheid, schooling and that of the post-apartheid period and would continue to influence and shape each other in the future. An analysis of these interrelations aimed to reveal the modes and the nature of societal and schooling transformation in the specific cultural context in Venda.

## 4.2. Observation of schooling and classroom teaching and learning

### 4.2.1. Rationale

The present study considers teachers and learners, from the Socio-cultural and Activity Theory perspective, as agents of their society and culture. They embody,

in their present practices, the forms of the past practices of their schooling and society, which they reproduce, at the same time that they change them. The analysis of the practices of classroom teaching and learning therefore seeks to consider how the recent social and political changes, as well as the legislated curriculum changes, have resulted in the associated changes in the organisation of classroom teaching and learning and its psychological consequences.

#### 4.2.2. Aim and hypothesis

The aim of the classroom observations in the current study was to consider the classroom practices of teaching and learning in the context of social and political changes, and the new educational innovations in the form of the new, Outcomes Based Education, curriculum in South African. Considering learners' performance on the experimental tasks reported in Chapter 3 and their emphasis on concrete and experience-dominated modes of thinking and problem solving, it was expected that the dominant mode of classroom teaching and learning would also emphasise concrete and experiential methods, what Hedegaard (2002; 1996; 1990) has termed the "empirical epistemological procedure".

#### 4.2.3. Research Design

Observation of the practices of schooling and classroom teaching and learning was informed by educational ethnographic methods, as outlined by Spindler and Hammond (2000), who view this method primarily as the adaptation of an ethnographic approach to educational research. Participant observation and interviews were used to collect the data. Participant observation involved the researcher participating in the classroom activities only so far as it was necessary for him to do so, or, as was often the case, when he was requested by learners or teachers to participate in their activities.

Spindler and Hammond proposed that a participant observer does not determine

the specific categories of observation in advance, and should try to avoid predetermining what is going to be observed or elicited from the subjects. In the current study, the hypotheses were theoretically informed, and evolved in the light of new observations

The observations involved collection of a large volume of materials and artefacts, such as manuscripts, journals, documents, memos, photographs, etc. as sources of information. This data included information on the local, or cultural, knowledge that enabled the researcher to enter into the life-world of the subjects. This culturally-based knowledge was subsequently restructured, through the analysis of the data into an interpretive body of knowledge based on the researcher's theoretically informed interpretations.

#### 4.2.4. Subjects

The subjects comprised the learners and teachers in the junior primary and senior primary schools where the experiments discussed in Chapter 3 were conducted. Two classes from Grades One to Four of the junior primary school, and Grades Five to Seven of the senior primary school were randomly selected for observation.

Under the OBE curriculum (Department of Education, 1997c; d; 1996a; b; 1994) the classes that were observed fell into two phases of the primary school, the Foundation Phase (Grades One to Three) and the Intermediate Phase (Grades Four to Six). Grade Seven was also included in the observations because, although it fell under the Senior Phase of schooling in the new curriculum framework, the class was still physically located in the primary school. The Foundation Phase represented a level of schooling where teachers and learners had already begun using the new curriculum so it was expected to be undergoing more pronounced and rapid transformation than the other Grades. The Intermediate Phase Grades had not yet begun to implement the new curriculum

framework and were therefore not expected to be experiencing the change, to same extent as the Foundation Phase.

Because all teachers were class teachers in the junior primary school, classes were each observed for a whole day. One teacher was observed teaching a class for a day or half a day, depending on whether the teacher was available to be observed for the whole day or a half-day. Some Grade Two and Grade Three classes in the junior primary school had two teachers who took turns to teach the lessons. That is, two classes were sharing a single classroom with the two teachers sharing the teaching time. Senior primary school teachers were subject teachers, so the class moved from one classroom to another throughout the day. In this situation, the researcher moved around from one classroom to another with the learners.

The classes observed ranged from 30 to 80 students and some of the classes, 'double classes', had two teachers, each responsible for his or her own class. The teachers in the double classes took turns to teach. Appendix 4.1 shows the years on which the school visits were made, the Grades visited and the number of learners and teachers in each class presented as learner-teacher ratio. No gender details for learners were recorded and this had no specific significance for the analysis of the data. All teachers observed at the junior primary school, except for two, namely, the Grade Three and Grade Four teachers, were women while only four of all the teachers observed at the senior primary school were male and the rest were females.

#### 4.2.5. Procedure

The observations entailed the researcher conducting the following activities: sitting at the back of the classroom and listening to the lesson; checking the written work of the learners, copying the exercises and activities presented on the blackboard and in the textbooks; and writing notes on the teachers' and

learners' verbal interactions. The materials used were notebooks and pens for recording the observations.

Classroom observations focused on the practices of schooling and classroom teaching and learning. The researcher sat at the back of the class and observed the activities as they unfolded. The researcher only participated minimally in the activities, when invited to do so by the teacher or the learners. For example, the researcher would respond to the question about the work being covered in class only when the teacher asked for the researcher's comments. Learners sometimes approached the researcher and asked for assistance with completing their written tasks or for clarification of an issue they found difficult to understand. This allowed the researcher to gain a deeper understanding of the instructional problems and difficulties that the learners experienced.

The observations were conducted over a period of six weeks, spread over four years. The schools were visited for a period of one to two weeks in a year, and the first week was spent at the junior primary school while the other week was spent at the nearby senior primary school. The fieldwork extended over a lengthy period so that the researcher entered into the life world of the subjects and gained an 'in depth' understanding of the cultural practices of schooling and the associated possibilities for change over a long period of time. It also enabled the researcher to ask different questions about the observed phenomena so as to penetrate the outward form and obtain insight into the internal organisation of the culturally shaped practices of schooling in the process of change.

The arrangements to visit the specific classes were made through the school principals. Teachers in the junior primary school taught all the subjects and therefore remained with their classes all the time. The observations at the junior primary school lasted for the whole day or half a day in one class, depending on the availability of the teacher concerned. In the senior primary school, teachers specialized in the subjects that they taught and, as a result, only taught specific

classes at specific periods. Learners changed classes, moving from one class to the other following the subject teachers in their classrooms. The school day lasted from 07.30 to 13.00 for the junior primary learners and from about 07.30 to 14.00 for the senior primary learners. Junior primary school Foundation Phase learners (Grade One to Three) did the OBE curriculum Literacy, Numeracy and Life Skills Learning Areas while the Intermediate and Senior Phase Grade (Grade Four to Six and Grade Seven) learners did a selection of the old, apartheid curriculum subjects, namely, TshiVenda, English, Afrikaans, Mathematics, Geography, History, General Science, Religious Education, Health Education, Agricultural Science, Technology and Guidance. The observations for the senior primary learners involved moving with them from one class to the other as they go to their subject teachers' classes. Appendix 4.1 illustrates the Grades visited on specific days on which the observations were made and gives a precise indication of which grades were observed over the six week observation period.

#### 4.2.6. Method of analysis of data

Data were analysed in terms of whether the practices of teaching and learning followed the traditional, rote memorisation, mode characteristic of apartheid schooling or whether they followed the changes envisioned in the new OBE curriculum framework. The data presented for analysis below were selected to illustrate these considerations.

In its empirical application in the present study, the analysis primarily involves the consideration of:

- How the present practices of classroom teaching and learning change, and simultaneously reproduce, the past institutional practices of schooling and society.
- How teachers used the new, post-apartheid, curriculum framework to organize their present practices of classroom teaching and learning so as

to contribute to their learners' learning and development.

The analysis of the observations used the themes that are informed by the Socio-cultural and Activity Theory, discussed in chapter 2. These themes involved first, the relation between schooling and the practices of society and its institutions, and, second, how the organisation of the classroom practices of teaching and learning were influenced by the ways in which the institution of schooling, within the specific society and culture in which it takes place, had been organised. The relationship between cultural practices and curriculum on the one hand and the present practices of classroom teaching and learning on the other hand was emphasized.

The themes, located within these two major thematic organisations, focused on the analysis of the practices of teaching and learning in the specific Grades, namely Grades One and Two in the Foundation Phase, and Grades Four to Six in the Intermediate Phase. The analysis here aimed to reveal how the practices of classroom teaching and learning differed across the grades and the phases depending on what socio-cultural and institutional concepts and principles were used to organise teachers' and learners' actions. The lessons reported below were selected for discussion on the basis of the extent to which they were considered representative of the dominant mode of practice for their particular grade or phase.

### 4.3. Data Presentation and Analysis

#### 4.3.1. The societal basis of the practices of schooling and classroom teaching and learning.

Out Comes Based Education curriculum was a response to the societal injustices and inequalities of the previous apartheid regime as much as it was a

direct response to the real crisis in the schooling system that was characterized by poor instructional quality and inadequate learning outcomes. The post 1994 political changes in South Africa necessitated associated changes in the organization of schooling and classroom teaching and learning. This, at the level of classroom practice, was made possible by the introduction of Outcomes Based Education curriculum framework to guide the relations and activities of classroom teaching and learning. As discussed in chapter 1, the principles and concepts underlying OBE derived from the nature of the new society that the new constitution envisaged for the new South Africa.

As a result, the practices of schooling and classroom teaching and learning revealed this societal basis of practice. There was an emergent, new, forms of practice, on the part of teachers and learners in the Foundation Phase Grades, especially in Grade One, that were necessitated by the implementation of the post-apartheid, OBE, curriculum concepts and principles for classroom teaching and learning.

The Grade One to Grade Three teachers, and more especially the Grade One teachers had gradually been integrating the concepts of the new curriculum within their practices. These teachers were the first group that was required to implement the new curriculum and were provided workshops and other in-service support programmes. However, the teachers reported that the support they received was inadequate and they lacked confidence during the early years of the curriculum implementation. However, by around 1999 and 2000, the Grade One teachers' practice had gradually shifted from the traditional memory-based tendencies to learners-centred instructional approaches. They were beginning to display an attitude of respect for the learners and an apparent belief in learners' capacity to contribute genuinely to their own learning and development. This learner-centred, active learning, approach informed by the new OBE curriculum was illustrated by the following Grade One lesson excerpt:

### Grade One Literacy Lesson

*Date: 23. 10. 2000*

T. "Lets divide the sounds now, "*Tshinakaho*". How many sounds are there?"

A few learners raised their hands. The teacher nominated three learners, one after the other, with each learner giving incorrect answer to the question. The fourth learner to be nominated gave the correct answer:

L. "They are four".

The teacher agreed and repeated the answer to the whole class before proceeding to the next question.

The teacher said another word out as she wrote it down on a separate section of the blackboard:

*T. "Tshililo"*

Several learners raised their hands. The teacher nominated five learners, one after the other. Each of these learners gave an incorrect guess. The sixth learner gave the correct answer:

"Two".

The teacher repeated the answer aloud. The teacher asked further:

T. "Why is it that we say there are two sound patterns in the word "*Tshililo*"?"

Several learners raised their hands. The teacher nominated one pupil whose hand was raised to give the answer:

L: "Because "*li*" and "*lo*" are the same".

The teacher repeated this answer to the whole class, confirming that she agreed but never explained the answer further.

This lesson illustrated that the teacher's approach had changed from what would have been passive learning with the teacher explaining by way of telling learners the right answers. Further, the teacher seemed to treat learners with respect by not showing irritation at the incorrect answers they gave her. The teacher used an important form of questioning, "Why is it that we say there are two sound

patterns in the word". Such questions, that encouraged identification of reasons, rarely occur in traditional teaching practices.

Although the teacher's achievement in seeking to transform her practice through the use of the concepts of the new curriculum was recognised, it should also be acknowledged that the forms of classroom practice that derived from the teacher's past schooling continued to shape and influence her present practices. The lesson above revealed that the teacher's orientation continued to emphasise rote learning of information as essential for knowledge to be learnt in school. The teacher was also tolerant of guesswork, without seeming to use it appropriately or making learners understand where this mode of learning could be more productively employed in the acquisition of knowledge. By continuing to ask learners the same question until she received the correct answer, the teacher encouraged learners to believe that correct answers could be derived through guesswork alone.

Lastly, although the 'why' question, seeking the learners' reasoning about their answer, was a step towards learner-centred active learning models, this question did not serve its purpose because the learner argued that the consonants "li" and "lo" were the same and the teacher agreed to this. This instance shows that the teacher's present practice was not adequate for generating conceptual development. The consonants could clearly not be said to be the same. Here is an instance of the reduction of a complex formal, scientific, concept to a concrete concept. Learners were, for instance, led to think that the 'sameness' applied to the consonants, as represented on the chalkboard, but not to the sounds, which was the objective of the lesson. In this lesson the teacher was not able to sustain the theme underlying the concepts of the subject matter. It was not clear from this lesson that the learners ended the lesson with a clear understanding of how one sound pattern differs from the other. The learners had no explicit rule on the basis of which to make the necessary sound pattern distinction, hence their reliance on guessing the answers.

In spite of the limitation of the lesson due to the teacher's apparent lack of confidence with the subject matter concepts, the general approach seem to emphasize the procedural requirements for an OBE aligned lesson. The principles for a progressive educational model that was radically different from the traditional rote-based practices of the apartheid schooling system, underpin the general approach of the Grade One teacher. These principles, as elaborated in Gulting, et al. (1998) and Department of Education (1997c. & d) separately, involve included:

- Learning that focused on the acquisition of abilities, skills, and attitudes, rather than rote memorization of information.
- Learning that developed problem-solving skills, communication skills, group work and cooperative and collaborative learning.
- Classroom practices that emphasized activity-based learning, with opportunities for exploration of ideas.
- Integrative approaches to learning, where theory and practice; school knowledge and everyday knowledge; indigenous knowledge and school knowledge, etc. were linked to generate meaningful types of learning and attitudes of respect and human dignity.
- Learning and teaching that was directed towards the attainment of the pre-specified outcomes. That is, teaching proceeded from the assumption that all learners could achieve the outcomes at their own pace, while assessment was geared towards the establishment of the degree of attainment of the outcomes and the formulation of new strategies for assisting learners in their progress towards the attainment of the learning outcomes (Gulting, et al. 1998; Department of Education, 1997c. & d.).

The Outcomes Based Education curriculum therefore provided teachers with explicit tools with which to organise classroom activities in ways that were radically different from those that they were accustomed to in the past. The

Grade One teachers (as illustrated by the lesson extracts above) made more explicit use of the conceptual tools the new curriculum provided to organise her teaching and learning activities. That is, these teachers were found to include more group-based teaching and attempted to integrate the subject matter content with their learners' prior knowledge and experiences. On the contrary, the Grade Two and Three teachers were found to be just beginning to acquire the new conceptual tools that the new curriculum framework provides. These teachers continued to use their usual rote-transmission mode of teaching and only accommodated towards the new curriculum when required, such as during teacher evaluation processes by the principal and her school management team.

However, the Grade Four to Grade Seven teachers (as shown in the lesson extracts below) continued to teach in the same way that they did in the past. The OBE curriculum framework had not officially been implemented at this level of schooling. As a result, teachers made no attempt to integrate the principles of the new curriculum and to apply the modes of teaching and learning that this curriculum advocated.

For example, the Grade Four teacher gave a characteristically traditional reading lesson:

### **Grade Four Reading Lesson**

*Date: 19. 10. 1999*

T: "A visit to grandmother"

The teacher read and wrote on the board, and instructed learners to repeat in chorus.

L: "A visit to grandmother".

Learners read the sentence out in chorus.

The teacher read a paragraph, ending with the sentence below, which she repeated in Tshivenda and, thereafter, asked a question.

T. "They were very pleased with the present...*no fhiwa presenthe a ni takali?*"

[...if you were given a present, wouldn't you be happy?]

To this question, the learners responded in chorus:

L. "We would be happy!"

The teacher continued to read the text and ended the next paragraph with a sentence, which she repeated again for the learners, in the form of a question:

T. "They said goodbye grandfather and what?"

Learners answer in chorus:

L. "Grandmother".

The teacher was the only one with an old reader from which she read the sentences and translated them into TshiVenda. The learners responded to the teacher's questions only when she asked them and chanted the sentences after her when she indicated that they needed to do this. An Outcomes Based Education reader would have been written with an emphasis on learners' active participation in their learning, such as involving them in picture interpretation or dialogue about the content of the story. The traditional approach differed from the progressive educational approaches of the OBE Curriculum in that it relied predominantly on verbal communication of knowledge. Narratives, story telling, imitation and observation were the primary methods through which this knowledge was taught and learnt. The methods used by the Grade Four to Grade Seven teachers emphasized this method of working with knowledge, which derived from the apartheid schooling and society.

There were no teacher development support programmes about implementation of the OBE curriculum for the Grades Four to Seven. As a result, teachers at the higher levels of schooling had no orientation to the new curriculum and were consequently unable to apply the new method of teaching and learning. Until the official phasing in of the new curriculum when these teachers would receive the necessary training, the old practices continued in the school, alongside the new classroom practices that the lower Grades teachers were introducing.

The discussion below further examines, in more depth, the patterns of change in the practices of schooling and classroom teaching and learning illustrated by the lesson extracts from Grades One and Two, which contrast with the lesson extracts from Grades Four and Six that reflected the past practices of schooling. These lesson excerpts illustrate the cultural-historical development of the practices of schooling and classroom teaching and learning in South Africa, as well as the cognitive consequences of such practices.

#### 4.3.2. Socio-cultural organization of classroom teaching and learning

The Grade One teachers organized their lessons and the activity of teaching in accordance with the OBE curriculum. The learning support materials such as the textbooks and readers that were used were produced for the OBE curriculum framework. Teachers had attended the local orientation and training workshops (offered by officials from the regional administration offices) about implementing the new curriculum. Teachers were also involved in ongoing teacher support groups, which met occasionally at the schools. Teacher support groups provided teachers with the opportunity to share ideas and experiences of implementing the new curriculum.

The Grade One lessons, as a result, were more learner-centered, with a greater degree of learner participation and activity than was found in the Grades Four to Seven lessons that were examined. Teachers organized their teaching using the readers and textbooks that were produced specifically for teaching within the OBE curriculum. The learning support materials therefore, also guided the lessons. The Grade One teachers seemed to have some flexibility when it came to the level of text-dependency. Even in Grade One, the content knowledge was separated from the teacher as an individual, and externalized as formal school textbook knowledge, only relevant for mastering school forms of learning. The

teacher did not appear to own the content knowledge that she was teaching and did not demonstrate any deeper understanding of the knowledge.

This knowledge that existed on its own, independent of the teacher was 'textbook knowledge', facts about the world acquired in society without the knower transforming them into individual knowledge, (Hedegaard, 2002; 1990). This was derived from Vygotsky's (1978; 1962) developmental conception of knowledge acquisition (also compare with Kozulin, 1990), that knowledge exists outside of the knower, in society, and the individual acquires this knowledge as a tool for social participation and mastery of the social world. In its developmental progression into the individual domain, socially transmitted knowledge exists, first, as 'knowledge for others' before it is transformed into 'knowledge for self'.

The social stage, characterized by externalization and inter-psychological processes, involves knowledge being oriented towards mastery of the external, social world. The formal knowledge, existing as artifacts external to the knower, exists for the teacher, for the mastery of the social world of schooling, and was never internalized into personal knowledge for the control and mastery of the self. The mediational role of the teacher in the classroom models the mode in which the teachers themselves relate to school knowledge.

These patterns were observed in the practices of teachers in the primary schools studied. In the Grade Six Geography lesson, described below, the 'epistemic separation' between the teacher and the knowledge being taught is evident. The teacher explicitly used the textbooks as a reference for the ideas to be learned. Like the Grade Four teacher in the reading lesson above, the Grade Six teacher, in the excerpt below, read paragraphs from the textbook and gave abbreviated sentences that repeated the text language, before translating the English sentences into TshiVenda.

## Grade Six Geography lesson

*Date: 25. 10. 2000*

After reading a paragraph, the teacher explained to the learners:

T: "Now we have got a very short paragraph here.... Some of you will say this is gas [...] by gas we mean petroleum [...] Now this gas is very horrible.....".  
[in TshiVenda] "God has really provided...God is good. After he had made the earth he hid gas under the ground so we could use it at the appropriate time".

The whole class sat quietly with their textbooks opened before them, paying attention to the teacher.

The teacher read another paragraph again and continued with the explanation:

T: "Now the iron ore is the iron which has not been purified...[In Tshivenda] "...it is still raw and impure".

After this, the teacher read another paragraph again and picked on a specific content issue raised in the text to reiterate to the learners:

T: "[...] Ok, now we are having phosphates for making fertilizers. These fertilizers are being made from raw materials and we call them finished products? [...] Turn to page ninety now, you can find Alexandria?".

Learners turned their books to page ninety and answered the teacher's question in chorus:

L: "Yes".

Without saying anything regarding Alexandria, the teacher instructed learners, again, to turn to page ninety-four:

T. "Turn to page ninety four again. Many poor farmers have left their farms for the cities...Now Egypt is the second most populated country in Africa,

This lesson excerpt revealed the teacher's over-reliance on the textbook content for teaching. The teacher did not seem to have mastery of the content of the subject matter. The teacher also did not seem to have full ownership (in the

sense described by Wertsch, 1998) of the knowledge he was teaching. The textbook assumed the ultimate authority from which knowledge about the subject matter was derived, often without it being meaningfully related to the learners' life world. The teacher did not make explicit the concept of "raw materials" and "finished products". These concepts were not clearly articulated in the teachers' utterances. For example, the teacher explained:

Ok, now we are having phosphates for making fertilizers. These fertilizers are being made from raw materials and we call them finished products? [...] Turn to page ninety now, you can find Alexandria?"

This illustrated the over-dependence on the textbook. Knowledge appeared to have an inert existence, to be the possession of the textbook while the teacher's role was that of a translator, or medium, repeating what was represented in the textbook in a language understood by his audience. This pedagogical mode was likely to generate, on the part of learners, a view that school knowledge exists separately from the knower and that it is the knowledge of the textbooks, not directly relevant for solving immediate life problems and for understanding everyday life world. Learning in this situation became a process of trying to represent in one's mind the content of the textbooks in exactly the same mode in which it was represented in the original sources. As a result, learners did not develop the capacity to generate their own ideas or to think creatively and imaginatively.

#### 4.3.3. Teaching and learning in Grade One

The observation of the Grade One lessons revealed that the concepts and principles of Outcomes Based Education curriculum influenced the teacher's organization of classroom instruction. For example, the Grade One teacher, in the lesson description below<sup>1</sup>, organized her lesson around the concepts of the new curriculum. The teacher reported that she integrated the three learning

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1. See appendix 3 for further examples of the lesson excerpts.

areas of Literacy, Numeracy and Life Skills within the lesson, and this integration enabled her to engage her learners in active learning. That is, she was able to get her learners to talk more than they did in the past and participate actively in classroom learning activities. Learners' learning was not a passive process anymore as it had been in the past.

The teacher, through her interpretation of the new curriculum and the application of its principles and concepts to her practice, created a new learning experience for her learners. The introduction of the new curriculum to the schooling system therefore introduced far-reaching changes to the practice of schooling in general and to the activities of classroom teaching and learning in particular. However, the nature of the changes needed thorough examination.

The present practices of classroom teaching and learning instantiate the practices of the past schooling and classroom teaching and learning at the same time that these are changing. The present practices of classroom teaching and learning in Grade One, although organized according to the new curriculum framework, also incorporated instances of the past modes of instruction.

The Grade One lesson below showed that group-based and collaborative learning was also used as the organizing principle for the lesson. For example, the teacher arranged the learners' into small groups of between four to six learners each. Learners had workbooks before them. They sat with their workbooks opened while the teacher read the instructions from her own copy of the workbook. After reading each of the instructions in the workbook, the teacher asked learners to repeat the reading from their copies after her, in chorus. This was an instance of the past forms of classroom instruction. Choral recitation of statements after the teacher had its origins in the drill practices that characterised schooling ever since the catechism recitation classes of missionary schooling. The practice aimed to get learners to commit the content of learning to memory. Thus memorisation, rather than understanding was fore-grounded as the primary

goal of classroom learning.

After that the teacher led the learners in recitation of the instructions for completing the exercise, the teacher began to explain what the instructions meant. The medium of instruction in Grades One to Three was TshiVenda. The present exercise had four tasks. Each of the tasks required learners to (i) find half of two circles, (ii) half of four circles, (iii) half of six circles and (iv.) half of eight circles. The learners had to identify the number of circles mentioned by colouring the circles with crayons. The following Grade One lesson excerpt illustrates the instructional patterns described above:

**Grade One Numeracy Lesson,**

*Date: 23. 10. 2000*

The Grade One teacher began by leading the learners in the colouring half of the ten elephant pictures, a task that was presented as a demonstration task. After that the learners coloured half of these elephants, the teacher asked them to count the number of elephants they had coloured:

T. “[...] Count the elephants that you have coloured”.

Learners counted the coloured pictures, in chorus, from one up to five. After this, the teacher instructed learners to read the next sentence. Learners read in chorus:

L. “Colour half of the number of the circles in each and every box”.

The teacher explained what learners needed to do, according to the instruction they had just read. After explaining, the teacher instructed learners to take out their colouring pens from a box on her desk.

Learners begin writing. As they wrote, the teacher instructed the group leaders in each group to come to the front and show her their books so she could see what they are doing. The group leaders went to the teacher, one after the other, to

show her what they had written. The teacher explained how to work out the tasks correctly to each group leader and corrected them where they had not completed the tasks correctly. After this, the group leaders went back to their seats and continued writing.

After a few minutes, the teacher stood up and began to move around among the learners while they continued writing. The teacher checked if the learners were completing the tasks correctly. Upon checking, the teacher discovered that the majority of learners were not completing the tasks correctly. In addition, the group leaders had not shared the information the teacher gave them about the tasks with their peers. The teacher had probably forgotten to tell the group leaders explicitly that they would need to share the information with the other learners in their groups. As a result, the learners seemed unaware that the assistance was meant for their group members as well and that they had to share it with the other learners in their groups.

The learners were arranged in groups. They all had OBE aligned workbooks provided by the state. The teacher explained the instructions, again, to the learners and led them in chorus reading of the instructions. The learners answered the teacher's questions in chorus. For example, they counted the coloured elephants in chorus and read through the instructions in chorus. Therefore, the teacher explicitly directed learners' learning through leading them into chorus reading and explaining the task instructions to them. This is an instance of the teaching strategy derived from the teacher's past practice of chorus recitation and drilling learners on the correct answers. The teacher explained the instruction to learners even though this was written in simple language for them to read and carry out the task, one of an important skill in OBE approach in which the pupils might lag behind in if they are not encouraged to practice. Therefore, in spite of the textbook being written to facilitate this learner-centred approach, the teacher still converted the text into her teacher-centred strategies and emphasized teaching rather than learning with teacher guidance.

The teacher's group work facilitation process illustrated how the teacher, in alignment with the OBE curriculum attempted to facilitate collaboration and cooperative learning among learners. However, the learners' understanding of their new responsibilities were different from the teacher's expectations. These learners who had been nominated to serve as group leaders had probably understood the teacher's assistance as directed to their own individual benefit and not for the benefit of their fellow learners. As a result, none of the group leaders shared the instructions on how to complete the task with their peers. Learners would never have been permitted to share ideas or ask for peer assistance on a task under the previous school system. Such practice would not have been acceptable because task performance was expected to be the product of the individual learner's learning, without another learner's assistance.

Another characteristic mode of classroom instruction involved the manner in which learners received instructions on how to complete tasks. The teacher did not trust learners with the responsibility to read instructions from the texts on their own and make their own interpretations. The teacher read the instructions for the learners, asked them to repeat the sentences after her, and then explained further for them. Then the teacher led the learners in the colouring of half the elephants. She then asked them to read the number of the elephants that they have coloured, which the learners did in chorus.

The teacher's method of guiding learners to complete the tasks did not encourage development of skills for interpreting the written instructions on their own. Meanwhile, because the place of giving explicit instruction on how to complete the task was dominated by demonstration, learners are likely to acquire the skill of completing the task without the necessary understanding of the underlying reasons for the discrete actions that led to the successful performance. This mode of learning was characteristic of the traditional, rote learning, method. It is also akin to what was referred, in chapter 1, as everyday,

spontaneous, modes of teaching and learning—after Wertsch's (1984; 1979) study, involving the use of directives by adults or teachers that require learners to carry out actions that produce appropriate results without understanding the principles that underlie the nature of the task they are completing.

Another instructional pattern that characterised the Grade One lessons involved the use of the group-based method proposed in the new curriculum. However, this method was not used adequately as the instructional method remained teacher-centred and continued to conceive of learners as an undifferentiated collective rather than a small group of individuals with different capacities and learning needs. For example, the teacher in the lesson described above teaches for most of the lesson from the front of the class and addressed the learners as a whole class, leading them in chorus reading of the text. All these happened in spite of the group seating arrangement that learners were instructed to maintain. Because the teacher did not regularly monitor the performance of individual learners as they proceeded with their exercises, the teacher only discovered late after that the learners had finished writing that most of them did not complete the task correctly and that the group leaders did not share the information she had given them.

In another lesson, explained below, the Grade One teacher organized her lesson according to the concepts of the new curriculum, namely, active learning, group-based collaborative and cooperative learning, learner centeredness, teacher facilitation, and knowledge integration. She engaged her learners in active learning, allowing them to talk and to correct her where they see her making an error. This was uncommon in the previous schooling system. In this lesson, the teacher went to the chalkboard and wrote:

### **Grade One Literacy Lesson**

Date: 23. 10. 2000

T: “Tsha, tshe tshi tsho tshu”.

L: “You did not write the dot”

Learners responded in chorus. The teacher had apparently forgotten to put a dot on top of ‘i’, for “tshi”. The teacher asked where she had omitted to place the dot.

T: “Where?”.

Immediately, before the class responded to her question, the teacher realized where she had made the error. Instead of correcting the error at once, the teacher wrote “Tsh!”, placing the dot underneath the “i”. Learners again objected to this in chorus, saying that the dot was still not at the right place. After this protest, the teacher then put the dot in the right place. However, she forgot to erase the other dot that she had earlier placed underneath the “i”. Learners again noticed this and shout, once again, in chorus, that it was still not correct.

The teacher did not immediately realise where the error was this time. As the teacher stared at the learners, amazed, several learners chanted in chorus:

L. “There are two dots”.

The teacher looked back on the board and, thereupon, realized what the learners were referring to. The teacher then quickly erased the dot underneath and the learners expressed their approval by chanting:

L. “Yes”

In this lesson, the teacher engaged the learners actively in the learning, an approach that differed fundamentally from the passive learning and teacher-centred transmission mode that characterised the past practices of schooling. The teacher permitted the learners to correct her and to demonstrate their knowledge. She had, in the language of the curriculum framework, changed her attitude from a ‘dispenser of knowledge’ to one that viewed learners as equal and active participants in the process of learning. However, the teacher appeared to

spend an undue amount of time on an activity that was within her learners' level of understanding. While this episode may have been important to build learners' confidence during learning, it may not have truly demonstrated the classroom practice of 'active learning' since it did not improve learners' knowledge but simply reiterated what they already understood.

Following this episode, the teacher moved on to Numeracy, building on the Literacy part of the lesson that she had just conducted. This demonstrated the teacher's ability to organise her activities around the central concepts of the curriculum, which required an integrative approach to knowledge across the learning areas as well as within them. However, the teacher did not explain to her learners how the shift from one knowledge domain to the other was important and how the different parts of the lesson related to each other.

By way of introducing the second episode, the teacher requested a learner to come to the front and write the number "5" on the board:

T. "Who can write the number 5 on the board for me?"

One boy raised his hand. The teacher nominated him and the boy went to the board, but wrote the number backwards. Before the teacher could comment on the answer, the whole class said "No", in chorus. Without remarking, the teacher nominated another pupil who went to the front and wrote the number correctly:

L. "5"

The teacher asked the class if this was correct and the class answered in chorus:

L. "Yes"

This episode was not well introduced. Learners did not seem to understand why they had to go to the board to write the number 5. Although the teacher was being guided in her lesson by the new curriculum in making connections between the literacy lesson and the numeracy content, the learners were not able to follow this integration. The teacher understood the logical sequence as the number "5" represents the number of the five consonants, "*tsha*", "*tshe*", "*tshi*", "*tsho*", "*tshu*",

that the teacher had written on the board during the earlier part of the lesson, but this was not made clear to the learners. When the first pupil wrote the number wrong, the other learners, competitively, pointed out that it was wrong, did not assist him, but offered to be nominated to write the number correctly. The principle of collaboration and cooperation did not apply in this lesson. The teacher did not seem to have an interest in learners as individuals. She did not assist the learner who got the answer wrong but ignored him in favour of getting a correct answer from another learner.

The teacher showed a preference for correct answers than the learners' incorrect answers that may, however, have revealed the emerging understanding on the part of the learners. Therefore, the concept of integration was applied in a superficial manner that did not enhance learners' learning. The teacher implemented an integrative approach, as required for an OBE lesson, but with little regard for learners' learning and concept development. Integration of topics and knowledge perspectives was not carried out for the purpose of facilitating learners' learning, but as a requirement of the curriculum; assumed to be an end in itself. The teacher failed to use the procedures of the new curriculum to bring about efficient and meaningful learning on the part of the learners. Instead, the curriculum statements about how classroom teaching and learning should proceed were treated as an end in themselves and as inherently capable of bringing about effective learning.

The next part of this lesson involved a written exercise, but this was also was not shown to be clearly connected to the preceding part of the lesson. The teacher nominated a pupil and instructed him to go to the blackboard and write "*Tshikolo tsha Mbaleni*". The nominated pupil went to the blackboard and wrote:

P: *Tshikolo tshaMbaleni*.

The other learners, without waiting for the teacher to react to this answer, immediately chanted, in chorus:

P: It is not correct".

The teacher nominated another pupil from those who had raised their hands to write the sentence correctly. The nominated pupil went to the board and wrote:

P: *Tshikolo tsha Mbaleni.*

The teacher asked the class if this was correct and they answered in chorus:

L. "Yes"

The teacher agreed and repeated the sentence aloud, as if reading it from the board.

The teacher introduced the written task to the learners as if it was not related to the parts of the lesson that went before. However, a closer look at the lesson showed that the sentence was still part of the lesson about reading and writing (literacy) and was based on the learning of the consonants ("*tsh*") and how they worked in a word and in sentences. This episode, once again, focussed on the correct way of writing a sentence, in the sense of acquiring a skill to produce the correct performance, without the learners understanding the principles, or reasons, as to why the performance had to be carried out in the way it was. It was not made clear to the learners how the combinations of individual elements were combined to make a word and then a sentence, or what principles explained these combinations. The lesson focused on teaching the skill of writing a sentence, but how the individual parts of the sentence combined, and were identifiable, was not explained or presented to the learners in a manner that would enable them to acquire the principles underlying word and sentence construction. The approach involves, as discussed in chapter 2, a mode of teaching informed by the learners' actual level of development, or what is already in the learners' level of performance capabilities. Wertsch's (1984; 1979) described this as Action Pattern 2 modalities of task representation that emphasize the acquisition of skill or learning outcomes without necessarily gaining the associated understanding of the principles that underlie the nature of the task.

The curriculum principle of 'active participation in learning' was put into practice as learners contributed to the lesson by contributing their ideas about the status of the answers offered. However, the contribution of learners was limited to adjudication of peers' answers to the teacher's questions, if these were deemed not to be correct, as well as to the competition for nomination to offer an answer to the teacher's question. The first pupil's inability to write the sentence correctly was indicative of the general problem in class. This was confirmed by the performance of learners in the written exercise as it proceeded, as explained below, in which the teacher instructed learners to copy the sentence into their exercise books.

The learners' writing revealed that they generally have a problem with word spacing, even when they have to copy this from the blackboard. After instructing learners to take out their exercise books and start writing, the teacher wrote the sentence "*Tshikolo tsha Mbaleni*" on the board. The letters were neatly inscribed in the horizontal lines that the teacher has drawn on the board; with the capital letters filling two lines while all the other letters filled a single line. The teacher instructed learners to copy the sentence neatly into their books and to fit the letters correctly into the lines just as she has done. After a few minutes, the teacher moved around to check on what learners were writing. The teacher found that most learners either copied the sentence as a single word, without the correct word spacing, or started writing from the right to the left hand margin of the exercise book. After realising that most learners were not able to space the words correctly, the teacher went to the board and explained how the learners needed to space the words:

T. "When you finish writing "*tshikolo*" you must place your finger, after "*tsha*", again place your finger"

The teacher demonstrated this on the board, placing a finger after every word to show how to create a word space. As the teacher moved around the classroom, checking the learners' writing, she found one pupil writing from right to left. The

teacher turned to the rest of the class and gave an instruction which she framed as a question:

T: "From which direction did I say we should start when we write?"

Several children answered this in chorus:

P: "From the left"

The teacher announced to the whole class that there was someone, referring to the pupil next to her, who was writing from the right to the left:

T. "This one writes from right to left, he writes strangely".

The written exercise above revealed that learners had difficulty grasping the concepts of word and sentence, and how these were related in a sentence. They found it difficult to distinguish one from the other, and consequently to establish the appropriate spatial relationship between the words in a sentence. As the teacher went around checking on what the learners were writing, she found that some learners wrote the sentence as if it was a single word, with no word spacing at all, in spite of the instructions she had just given about using a finger to determine the spacing. Some learners were aware they had not done this and tried to hide their work from the teacher as she passed.

The underlying problem in the teacher's approach was related to concept clarification. She did not explain the conceptual relations underlying the content knowledge to learners. She used the "empirical" method of teaching (Hedegaard, 2002; 1996; 1990). This method relies on the simple presentation of formal knowledge and its assimilation by learners, without regard for the deeper understanding of its complexity. Vygotsky (1979; 1962) has argued against the acquisition of formal, scientific, concepts through such drilling. While the teacher organised her lessons on the basis of how to teach within the new OBE curriculum framework, she did not use these concepts to engage her learners in activities that could bring about a deeper understanding of the content and meaningful acquisition of its underlying concepts. The teacher had changed her practice to the concepts of the new curriculum but continued to organise her

activities according to practices derived from her previous professional experiences. For example, the transmission method of teaching assumes that learners acquire knowledge through simple listening and observation, as well as repeating or practicing a skill or knowledge for future reproduction when needed. The substantive aspect of knowledge involving, for example, a deeper understanding of the underlying conceptual relations of such knowledge is not taken to constitute a fundamental aspect of knowledge acquisition.

This was further illustrated by the way that the teacher dealt with the last, and apparently more demanding, part of the lesson. As explained below, the lesson continued when the teacher asked the learners to suggest words beginning with “tshi”, “tsha” and “tsho”, which were already on the board.

T. “Right, give me the words that begin with “*tshi*”, “*tsha*”, and “*tsho*”, so we write them on the board”.

Learners raised hands. The teacher nominated learners, one after the other, as they gave the words. The teacher wrote all the words on the board as each of the nominated learners said them: “*Tshinakaho*”, “*Tshilidzi*”, “*Tshililo*”, “*Tshifhiwa*”, “*tshinoni*”, “*Tshivhidzo*”, “*Tshimangadzo*”.

The teacher asked the learners if they could tell her why she began some of the words with a capital letter. Learners raised their hands and the teacher nominated one pupil, who responded:

L: “Because names begin with capital letters”

The teacher agreed to this, expressing appreciation for the given answer:

T: “Did you hear what she said? She says, because names begin with capital letters. I really did not realise that she could give the correct answer. Lets proceed”.

After some time, as learners continued to give the words that began with “tshi”, and they came to the word “*tshinoni*” [bird], the teacher asked why this word did not begin with a capital letter. Learners raised hands and the teacher called the name of one pupil who answered:

L: "Because *tshinoni* [bird] is not a name".

The teacher agreed and continued to ask more questions.

The second part of the lesson episode above seems to be more intellectually demanding than the previous ones. Learners were required to give the names that begin with the given consonants and to provide the properties of the words given. The teacher asked learners to give her the names that begin with "tshi". Learners raised hands to be nominated to give naming words; all of them were names of people, they were "proper nouns". Only one of these naming words was a "common noun", "bird". The teacher asked learners why the naming words she had written on the board begin with capital letters. One pupil was nominated and gave an answer that appears ambiguous. The answer, to which the teacher agreed, was: "Because names begin with capital letters". The pupil's concept of a "naming word" or noun, suggested by the pupil's response above, was a spontaneous, everyday, concept that derives from the child's conception of "naming words" as only involving "names of people". Children were more aware, in their everyday, spontaneous learning and developmental situations, of their social world in which "naming words" naturally referred to people around them.

The teacher agreed to the answer, even acknowledging that she underestimated her learners' ability to give the correct answer on this question. This illustrates a theoretical point, discussed in Chapter 2 (section 2.5), of teaching pitched at the actual level of learners' development or at the level where learners are already competent at a given knowledge or skill and thus not addressing learners' developmental potential.

When the teacher came to the word "*tshinoni*"—bird, which did not begin with a capital letter, she again asked the learners why this word did not begin with a capital letter. The nominated learner answered that "bird", is not a "naming word". The teacher agreed to this answer and proceeded with the lesson. It was now clear that the learners did not understand the concepts involved in this lesson.

The concept of “noun”, or “naming word”, was not presented, as a formal, scientific and theoretical concept whose teaching should have focused on revealing to learners the contradictions between the abstract and theoretical system of meanings that it subsumes and the concrete and empirical system of meanings subsumed by the everyday, spontaneous, concept of “name”.

In spite of the obvious difficulties that the learners experienced with understanding the concept of “naming word” or “noun”, the teacher did not take time to explain this concept to them, but, rather, presented it as a simple extension of what learners already knew about the everyday concept of “name”. In TshiVenda, “*Tshililo*” is a “name” of a person, in the spontaneous, everyday, sense in which the concept of “name” is understood. However, “*tshinoni*”—bird, is not a “name” in the same sense in which “names” are generally understood in everyday, spontaneous, situations because it does not name or identify a specific person or bird of a particular type. That is, there is no conception of ‘common nouns’, or an awareness of this form of knowledge, in the learners’ everyday, cultural-linguistic, system of knowledge. As a result, the pupil in this lesson found a spontaneous, cultural-linguistic, concept by which to define the word “*tshinoni*” which, of course, was not consistent with the demands of the task at hand.

The teacher’s practice suggested a lack of confidence with the content of her lesson and an apparent lack of knowledge of appropriate ways to mediate formal, abstract-theoretical, forms and knowledge so as to help learners transform their concrete and empirical forms of knowledge, which were inadequate for the demands of formal school learning tasks. The teacher could, for example, have engaged her learners in activities, such as identifying the various properties of the different naming words, such as their referents and whether they begin with a capital letter or not in their written form. This would logically have led to a definition of the various types of “naming words” or “nouns”, with learners participating in identifying whether a particular naming word would fit the definition or not. In this way, the teacher would be guiding the learners towards

the acquisition of a more powerful, conceptually more complex, concept of “noun” or “naming word” that surpassed the simplistic, concrete and empirical, concept that the learners already had.

The last part of the lesson, explained below, was related to the previous episode and involved identification of the different sound patterns in each of the words written on the board. Learners demonstrated a total lack of understanding of the criteria for the identification of the sound patterns. The teacher did not assist them by offering any clear explanation as to what the task involved. However, learners continued to be actively involved in their learning, vicariously raising their hands to respond to the teacher’s questions but constantly coming up with guessed and incorrect answers. Even when a correct answer was produced it could no longer be safely determined that the answer came from the pupil’s meaningful understanding of the task.

The teacher asked learners to tell her the number of sound patterns in each of the words on the board. The teacher read out a word from the board and asked learners to say how many sounds it had:

T. “Lets divide the sounds now, “*Tshinakaho*”. How many sounds were there?”

Few learners raised their hands. The teacher nominated three learners who each gave incorrect answers to the question. The fourth pupil to be nominated gave the correct answer:

L. “There are four”.

The teacher agreed and repeated the answer to the whole class before proceeding to the next question.

The teacher said another word as she wrote it on a separate section of the blackboard:

T. "*Tshililo*"

Several learners raised their hands. The teacher nominated five learners, one after the other, and each of these learners gave an incorrect guess. The sixth pupil gave the correct answer:

L. "Two".

The teacher repeated the answer aloud [This answer was of course incorrect as the word, "Tshi-li-lo" contains three syllables].

After this the teacher asked further questions:

T. "Why is it that we say that there are two sound patterns in the word "*Tshililo*"?"

Several learners raised their hands. The teacher nominated one pupil, whose hand was raised, to give the answer:

L. "Because "*li*" and "*lo*" are the same".

The teacher repeated this answer to the whole class, confirming that she agreed with it. The teacher never elaborated on the explanation given which was not correct.

The teacher went on to the next word:

T. "*tshinoni*"

The teacher uttered this word while pointing with a stick to the place on the board where the word was written. Several learners raised their hands. The teacher nominated a pupil by calling a name:

T: "Tshipuliso".

The nominated pupil answered:

P: "Four".

The teacher kept quiet, not responding to this learners answer. The other learners realized that the answer was not correct and raised their hands, competing for the teacher's attention. The teacher nominated several learners but no-one was able to give the correct answer. Some of the learners guessed

that there were four sounds, repeating the same error as the first pupil. Seven learners in all were nominated and gave incorrect answers.

The situation began to get out of control although it was still in tune with the curriculum principle of active participation in the teaching-learning process. Learners' answers to the question above were now divided between those who said that there were two sound patterns and those who said there were three sound patterns in the word "*tshinoni*". Divided in this way, learners chanted their answers aloud, as if arguing about which was correct. In response, the teacher instructed learners to decide on which of the two answers was correct by means of a vote:

T. "Lets raise our hands and vote".

After that the learners raised their hands in favour of one of the two answers. The teacher concluded:

T. "Those who say there are two sound patterns are in the majority, which means that there are two sounds"

This may seem to have been a surprising move by the teacher. Although the answer to the question may have been correct, the procedure for deciding on it did not help the learners to understand the task. The teacher's action was, however, aligned with the principle of the new, OBE, curriculum framework that the organisation of learning and teaching, at the foundation phase in particular, needed to reflect an awareness of the fact that learners at this level of schooling do best on tasks related to their familiar situations (Department of Education, 1996; Gulting, et al. 1998). As a result, the teacher engaged her learners in a democratic decision making process, which involved an important socio-political experience of children in the post-apartheid South African society. However, this procedure, or approach for teaching, did not facilitate learners' concept acquisition. This method of teaching did not assist learners to grasp the criteria and underlying principles for identifying the different sound patterns in the given words.

Observation of the teaching and learning practices in Grade One revealed that the teacher made deliberate use of the new curriculum, its concepts of teaching and learning and the principles that informed this conception, to organize her lessons and her teaching activities. The concept about how teaching and learning should proceed in an Outcomes Based Education classroom produced a change in the mode of interactions between the teacher and her learners. Learners began to participate openly in the lessons while the teacher encouraged them to talk and to correct her when she made a mistake. Learners could guess their answers rather than withdrawing their participation in the lesson because they did not know, or were not sure, about the status of their answers. Learners' confidence seemed to be improving from their active participation in their learning and the teacher did not openly express impatience with learners who failed to provide correct answers to her questions, as would normally happen in traditional modes of teaching and learning.

However, the principles of active participation in learning, demonstration of knowledge, as well as learner-centeredness, seemed to produce unintended effects on lessons, especially when the teacher dwelt on an aspect of the lesson that the learners had already mastered and were competent with, for much longer than was necessary. As a result, much of the teaching time was lost in activities that constituted only the basics of the more demanding work still to follow in the lesson. The procedural aspects of the curriculum; that is, what procedures need to be carried out during teaching as well as what forms of activities learners needed to engage in, was applied by the teacher without regard for how these would bring about meaningful acquisition of the content by learners. The procedures that the teacher used to teach the content did not have an intrinsic relationship to the form of knowledge the content constituted. The procedures of how to teach and what activities, e.g. group-work, should be applied, remained as overlays on content, and never came into meaningful and mutually effective contact with each other. This mismatch in the application of the

methods of teaching and learning propagated by the new OBE curriculum and the actual presentation of the content of learning resulted in the old problems of concept learning. Teachers continued to present the concepts through a method that assumed knowledge transference while learners assimilated the concepts without meaningful understanding.

Learners repeated the words that the teacher had taught them, as answers to the teacher's questions without demonstrating any meaningful understanding of the conceptual relations and principles underpinning the words or content of their answers. In the observed Grade One class, this mode of teaching and learning, characteristic of apartheid era took place simultaneously with the application of concepts and principles from the new OBE curriculum framework. These modes of classroom practice, emerging from the changing socio-political circumstances of schooling in South Africa, were also manifest, to varying degrees, in the practices of the Grade Two and the Grade Three teachers discussed below.

#### 4.3.4. Teaching and learning in Grade Two and Grade Three

This analysis deals with two separate instances of classroom teaching and learning in Grade Two and Grade Three. The discussion focuses on the Grade Two lesson, and the Grade Three lesson is attached in appendix 3.3. to further illustrate the pattern of classroom practice characteristic of these Grades. The Grade Two lesson involved the teaching of reading or, in the language of OBE curriculum, literacy. The teacher used the reader produced for the Outcomes Based Education curriculum to organise her teaching. The principles of the OBE, curriculum can be seen in practice, both in the way in which the text in the reader was represented and in the teacher's practices.

The text, on which the lesson was based was written in TshiVenda and was about morning preparations. The text was accompanied by picture drawings of children preparing themselves to go to school. Already, the learner-centred

principle was evident here. The text was represented in the second person, which focused the story reference directly on the learners. The story itself was about activities with which learners were familiar and could identify such as what they do before they get to school. The text also taught a “life-skill”, an approach that was consistent with the principle of integration, in the curriculum.

The following observation of a Grade Two reading lesson illustrated how the curriculum and the reading text organised the classroom practices of teaching and learning. The lesson began with the teacher instructing learners to open at the relevant page in the reader. At the same time the teacher also reprimanded learners who were making a noise because they did not want to share the reader. The actual lesson started when the teacher instructed learners to read from the text:

### **Grade Two Reading Lesson**

*Date: 11. 08. 1999*

T: “Let us read where it is written in red letters”.

The whole class read the heading in chorus:

L: “*Didzudzanyeni*”.

[Prepare yourself].

The teacher instructed learners to read further in the text. Learners began to read in chorus, but the teacher immediately stopped them and instructed them not to read in chorus, but to raise their hands for nomination:

T: “Let us raise our hands, let us not read in chorus”.

The teacher nominated one pupil to read. The nominated pupil stood up and read:

L. “When you cannot find your shoe”.

The teacher repeated the sentence. The whole class repeated the sentence, again, in chorus. Thereafter, the teacher asked a question three times, pointing at the picture in the reader:

T: "Who shall we say this one is?"

Learners raised their hands. The teacher nominated one pupil to answer:

L.: "*Vhuada*" [the name means one who is always dirty].

Without making any remark on this response, but indicating an attitude of agreement, the teacher nominated another pupil to read the next sentence.

The nominated pupil read and the teacher commented further on the story, making references to the pictures in the reader:

T: "Yes! This place looks very messy".

After this comment, which the teacher repeated twice, the teacher nominated the next pupil to read further. The nominated pupil stood up and read:

L: "Where you sleep is messy".

After this reading, the teacher drew attention to a specific picture in the reader:

T: "Can you see the place".

One pupil, at the back of class commented in response to what the teacher had just said:

L: "There are flies as well".

The teacher agreed and asked if this could be the home of certain learners in class. Several learners suggested that it could be some of their classmates' homes, identifying them by names:

L. "Yes! It is Dangala's home? It is Luvhola's home?"

Learners argued among themselves about this, while those whose names were mentioned protested that these could not be their homes. The teacher went to the cupboard, took some jerseys and shoes out used them to demonstrate to learners what a messy place looks like; sprawling the clothes all over on the floor at the front of the classroom. After this, the teacher asked another pupil to read further:

T. "Mulea, read for me please".

The nominated pupil read on.

At the beginning of this lesson, the teacher took more time than was necessary, about fifteen minutes, to introduce the lesson and to give instructions to learners about what to do. Five minutes would have been adequate. Learners did not pay attention to what the teacher said at the beginning of the lesson. They use this time to talk to each other and to compete about seating space and the position of the reader on the desk that was occupied by more learners than was normal. The shortage of readers added to this problem.

The teacher approached the learners as a collective and not as individuals whose needs and interests she should take into account during their learning. In response to the teacher's instruction for them to read, the whole class responded as a collective and read the text in a chorus. As the learners started to read the second sentence in chorus, the teacher stopped them and instructed that they needed to be nominated to read as individuals. Here was a move by the teacher to solicit individual performance. The approach however remained formal. Learners needed to demonstrate their willingness to answer the questions by show of hand. Only these learners who demonstrated that they were capable of providing a correct answer were engaged. This practice was not inclusive and accommodative of individual learners' abilities and was not inclined to facilitate successful performance by all learners irrespective of their learning pace. Active participation was limited to those learners who demonstrated superior abilities on tasks.

The teacher nominated individual learners to read, but the reading was limited to a single sentence for each pupil. After each pupil had read, the teacher repeated the sentence and urged the whole class to repeat it after her in chorus. Then the teacher explained to the learners what the sentence meant and related it to their experiences, sometimes asking content-based questions for learners answer.

The teacher's questions referred directly to the content and required descriptive answers.

The lesson foregrounds the content and rote learning process. The skills of reading, interpretation, understanding and relating content to own experiences and life-circumstances were not emphasised. These skills would require the teacher to change her method so that the lesson did not focus on the acquisition of content in which the learners already demonstrate competency. The lesson needed to engage learners in activities such as reading a paragraph or more, interpreting the text and relating it to their own experiences. The teacher should have assumed a role of assisting the learners in these learning activities, especially when they demonstrated inability to proceed and complete the task competently on their own.

This method, which would be consistent with the general principles of the new curriculum in regard to active learning and learner-centered model of teaching, was not fully developed, as a conscious approach to teaching that the teacher could use. Instead, the emphasis on the transmission of content, resulting from the teacher's past practices of teaching, and her assumptions about knowledge and learning, constrained the emergence of a form of classroom practice consistent with the progressive principles of the new, OBE curriculum framework.

The teacher's practices manifest the principles of OBE curriculum, especially when the teacher encouraged pupil participation in the lesson and referred to the learners' life-experiences. However, the teacher reproduced instances of her past practices, at the same time that she was using the new curriculum to transform her past practice. The teacher only permitted each pupil to read a single sentence in the text before she took over to interpret and nominated another pupil to read. This practice, because it denied the learners the opportunity to read a substantial amount of text on their own, may affect the development of learners' reading confidence. The reading potential of learners

may have been limited because the reading activities in which they participated offer only a limited scope of practice with the teacher's assistance. Although the content of the text was familiar to the learners, and they demonstrated competence in the interpretation of the events and actions in the story, the teacher limited the learners' opportunity to demonstrate their knowledge by assuming a dominant role of interpreter.

The teacher offered her own interpretation of the events and actions in the story and encouraged learners to assume her interpretation. This practice suggested that the teacher saw one interpretive framework for the events and actions represented in the text and supposed that 'knowing', in this instance, involved the correct interpretation, which could only be achieved by learners adopting the teacher's views. This linear, transmission mode of knowledge was presupposed by the teacher's practice. The teacher did not feel confident to "let go" of her role of dispenser of knowledge.

Further, the familiar content represented in the text was within the level of performance of the learners, or, in Vygotskian terms, within the learners' zone of proximal development (see Chapter 2 for a detailed discussion of this concept). Learners demonstrated an understanding of the text and related it with ease to their life-situations. Therefore, what then was the point of teaching if learners already knew and understood the content of the lesson? It was not clear what skills learners would acquire from the reading activity. The teacher did not appear to be clear about this.

However, the content of the text can be understood in relation to the principles of the new curriculum, that informed the design of the text content, whereby the focus of teaching and learning was on what learners know and can do, with regard to knowledge, skills, and values (Department of Education, 1996). Therefore, viewed against this background, it becomes reasonable that the text used familiar content so as to enable learners to use themselves and their

familiar surroundings as reference points for their learning. The skills and values that the tasks generated on learners related to literacy, the skill of reading and accurate interpretation of events and actions represented in the text and in its accompanying drawings. In addition, this involved generation of life skills and societal values to do with planning and preparing oneself for the day in school and other social destinations, including values to do with time management and cleanliness.

#### 4.3.5. Classroom teaching and learning in Grade Four to Grade Seven

The practices of teaching and learning in Grades Four to Grade Seven mainly reproduced the past practices of the apartheid schooling and society. These practices were the antitheses of those proposed in the new, OBE curriculum framework. These practices can be traced from their apartheid past in society and in the schooling system. In the absence of alternative teaching methodologies these teachers made do with what they had, which were the concepts and principles for teaching and learning that have been acquired in the past under the apartheid system. This discussion below focuses on two representative classes of Grade Four and Grade Six lessons.

##### 4.3.5. (a). The Grade Four Reading Lesson

*Date: 19. 10. 1999*

The Grade Four class accommodates learners in their fourth year of school with an approximate age of nine years. The Grade Four teacher made use of an old reader and only the teacher had a copy. The teacher read from the reader and wrote the sentences she read on the board so learners could repeat them after

her. After every reading and chorus repetition of the sentences by the learners, the teacher explained what the sentences meant.

After cleaning the blackboard, the teacher wrote a topic on the board; read the statement she has just written and urged her learners to repeat after her:

T: "A visit to grandmother"

The teacher read, wrote on the board, and instructed learners to repeat in chorus.

L: "A visit to grandmother".

Learners read the sentence out in chorus.

The teacher read a paragraph, ending with the sentence below, which she repeated in TshiVenda and, thereafter, asked a question:

T. "They were very pleased with the present...*no fhiwa presenthe a ni takali?*"

[...if you were given a present, wouldn't you be happy?]

To this question, the learners respond in chorus:

L. "We would be happy!"

The teacher continued to read the text and ended the next paragraph with a sentence, which she repeated for the learners in the form of a question:

T. "They said goodbye grandfather and what?"

Learners answered in chorus:

L. "Grandmother" (See appendix 3.4. for a full lesson).

The lesson proceeded like this for the next fifty minutes. At the end of the lesson, the teacher gave out a written exercise, based on the content of what she had covered during the lesson. She informed the learners that she was not erasing the answers to the questions, which she had written on the board during the lesson, adding that she was telling them this in TshiVenda so that no one should say, later on, that they did not understand this. The teacher copied the following questions from the reader into the blackboard:

English Classwork 19 October 1999

(a) On what day did the children go to visit their grandmother?

- (b) Who carried Siphon?
- (c) How far did they go in the bus?
- (d) Who drove carefully?
- (e) Where did the bus stop?
- (f) Who was waiting for them?
- (g) What was grandfather doing?
- (h) What was inside the first parcel?
- (i) What was inside the second parcel?
- (j) What did the children have for dinner?

The written exercise above showed that the classroom mode of teaching and learning derived predominantly from the reader that the teacher used. The reading text emphasised content transmission. This mode of text presentation assumed that learning happens by way of knowledge transfer, that is, by learners assimilating the content and demonstrating their competency by giving back the content, as represented. In the written exercise, there was no form of questioning that encouraged the learners to interpret the text and engage their own thinking beyond the explicitly given content represented in the text. This approach to knowledge and learning also dominated the teacher's mode of teaching. The lesson was limited to the teacher reading paragraphs and writing down select sentences for the learners to repeat in chorus after her. These sentences were the source of the correct answers for the written exercise that was given immediately after the oral part of the lesson. Although the correct answers were in the text, all learners did not have copies of the reader, so the teacher wrote down the sentences that answered the questions on the board for reference by the learners as they completed the written exercise.

As in the Grade Two lesson explained above, the present lesson highlighted transmission of content over the skills of reading, text interpretation, language and communication. The teacher assumed the role of knowledge dispenser and controlled and interpreted to learners what and how learning should take place.

The teacher's use of language was limited to repetition of the text's sentences, which she interpreted to the learners in TshiVenda. The learners' participation in the lesson was limited to repeating the teacher's words and sentences, in chorus, on the teacher's instructions. Learning was limited to reproduction of the text language and never engaged learners in genuine communication, either in English or in TshiVenda. Learners were passive recipients of the text content and were therefore not likely to use it to change their existing concepts and mode of learning.

#### 4.3.5. (b). The Grade Six Geography Lesson

*Date: 25. 10. 2000*

By Grade Six the average age of the learners was eleven years, and they experienced a number of changes in their classroom activities. Firstly, the language of instruction had changed from mother tongue to English. However, in spite of this change, much of the actual communication between learners and their teachers, and among the learners themselves, continued to take place in their home language. Teachers used abbreviated sentences when they communicate in English with their learners and, in turn, expected learners to use similar form of expression when answering questions. Teachers translated almost every English sentence they uttered into TshiVenda to assist their learners' understanding of instructions. Communication was often limited to the teacher asking content-based questions which learners answered in one word or a short phrase. The problem of language not only limited the development of communicative competence but also limited successful acquisition of concepts.

Secondly, content-knowledge syllabi that involved expository rather than narrative, texts were introduced in Grade Five (also see Macdonald, 2005b; 1990a). Teaching and learning at this level was not limited to the reading of narrative texts but extended to content knowledge subjects such as mathematics,

general science, social studies, etc. Specialist-teachers who had been trained to teach particular subjects took turns to teach Grade Five classes. However, given the poor standards of teacher education during the apartheid system, teachers were forced into the role of interpreters of textbook knowledge. This interpretation was limited to translating content into the language that learners understood. The lack of thorough knowledge and autonomous competence in the subject that they taught reduced teachers to uncritical dispensers of factual information represented in the textbooks.

Analysis of the Grade Six Geography lesson revealed the characteristics of this mode of teaching. The first part of the lesson involved the teacher asking content-based questions:

T: "What do you understand by the term, mining? When I say mine, I am using the same word. [...]. Which country are we referring to... Which country are we reading about?"

Learners raised their hands to be nominated to give the answer. One pupil responded:

L: "Egypt".

The teacher proceeded to the next question, without making any remark to this answer.

T: "What is the capital city of Egypt?"

Learners raised their hands to be nominated, but the teacher immediately changed the question before nominating a pupil:

T: "What is the capital city of South Africa?"

Learners raised their hands again and the teacher nominated one pupil:

L: "Pretoria".

After this answer, the teacher returned to the earlier question that he had skipped:

T: "What is the capital city of Egypt?"

Learners raised their hands again and the teacher nominated another pupil to answer:

L: "Cairo".

The teacher proceeded, without commenting on the answer the pupil offered:

T: "Who is the president of South Africa?"

Learners raised their hands, and the teacher nominated another pupil:

L: "Thabo Mbeki".

The teacher continued:

T. "What do you call a person who is president in Egypt?"

One pupil, whose hand was raised, was nominated:

L. "President".

Again the teacher proceeded to the next question, not commenting on this answer, but suggesting, as with the other answers, that the answer was correct.

The lesson continued like this for a while and, thereafter, shifted to a teaching mode where the teacher dispensed textbook content to his learners. The teacher explicitly used the textbooks as a reference for the ideas to be learned. Like the Grade Four teacher in the reading lesson above, the teacher read paragraphs from the textbook and gave abbreviated sentences that repeated the text language before translating these in to TshiVenda. After reading a paragraph, the teacher explained to the learners:

T: "Now we have got a very short paragraph here. Some of you will say this is gas [...] by gas we mean petroleum.[...] Now this gas is very horrible.....".  
[in TshiVenda] "God has really provided...God is good. After he had made the earth he hid gas under the ground so we could use it at the appropriate time".

The whole class sat quietly with their textbooks opened before them, paying attention to the teacher.

The teacher read another paragraph again and continued with the explanation:

T: "Now the iron ore is the iron which has not been purified...[In TshiVenda] "...it is still raw and impure".

After this, the teacher read another paragraph and chose to reiterate a specific content issue raised in the text:

T: “[...] Ok, now we are having phosphates for making fertilizers. These fertilizers are being made from raw materials and we call them finished products? [...] Turn to page ninety now, you can find Alexandria?”

Learners turned their books to page ninety and answered the teacher’s question in chorus:

L: “Yes”.

Without saying anything regarding Alexandria, the teacher instructed learners, again, to turn to page ninety-four:

T. “Turn to page ninety four again. Many poor farmers have left their farms for the cities...Now Egypt is the second most populated country in Africa, after Nigeria. We are number hundred, am I right?”

There was no response from the learners to this question, which the teacher seems to treat as rhetorical and never followed up.

The lesson continued for another ten minutes like this (see appendix 3.5 for the full lesson). This time, the teacher selected specific paragraphs, which he read to the learners and then largely translated into TshiVenda. The teacher asked questions to the learners, who also responded in TshiVenda. However, in spite of the teacher using the learners’ home language to explain and ask the questions, the communication remained limited to one word and one-phrase questions and answers, which suggests that the basis of this mode of interaction was deeper than the language medium question. The mode of teaching remained focussed on the dissemination of content without a clear explanation of the conceptual relations that underpin the content represented by the text. For example, the teacher read a paragraph about the motor manufacturing industry, and commented on its content in TshiVenda, concluding with a question:

T: “...*Hu tshi pfi motor car, hu khou ambiwa mini muthannga?*”

[...What does motor car refer to, young man?].

Learners did not raise their hands to answer the question. One learner was nominated, nevertheless, and he answered:

L. “*Goloi*”

[Car]

Without commenting, the teacher read another paragraph from the textbook, which he explained only in TshiVenda. The explanation did not go into deeper conceptual clarification:

T: “[...] *Assembly ari ambi kereke, ri amba hafha hu no kweiwa hone golo. Hai dzi no tsheiva hone. Ni fhanogolo dzi tou tsheiva. Golo dzi a itiwa fhanogolo South Africa, hafho PE*”.

[By assembly we do not mean a church congregation, we refer to where cars are assembled. Not where they are cut (body repairs). Here in South Africa cars are assembled in PE].

Learners laughed loudly, amused by the teacher’s statement, which teased them about possible misinterpretation of the word “assembly”.

This last episode of the lesson involved the teacher reading paragraphs and translating into TshiVenda. Although much of the communication, except for the reading, was conducted in the learners’ home language, they remained passive throughout the lesson. Only the teacher talked and asked questions, which he even answered himself when learners no longer volunteer to answer. Learners had problems with both the language and the concepts. They failed to make sense of the content of this lesson, first, because it was communicated through a language in which they were not competent to engage in complex conceptual learning and, second, because the teacher did not make important conceptual connections, which could have made the content meaningful to the learners.

The teacher failed to clarify the conceptual connection underlying the content of the lesson represented in the text. For example, the underlying connection between concepts such as population growth, urbanization, economic production, raw materials, etc., was not clarified. In other words, it was not clear how the population of Egypt, its economy and the natural resources at its disposal, made the country unique, as compared to other countries in Africa, especially South Africa. In fact, learners’ conceptual understanding in this lesson

was further constrained by the textbook's representation of knowledge, which emphasized transmission of factual content rather than the conceptual relations that should have made the content meaningful to learners. Learners could, for example, have gained a better understanding of the concepts in this lesson if it had been presented from the perspective of their familiar context in South African society and its economy in their immediate locality, before relating them to the comparative conditions in other parts of Africa and the world. Rather than presenting such content as unrelated factual material that only needed to be assimilated, the teacher could, for example, have *problematized* the content. Learners could have been engaged in activities that involved familiar South African content with the aim of developing their understanding of the general concepts and how these concepts could assist them to understand general issues, such as those relating to human social development. This idea is further interrogated in chapter five.

#### 4.4. Conclusion

In this chapter the institutional practices of classroom teaching and learning in the context of rapid socio-political changes were examined. These changes place new demands on the teachers and learners. The new curriculum framework was the primary cultural tool or social instrument of transformation that the post 1994 democratic dispensation used to transform the past practices of schooling.

The modes of classroom practice, described above, revealed instances of the evolving practices of schooling and classroom instruction. However, the past forms of schooling continued to be instantiated in the currently evolving practices. Observation of the teachers' and learners' classroom practices indicated that they enacted, not only the present changes embodied in the new curriculum framework, but also the past practices of the apartheid schooling and society.

The data presented and analysed in the present chapter revealed the socio-cultural embeddedness of the practices of schooling and classroom teaching in South Africa and Venda. Changes in the curriculum framework for schooling accounted for the associated changes in the practices of classroom teaching and learning and their psychological consequences. However, the nature and the direction of these changes is also determined by the specific history of schooling and society or the socio-cultural context of schooling, which would need to be taken into account in future curriculum development and schooling improvement initiatives in Venda and South Africa.

It was clear from the analysis that, despite the laudable aims of the Outcomes Based Education curriculum framework, little transformation of classroom teaching and learning practices had taken place. The analysis of the interactions between teachers and learners in this chapter highlighted instances of the strategies employed by teachers and learners that ostensibly seemed to meet the objectives of OBE, but in reality, failed to effect deep learning. For example, even where the new practices of learner-centeredness were applied, these were unintentionally offset by the lack of substantive engagement with the formal learning content. New approaches such as engaging learners' in 'active' learning processes did not produce the required results of substantive learning and acquisition of formal, school-specific, scientific concepts. Instead, these practices; when they were not accompanied by appropriate elaboration of why particular answers (and practices) were correct; became insufficient for creating the relational systems of knowledge adequate for future independent action on the part of learners.

Therefore the mode of classroom teaching and learning practices that continued to dominate schooling in Venda, was concrete; emphasising, not deep learning that formal schooling should be inculcating, but the everyday, spontaneous, knowledge and mode of learning, or "empirical epistemological procedure" (Hedegaard, 2002; 1996; 1990). This form of knowledge and mode of learning

could account for the emphasis, by the subjects in the experimental tasks in Chapter 3, of the concrete and functional modes of thinking and problem solving. The nature and manifestation of these thought processes during classroom teaching and learning; and the possible ways of their resolution within the present South African schooling, is examined in Chapter 5.

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