

# CHAPTER 1

## BACKGROUND AND OUTLINE OF THE RESEARCH

### 1.1 INTRODUCTION

The implementation of Curriculum 2005 in the General Education and Training (GET) band of the National Qualifications Framework (NQF) in 1998 has led the national Department of Education to come up with an assessment policy and its implementation in the awarding of a General Education and Training Certificate (GETC). This policy known as the Assessment Policy GET band (a provincial version) was issued in November 2000. The purpose of this policy is to phase in assessment practices that are compatible with Outcomes-Based Education (NPDE 2000: 1).

This new policy applies to the General Education and Training Band of the National Qualifications Framework in Grades R (Reception) to 9. Quite recently, by a media release, the Department of Education (DoE 2002b: 1) decided to put on hold the implementation of the Curriculum 2005 policy as it was originally planned and issued new guidelines (*Curriculum 2005 Assessment Guidelines*) for the assessment of learners in the Senior Phase and final year (Grade 9). This study is an attempt to find out how these guidelines are implemented in Grade 9 classes of the selected schools in the Limpopo province (former Northern Province) with specific reference to Natural Sciences (NS).

### 1.2 ASSESSMENT IN OUTCOMES-BASED EDUCATION

The Assessment Policy (NPDE 2000: 2-9) states that the learning programme must clearly define the outcomes and the ways and means of assessment and the ways in which they will be used for reporting and progression. The additional time and support for learners that need extra time and support for progression must also be indicated. One of the principal aims of the policy (NPDE 2000:3) is to enhance the provision of continuous, coherent and progressive education to each learner. The quality assurance system is expected to provide feedback into schooling for improving curriculum,

assessment practices, leadership, governance and organisation of schools. It is, therefore, necessary to diversify the modes of assessment and improve the expertise of educators in designing, developing and using appropriate assessment instruments. The assessment at the end of the Senior Phase will be followed by a moderation exercise to ensure that appropriate standards are maintained. This will be done on a sample basis. Mechanisms for moderation will be put in place at school, provincial and national levels by Education and Training Quality Assurance body (ETQA) – now known as GENFETQA (General and Further and Training Quality Assurance).

The communiqué issued by the National Department of Education (DoE 2002a: 1) as a media statement, stated that after a thorough appraisal and analysis of the system, including the results of the pilot exercise, the Council of Education Ministers agreed to defer the full implementation until 2004. This was because the ministers needed more information about the value and purpose of the qualification (i.e., GETC), the relationship between the curriculum and the qualification and the differences between a school- based GETC and the one developed for adult learners.

The policy also stipulates that there must be different forms and methods of assessment that must be used in an all-inclusive and integrated manner. Assessment must also be internal and continuous which must be moderated externally, as well as external assessment, which is designed, planned, administered and moderated by an examining body. This will be at the end of Grade 9- GET phase. The details of the assessment policy and its implementation are discussed in chapter 2 (i.e., under Review of literature).

### 1.3 RATIONALE FOR THE STUDY

One of the objectives of policy implementation studies is to inform policy-makers about the problems experienced in the implementation phase (especially at the advocacy and the initial implementation) of the policy, for its analysis and review (Van Wyk 1999: 46-47). This should answer questions like:

- Is the policy being implemented in the way it is intended?

- Have the teachers adapted the policy to suit their needs or local conditions? Why?
- Do the teachers understand the policy correctly? Or are they simply rejecting policy as not suitable?
- Are there mechanisms in place to inform the government on the success/ failure of the implementation?

Other questions that are relevant could be:

- How are the assessment practices as prescribed in the policy (guidelines) implemented at the schools?
- Do they really improve learner performance (for example in learner achievement, school improvement and quality assurance)?

As the Curriculum 2005 OBE assessment policy or its revised version (Assessment Guidelines) is being tried for the first time in the Senior Phase (Grade 9) level with the aim of awarding a national qualification (GETC) – which will be a common, national report card by the NQF for 2002 (DOE 2002b: 1), much public attention and interest are generated.

Policy formulation and policy implementation are two related, but quite often mismatched activities in real practice. This is because the realities of the situation are often ignored (Jansen 1998: 321-331; Motala 1997: 2-5; O'Neill 1995: 7). This might be the very reason why the Department of Education has deferred the implementation of the assessment policy until 2004 and is trying an interim approach of assessment of GET Senior Phase (Grade 9) with a set of assessment guidelines with its document (DOE 2002 b) entitled *Curriculum 2005 Assessment Guidelines for the Senior Phase*. This document has two sections: section A, which is the generic component and section B, the different Learning Area-specific component. This study is an attempt to find out how these assessment guidelines in the Learning Area (LA) of Natural Sciences (NS) were implemented in selected schools and to assess the extent to which implementation matched the guidelines in the document.

## 1.4 PROBLEM FORMULATION

The main research question is:

How is the Curriculum 2005 Assessment Policy (Guidelines) being implemented in the GET Senior Phase (Grade 9) in 2002 in Natural Sciences?

The sub questions that will be looked at will be:

- 1.4.1 What does the Curriculum 2005 GET Assessment Policy entail as far as the assessment of Grade 9 in the Natural Sciences Learning Area is concerned? To what extent do the new Curriculum 2005 Assessment Guidelines for Natural Sciences in 2002 match/ compare with the above assessment policy?
- 1.4.2 How are these policy implementation guidelines being implemented in Grade 9 at selected schools in the Limpopo province? What are the views of the implementers as far as the implementation of the assessment, according to the guidelines and policy are concerned?
- 1.4.3 What recommendations can be made looking at the picture that becomes evident from the study?

## 1.5 THE AIMS OF THE STUDY

The study thus aims to:

- explore the implementation of Curriculum 2005 Assessment Policy Guidelines in Grade 9 at the school level with special reference to Natural Sciences in selected schools in the Polokwane circuit of Limpopo province; and
- make recommendations on the basis of the findings with respect to the implementation of the above (i.e., Curriculum 2005 Assessment) Policy Guidelines at the above schools.

## 1.6 RESEARCH METHODOLOGY

This investigation uses two main methods: a literature review and an empirical investigation.

The literature reviewed will be policy and implementation practices with particular reference to assessment in Curriculum 2005 and Outcomes-Based Education in South Africa and elsewhere.

The empirical investigation will investigate the implementation of the policy guidelines in five secondary schools in the Polokwane circuit (formerly called Polokwane District) of the Limpopo province, mainly through document analysis of learner and educator portfolios, and interviews with the educators who were the implementers of the policy.

A qualitative approach will be used, as the implementation is context specific and could capture the nuances of the situation and realities that exist at these schools.

### 1.6.1 Selection of Schools

Five schools are chosen from the Polokwane circuit of the Capricorn district (formerly Region II) of the Limpopo province. The selection of these schools is based on the following criteria:

- the type of school;
- the learner and educator population; and
- the location of the schools.

This selection, not only implies convenience sampling for the researcher, but also helps to give a glimpse of the situation as prevailing in the different types of English medium schools, as they form the bulk of the schools commonly found in South Africa. This variety serves to find out how the policy is implemented in schools that are different in physical resources, learner and educator composition and perhaps other variables like location, proximity to residential areas, towns and townships etc.

### **1.6.2 Learning Area**

As the researcher is a qualified teacher trainer with several years of teaching experience in natural sciences (biology and integrated science / general science) at the secondary school and college of education levels, the Learning Area in which the Curriculum 2005 Assessment Policy implementation will be examined will be Natural Sciences (NS). Senior Phase final year (Grade 9) is chosen since this is the final year of the GET phase, which is externally moderated.

The participants in the study will comprise all the Natural Science educators (NS educators) in the schools in the study who were involved in the teaching of the batch of learners that the schools presented in 2002 in Grade 9 (GET- final year) assessment.

### **1.6.3 Data collection strategies**

As most data sought will be of a qualitative nature and some baseline data (e.g. data dealing with individual school, educators and learners) may be quantitative, data collection will involve both techniques as in evaluation research and policy analysis studies described for multi-site case studies (McMillan & Schumacher 1993: 543, 550). Data collection will be mainly by interviewing educators and by the examination of learner and educator portfolios.

The following documents will be used:

- learner portfolios in Natural Sciences Grade 9 – a sample of six to ten from each school: two or three will be chosen from different categories of learners based on performance; and
- educator portfolio(s) – Grade 9 Natural Sciences educator(s).

The documents will be analysed on the basis of the criteria set out in the Assessment Policy Guidelines for 2002 to establish the match between policy and practice and the assessment tools established by the Department of Education to assess the implementation of the assessment policy.

Criteria will be drawn and instruments will be developed to establish the match between the policy guidelines and practice.

#### **1.6.4 Data analysis**

The data collected will be checked, verified and will be organised into categories that will match with those that are specified in the assessment guidelines and policy documents. This will enable the researcher to codify and identify key information for analysis and draw conclusions regarding the implementation of the policy at the local level by looking into the problems formulated, the particular educational context of the school and the theoretical background generated from literature review. The conclusions will be based on the data gathered.

### **1.7 VALIDITY AND RELIABILITY**

The research instruments used will be validated and reliability tested by using expert opinion and pilot- testing (McMillan & Schumacher 1993: 385-395).

Reliability will be addressed by informer rechecking and gleaning the same information through consensus with other informants as well as by using triangulating techniques (Sanders 1992: 34).

### **1.8 CHAPTER DIVISIONS**

The presentation of this dissertation is organised into the following chapters:

Chapter 1: This chapter comprises the background information, the purpose of the study, the research questions and sub questions and the rationale including an overview of the research methodology;

Chapter 2: This forms the literature review and theoretical background. The major topics will be educational policies and implementation- especially policies relating to OBE and Curriculum 2005 in its current form;

Chapter 3: Chapter 3 will deal with research design and methodology;

Chapter 4: This chapter will contain the findings which will be presented in a clear, cohesive and comprehensive manner along with the discussions that relate to the findings; and

Chapter 5: This is a concluding chapter, which will provide the summary of the research, the conclusions from its findings and the recommendations.

## 1.9 CONCLUSION

This study attempts to explore the implementation of Curriculum 2005 Assessment Policy (of 2002) in Natural Sciences at the Grade 9 level at selected schools in the Limpopo province through a small-scale multi-site (McMillan & Schumacher 1993:550) policy implementation case study approach. The research methods used are mostly qualitative – mainly by document analysis and interview. This chapter has presented the background of the research together with an outline of the assessment policy and the research methods used.



## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 INTRODUCTION

In this chapter, I wish to give an overview of Outcomes-Based Education and the implementation of Curriculum 2005 in South Africa, together with an outline of the Assessment Policy for the General Education and Training (GET) band in Grade 9 with special reference to Natural Sciences. The literature review will also seek information about similar assessment and policy implementation practices elsewhere, as South African experimentation with the OBE assessment is in its initial phase.

#### 2.2 OUTCOMES-BASED EDUCATION (OBE) AND CURRICULUM 2005: AN OVERVIEW

##### **2.2.1 Background of OBE introduction**

Spady (1994:1), the key proponent of OBE, refers to Transformational Outcomes-Based Education as an approach to education that emphasises teaching and learning through which “demonstrable knowledge, competencies and qualities” (that are integrated across the curricula) are realised to enable the learners to pursue life in their varied settings. The environment through which competencies are developed and the pace at which they attain these competencies must be “learner-centered” – given the fact that OBE emphasises “life-long learning” and that nobody fails in the system but may achieve the outcomes at own pace.

Outcomes-Based Education (OBE) is being implemented in South African schools through Curriculum 2005 (C 2005) (DoE 1997: i) or in its revised form.

Curriculum 2005 is the post-democratic curriculum for South Africa, which was introduced into schools from 1998 in a phased manner. The medium for this curriculum

implementation is OBE in its *Transformational OBE* mode (DoE 1997: 1). This is aimed at addressing *equity* in education, so that essentially the quality of learning opportunities afforded to all learners is the same. This is an attempt to create

“a prosperous, truly united, democratic and internationally competitive country with literate, creative and critical citizens leading productive, self-fulfilled lives in a country free of violence, discrimination and prejudice” (DoE 1997: 1).

By this, the government aims “to normalize teaching and learning”. This involves a “paradigm shift from the traditional aims and objectives approach to outcomes based education” (DoE 1997: 1-2).

The key principles guiding curriculum development across all Learning Areas (there are eight different Learning Areas in the GET phase) include: integration; holistic development; relevance; participation and ownership; accountability and transparency; learner oriented approach; flexibility; critical and creative thinking; progression; anti-biased approach; inclusion of learners with special education needs; quality standards; and international comparability (DoE 1997: 3).

The authors Jansen (1998); De Clercq (1997); Valley and Spreen (1998) are not very optimistic about the success of this new curriculum initiative. They give several reasons for its likely failure in implementation and delivery in South Africa. Some of their major concerns are discussed.

### **2.2.2 Curriculum 2005 as a ‘top down’ policy**

Curriculum 2005 with its OBE mode of implementation is a ‘top down’ (Jansen 1998: 330; De Clercq, 1997: 140) policy – a policy conceived and developed at the top of the hierarchy and implemented down to the grassroots by means of further policies and directives. Jansen (1998: 321-322) and De Clercq (1997: 132-133) have traced the background of its conception to the pre-democratic era when the government started negotiations with the political parties and other stakeholders towards a smooth transition to democracy. Jansen traces its conception and implementation to the national curriculum reform initiative of the democratic government which took place in three

bold steps: the first one was intended to purge the apartheid curriculum (school syllabuses) of 'racially offensive and outdated content'; the second to introduce continuous assessment into schools; and the third to introduce OBE into schools. He further makes a critical assessment of the claims, assumptions and silences underpinning the official policy on OBE (Jansen 1998: 321-331).

### **2.2.3 The claims of OBE**

The claims of OBE are manifold. According to its claim (Jansen 1998:322), *outcomes* would displace an emphasis on content coverage, make explicit what learners should attend to, direct assessment towards specified goals, would signal what is worth learning in a content-heavy curriculum, and can be used as a measure of accountability at school level. However genuine these claims may appear to be, according to Jansen (1998) and De Clercq (1997), there has not been sufficient evidence from countries such as Australia and New Zealand (where it was adopted in certain regions at least) about its success. De Clercq says (1997: 132) that the whole idea of life-long learning and integrated education was borrowed from these countries without an attempt by the government to learn from the experiences of societies in transition with similar sociopolitical democratic agendas and aspirations. Moreover, in Jansen's (1998: 322) view, OBE roots can be traced to Skinner's Behaviouristic theories of education and/ or Competency-based (vocational) education in the U.K, with shades of Tyler's Objective-based learning and Bloom's Mastery learning. In spite of all these, OBE does not have a "single historical legacy". Besides, these, according to Jansen, there are very little chances of OBE becoming successful in resource-poor schools- to which category most of our schools belong (Jansen 1998 322-323).

### **2.2.4 The reasons for the implementation of OBE and its possible impact**

The government, in its attempt to get rid off all its undesirable legacies of the pre-democratic era, (Jansen 1998; De Clercq 1997) aligned with the political and trade unionist (COSATU) and other opposition stand to integrate education and training and came up with OBE as a panacea for reform and change in South African education system. Structures for its implementation like the National Qualifications Framework

(NQF) and South African Qualifications Authority (SAQA) were also established. The policy was implemented without any “sustained debate among teachers and educators” (Jansen 1998: 323), or by involving teachers and educators in its design and implementation, but by using “technical expert committees” (De Clercq 1997: 140) which has contributed to a growing disaffection with OBE in the education community. Thus it was a ‘top-down policy’.

Jansen (1998: 323-330) gives 10 main reasons why OBE will have a negative impact upon South African schools. This is what Jansen has to say:

“OBE will fail, not because politicians and bureaucrats are misinformed about conditions of South African schooling, but because this policy is driven by political imperatives which have little to do with the realities of classroom life... OBE will undermine the already fragile learning environment in schools and classrooms”.

De Clercq’s (1997:127-146) view is that the curriculum reform policy proposals are flawed in their conceptualisation of the problems and misjudge the educational context and dynamics on the ground i.e., the classrooms, the teachers and the learners. According to her, these policy provisions and implementation strategies are more likely to favour the rich and the socially privileged (advanced) class rather than the disadvantaged for whom they are mainly intended. De Clercq also contends that the policy proposals are based on problematic assumptions about policy and policy process, and the relationship between policy and practice with an inappropriate understanding of the change and the change processes that are likely to bring in the required reform that favours the disadvantaged.

Some of the reasons stated by Jansen (1998:321-331) and also in some cases shared by De Clercq (1997:127-146) are:

- First, the language of OBE is too complex, confusing and contradictory – too many complex and confusing terminology making a ‘maze of these

jargons and their tortured definitions' well turn any one off; they are too complex and inaccessible for most teachers;

- The conception that curriculum change at school level is going to bring radical changes in the society (able to change South Africa in to first world country) is a myth. Similar is the notion that teacher is a mediator/facilitator to bring out learning outcomes through negotiation etc., is simply “a conceptual leap” which undermines the authenticity of the policy itself;
- The third reason that Jansen (and also De Clercq, 1997) provides is that OBE is based on flawed assumptions about what happens inside South African schools, how classrooms are organised, and what kind of teachers exist within the system. The OBE policy requires not merely the application of a skill, but an understanding of its theoretical underpinnings and demonstration of a capacity to transfer such application and understanding across different contexts. The demands placed on the teacher are formidable – if at all such teachers could be found in the common South African classroom situation;
- In a democratic system of schooling, even stating outcomes in advance is undemocratic. This is like reducing knowledge to its instrumentalist, utilitarian level that leaves it without any intrinsic value;
- The instrumentalism with outcomes brings in the question of values. No values are clearly defined as applicable to the South African context or situation in the OBE curriculum policy;
- According to Jansen and De Clercq, OBE multiplies the already heavy administrative load of classroom teachers with its continuous assessment policy. This is a critical reason, as most of the schools and classrooms are overcrowded, under-resourced and there are no teacher assistants available to teachers. To manage this (OBE) innovation, teachers will be required to

- reorganise the curriculum, increase the amount of time allocated to monitoring individual student progress against outcomes, administer appropriate forms of assessment and maintain comprehensive records. All these,
- will need adequate support such as release time, aide support and smaller classes that are unlikely to come forth in South Africa;
- There is no ‘content’, the vehicle for learning in the OBE curriculum; content is trivialised – similar outcomes (which are stated in broad terms) will use different content, even from widely different fields or Learning Areas – resulting in unmatched quality, depth and scope in knowledge. It also threatens to split and fragment knowledge, preventing integration; and
- Another major reason is that a number of interdependent innovations must strike the new educational system simultaneously: it requires trained and retrained teachers; radically new forms of assessment (such as performance assessment or competency based assessment); classroom organisation which facilitates monitoring and assessment; additional time for managing this complex process; constant monitoring and evaluation of the implementation process; retrained education managers or principals to secure implementation as required; parental support and involvement; new forms of learning resources (textbooks and other aides) and ways of incorporating all these into the teaching, learning and assessment process, especially in the situation where teachers co-learn through exchange and dialogue in the implementation process.

This means a total re-engineering of the education system and the process – which is unlikely given the present capacities in terms of financial, human and other resources.

This is also in agreement with De Clercq’s (1997) view, which indicates that there is a great need to drastically revise assessment policies and practices if OBE has to

be implemented in its intended form. This is not likely to happen in South Africa, where the end of year examinations are the benchmarks for progression – especially in the final year of schooling. There is also insufficient motivation for any alternative form(s) of assessment when the so-called existing OBE systems elsewhere still adopt the traditional systems of assessment and progression. A complete overhaul of the curriculum is required- which is unlikely to happen within the short timeframe.

Thus, according to Jansen (1998: 330) and De Clercq (1997: 140), OBE was ill-conceived technically - without adequate structures and mechanisms in place for its implementation; it was a political move by the government to win credibility with its electorate. The teachers who are the central players in this plan must have been directly involved – there must have been a shift towards more evolutionary policy planning. Conditions on the ground (level of implementation) must fit with the planning and intentions of the policy makers- a move to blend the ‘top-down’ with the ‘bottoms-up’ must be undertaken. There must be continuous interaction among all policy actors.

### 2.3 THE CONTEXT OF IMPLEMENTATION IN SCHOOLS

In the Schools Register of Needs Survey (SRNS), Motala (1997: 2-7) remarks that in its attempt to bring about the Culture of Learning (CoL) in schools, the Department of Education’s focus has been the establishment of frameworks and mechanisms for policy change whereas its attention to quality appears to have been only symbolic. However, there has been a re-launch of the Culture of Learning programme and the establishment of the Chief Directorate of Quality Assurance. According to the survey, the striking feature is of inequality – while privileged and reasonably well resourced schools do exist, the vast majority of children school under conditions of extreme neglect – under-resourced, without basic infrastructure or amenities and are taught by poorly trained teachers under extremely crowded conditions. To address the problem of equity, vast amount of resources are necessary - the 1997 budget (R.37 billion) has to increase by an average 3-4% over a 10-year period.

The Culture of Learning Programme (Motala 1997:3) aims at improving physical infrastructure at schools and developing the capacity for school governance. Adequate physical resources, learning facilities, equipment and sound accountable management are a precondition for quality education. The performance indicators for quality assurance use in South African context are equity, access, redress and quality. Policy researchers have now challenged the traditional use of Matriculation results only as an indicator of school performance. The quality assurance unit also has the task of creating a learning environment conducive to achievement, through among other things, improved assessment and examinations. Much has to be done in this regard by empowering education managers, principals and teachers by capacity building. School-based management has to improve in order to achieve this. According to this report, most teachers view these developments, including the implementation of C2005 in a positive light and welcome these initiatives and changes as envisioned in the policies.

## 2.4 CURRICULUM IMPLEMENTATION

### **2.4.1 Implementation of Curriculum 2005 (C2005)**

The immediate result of the launch of C2005 in 1997/1998 was “confusion, resistance and trepidation” (Vally & Spreen 1997: 13). According to Vally and Spreen (1997: 14), initially more than half of the schools in some provinces even ignored OBE. There was fear that it would still widen the gap between traditionally black (under-resourced) and white (privileged) schools; although the white schools believed they were already practicing outcomes-based education all along and labeled OBE as ‘watering down education’ and a ‘too simplistic in approach’ and ignored it. White teachers accumulated the resources and support materials. This proved De Clercq’s prediction (1997) that OBE is likely to benefit the privileged community rather than the disadvantaged.

Some of the serious problems experienced were as those predicted by De Clercq (1997) and Jansen (1998) and were elaborated earlier under 2.2.



Vally and Spreen (1998:13-16) also cite lack of teacher preparation, resources, backlogs in teacher qualifications, subject teacher shortages, lack of money (budgetary constraints), poor attendance in workshops and the preparatory sessions – which were often presented by inadequately trained staff as OBE implementation problems. They also note that most teachers did not know how to organise OBE assessment, doing continuous holistic assessment and organizing the school time to fit with all these demands – including planning and collaborating with other teachers to find and decide on teaching content, materials and the strategies (team-planning and team-teaching). Teachers are given greater responsibility under the new curriculum framework, to structure learning outcomes and create classroom environments that will support learning in order to meet these outcomes. Both pre-service (PRESET) and in-service training (INSET) that are relevant and timely, are required. The whole idea of cascading the training to local school staff also proved to be unrealistic and ill-conceived. Vally and Spreen (1998) along with others (Jansen 1998; De Clercq 1997) are of view that there must be institutional changes happening at the school level in terms of organizing the school day, management and the will and capacity to initiate, sustain and progress with change.

However, Vally and Spreen (1998:15-16) are optimistic that C2005 will provide new means to achieve equity and redress and if adequately funded, will provide opportunities to empower teachers to make important decisions affecting their students. They also believe that by emphasizing ‘skills’ through OBE, South African education system will be able to deliver to the global economy – a new brand of skilled work force – a human capital which is desperately needed to give the economy a much needed boost.

#### **2.4.2 Review of Curriculum 2005**

However, the report of the review committee (DoE 2000: 92-96), after three years of OBE implementation through C2005, has revealed that OBE implementation did not live up to its (political and social) expectations and has proved most of its critiques right.

The stand of the government is that C2005 will continue to be implemented, but in a revised form following the recommendations of the Review Committee – this has been labeled as the New National Revised Curriculum (also sometimes referred to as Curriculum 21 / C21). Teachers at schools are also not sure about the new format of the curriculum; they are following C2005 with its emphasis on OBE.

## 2.5 ASSESSMENT POLICY: C2005

The culmination of the Curriculum 2005 implementation was the implementation of the assessment policy which, for the purpose of practicality was issued as ‘Curriculum 2005 Assessment Guidelines’ to be implemented in 2002 for the award of the General Education and Training Qualification (GETC) at the end of the GET band (Grades R- 9 phase) of schooling.

### **2. 5.1 Curriculum 2005 Assessment Policy**

#### ***2.5.1.1 Assessment in Outcomes-Based Education***

The thrust in Curriculum 2005 and its assessment policy is demonstrated achievement by learners- what they know and can do or ‘outcomes’ as they are known. This means that the learning programme must clearly define the outcomes and the ways and means of assessment and the ways in which they will be used for reporting and progression. This must also indicate the provision of additional time and support for learners that need extra time and support for progression.

The policy also (NPDE 2000:3) aims to provide quality education to each and every learner by improving curriculum, teaching and assessment practices that are quality assured by putting in place mechanisms and structures (the quality assurance system) that monitor the organisation and management of schooling in general and assessment practices in particular. This is the function of the Education and Training Quality Assurance (ETQA) or General and Further Education and Training Quality Assurance (GENFETQA) body as it is now known.

According to the departmental document (NPDE 2000:4), assessment serves the following purposes: It

- determines whether the learning required for the achievement of the Specific Outcomes (SO s) is taking place and whether any difficulties are being experienced;
- reports to parents and other role-players and stakeholders on the levels of achievement during the learning process and builds a profile of the learner's achievement across the curriculum;
- provides information for the evaluation and review of learning programmes used in the classroom; and
- maximises learners' access to knowledge, skills, attitudes and values defined in the National curriculum policy.

The policy states that there must be different types of assessment, (formative, diagnostic, summative and evaluative) which must be used in an all-inclusive and integrated manner. Assessment must be both internal continuous assessment, which must be moderated externally as well as external assessment, which is designed, planned, administered and moderated by an examining body. This will be at the end of Grade 9- GET phase.

#### ***2.5.1.2 Assessment profile in Natural Sciences (NS)***

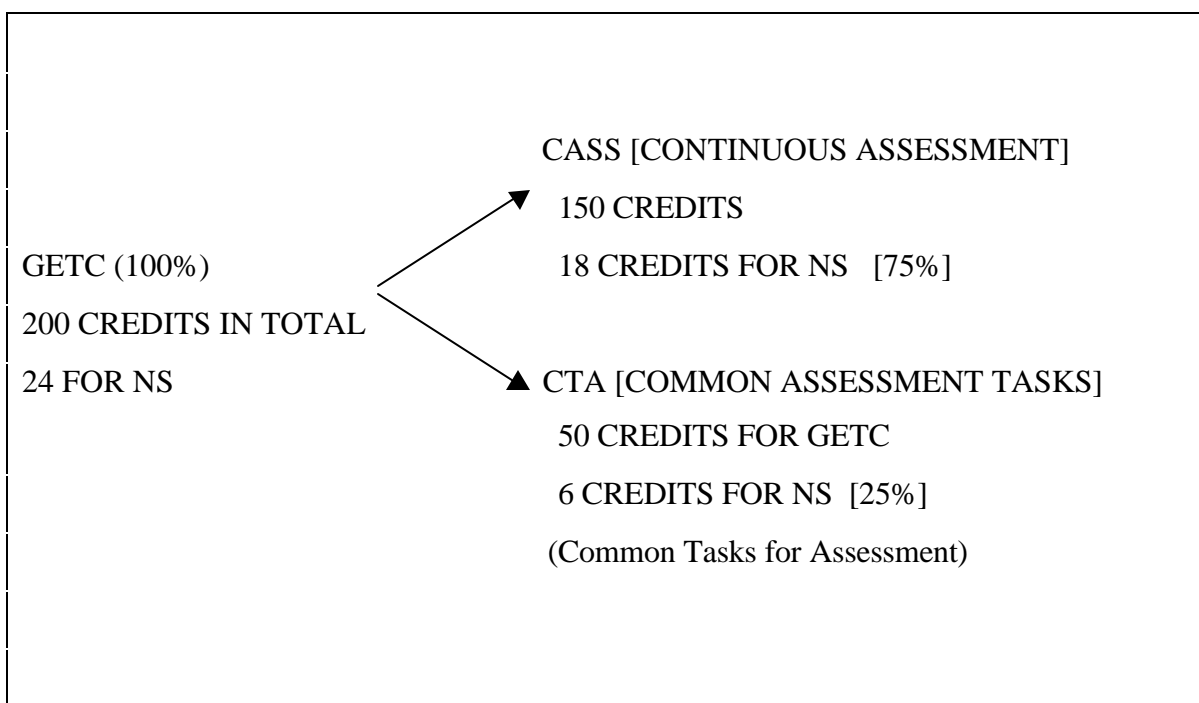
The curriculum document (NPDE 2001:1-5) and the assessment guidelines document (DoE: 2002b: 7) emphasise the need for the development of appropriate skills, knowledge and attitudes and an understanding of the principles and processes of natural sciences which involve investigating, exploring, doing science and being practically involved in discovering about science.

In the Outcomes-Based Curriculum 2005 (DoE 2002 b: 31), although all the Specific Outcomes in Natural Sciences are given credits, some of the Specific Outcomes that better reflect the nature of natural sciences are given more credits.

According to the guidelines document (DoE 2002 b 31), these must be given more weighting as they, among other things, address more important national agendas like HIV Aids, environmental education, equity, links with Further Education and Training (FET), Higher Education and Training (HET), and the world of work. The Specific Outcomes are clustered together into three groups. The groups are focused on scientific knowledge and concepts (6 credits), scientific processes (14 credits) and the role of science in society (4 credits).

The General Education and Training Certificate is awarded at the end of Grade 9 (DoE 2002 b: 30) to a learner who will obtain/ has obtained a minimum total of 120 credits out of a total of 200. The separate minimum for Natural Sciences (NS) is 10 and a maximum of 24. This is shown diagrammatically in Fig.1

Fig 1: ALLOCATION OF CREDITS IN THE **GET** BAND



The National Department of Education has adopted the following approach to Grade 9 assessment in 2002.

### ***2.5.1.3 The approach to assessment in 2002***

The Department (DoE, 2002 a: 3; DoE, 2002 b: 5; 13) has decided that for 2002, the following approach will be used for the assessment of Grade 9 learners:

- The use of school-based continuous assessment (CASS) to generate 75% of the year mark;
- The use of common tasks for assessment (CTA) for all Grade 9 learners, which will count for 25% of the total assessment, and serve as a moderating device;
- The use of approved requirements for the progression of learners; and
- The issuing of a common, national report card, for promotion within the school system or for access to other institutions.

The guidelines for the above assessment (which will be used as a policy document) are available at all schools with Curriculum 2005 (Grade 9) learners.

### ***2.5.1.4 The components of the assessment profile in Natural Sciences***

The documents (NPDE 2000: 6-7; DoE 2002 b: 32 -33) indicate that assessment at Grade 9 level will have two components, namely, continuous assessment (CASS) and common tasks for assessment (CTA). The learner portfolio must contain evidence of learner's performance in all the assessment tasks and a record of any expanded opportunities given to the learner. In the case of learners with special educational needs (LSEN), the adaptations to tasks and special concessions will also be included.

The educator's portfolio will describe the type of assessment selected, assessment tasks given to learners with their assessment grids, as well as any information relevant to the performance of the learners.

#### ***2.5.1.4 (a) Continuous assessment (CASS)***

Continuous assessment must be undertaken with a variety of suitable assessment tools and techniques. All educators should have a sound knowledge of what each technique offers. These include portfolio assessment, observation sheets, presentations and performances,

journals, tests and examinations, investigations/ project work and assignments. A balanced combination of these techniques should be employed to ascertain achievement of learners, as fairly and transparently as possible.

Following forms of assessment are compulsory in Natural Sciences (DoE 2002 b: 32-62):

- Investigations/ projects (at least 3 investigations two of which will be of 10 notional hours and the third of 3 notional hours, the project must be lengthy exercise in which the learners will use a variety of research skills and report the findings;
- Assignments- written problem solving exercises given after instruction with clear guidelines and time allocation (a minimum of three per month- at least five to be recorded);
- Tests and examinations – five; one must be practical and one could be an examination;
- Presentations and performances – oral/poster/model /display/talk/play etc.- two individual and one group; and
- Translation tasks – changing of information that is given in one form into another: e.g.: tables into graphs; pictures into diagrams; text into summary etc. - at least three must be assessed and recorded.

Continuous assessment must be school-based and teacher initiated and is done throughout the year. These assessment tasks must be collated in a portfolio and reveal the full extent of the learner's performance. Although this is used for formative assessment, the final product must also be assessed- evidence of which must also be kept in the portfolio.

#### *2.5.1.4 (b) Common tasks for assessment (CTA)*

The common tasks for assessment focus on the essential Specific Outcomes. It is externally set and internally administered and assessed. This is expected to serve as a

moderating tool for continuous assessment. Most of these tasks should have a practical investigative component that should be the focus of the common tasks for assessment in Natural Sciences. The practical component may be a group-work that investigates a scientific phenomenon/ process designed to create a variety of outcomes – skills, knowledge, attitudes and values in the Natural Sciences. The second component will be individual work – a controlled activity that assesses the extent to which learners have mastered the outcomes covered in the first component.

The Natural Sciences educator is responsible for organizing the information on the learners' performance for the continuous assessment tasks and common tasks for assessment.

### **2. 5.2 General guidelines for the different forms of assessment**

Assessment rubrics, which are tables used to link outcomes, marks, levels and level descriptors and grids are used to indicate levels of learner performance.

The guidelines document (DoE 2002 b: 33) specifies that each of the four themes- Life and Living, Energy and Change, Matter and Materials, Earth and Beyond – must be assigned at least 20% of the credits – the remaining 20% may be allocated for integrative tasks. Values and attitudes and tasks that address national, provincial and institutional priorities must be also included. There must be a provision for the assessment of learners with special education needs (LSEN). Individual contributions to group activities must also be evaluated.

### 2.5.3 (Table 1)

## COMPARISON OF ASSESSMENT POLICY AND THE ASSESSMENT GUIDELINES: GET GRADE R (RECEPTION) TO 9

(Policy document NPDE 2000 and Guidelines DoE 2002)

Assessment Policy	Assessment Policy Guidelines
Follows OBE assessment practices that are continuous, learner-centered, participative, democratic and transparent; involve learners actively using real-life contexts; be integrated throughout the teaching and learning process	Follows OBE assessment practices as indicated in the policy
Diversified modes of assessment – informal monitoring by observation, tests, oral questions and answers, conferencing, interview, self-reporting, peer assessment, portfolio, observation sheets, journals, tests, project-work and assignment.	Diversified modes of assessment - portfolio assessment as part of continuous assessment (CASS) tests, multiple choice, reason, essay, performance based; integration of knowledge, knowledge, skills and values; structured questions, assignments, case studies, projects, role-plays, simulations, oral questions, observations and self-report assessment.
Assess knowledge, reasoning, skills, product, affective- values and attitudes	Assess knowledge, reasoning, skills, product-affective- values and attitudes.
Learners’ portfolio must be carefully controlled - all the Natural Science themes and all the nine Specific Outcomes must be covered.	Learners’ portfolio must be carefully controlled - all the Natural Science themes and all the nine Specific Outcomes must be covered.
Teachers’ portfolio must be carefully controlled- all the Natural Sciences themes and all the Specific Outcomes must be covered.	Teachers’ portfolio: adequate coverage of all the Specific Outcomes, all the themes and forms of assessment to create multiple opportunities for learners to demonstrate the achievement of outcomes.
Reporting twice a year/ once every term to all the stakeholders	Reporting twice a year/ twice every term to all the stakeholders.



The two documents seem to indicate the same forms of assessment measures, recording and reporting procedures. Whereas the policy sets the essential principles, rules and regulations and basic components regarding the whole of assessment in the GET band, the guideline document serves to 'guide' teachers in their attempts to assess learners in the most essential ways in which assessment should be done, recorded, reported and used for promotion/ progress/ and learning decisions. What remains to be seen is the reality happening at the grassroots level.

#### **2.5.4 Recording and reporting**

The guidelines document (DoE 2002 b: 23-24) and the policy document (NPDE 2000: 7-8) stipulate the processes and procedures for reporting on learners' achievement on a regular basis. The documents also provide the samples of reporting instruments and student performance records (DoE 2002 b: 68,69,70). Details of the moderation procedure are also stated. Levels of moderation (school, cluster, district/region, provincial) are also indicated.

#### **2.5.5 Conclusion**

Thus, it is clear that this was a sudden move by the government to implement its plan for 'quality education for all' without paying much attention to the various aspects that needed to be addressed before launching on a policy change and implementation of this nature and dimension. This situation is exacerbated by the realities of the schools i.e., the grassroots level at which the policy has to be implemented in order to effect change. The picture is not a very optimistic one.

### **2.6 OBE ASSESSMENT: IMPLEMENTATION REVIEW**

#### **2.6.1 Introduction**

The implementation of OBE assessment in South Africa (as is in other more developed countries) is also riddled with many problems. Some of these are: the types of

assessment (tasks and instruments) used; teacher competency; methodological and logistical problems; recording and reporting; lack of resources; time; and questions of validity and reliability and so on.

### **2.6.2 Problems with the types of assessment**

Assessment in OBE is formative (namely, to inform educators and learners about a learner's progress in order to improve learning) and summative (Nakabugo & Sieborger 1999: 288-294). Curriculum 2005 requires that continuous assessment be guided by the principle of criterion referencing, i.e., learner's performance is assessed against set criteria.

Rault-Smith (2001: 4-10) points out that since educators have not been trained to make decisions on learner progress and promotion based on descriptive information they gather by using various assessment activities like projects, performance tasks, oral presentations, authentic /alternative assessment etc, they are reluctant to use them in promotion decisions.

### **2.6.3 Educator competency and the questions of validity and reliability**

According to Stiggins (1995: 11-19) and Rault-Smith (2001: 4-10), specialists in OBE assessment tasks, are difficult to find and educators are wary of using techniques other than standardized tests, examinations etc., for assessment. Although educationally they appear to be more reflective of the learning of children and the needs of the society, there are also questions of validity and reliability and a number of other issues- as have been revealed through research in different countries and settings.

Therefore, Rault-Smith (2001: 18) contends that the above forms of assessment and activities for assessment are problematic in planning and implementation. This view supports the analysis by Lissitz and Schafer (1993: 3-5) who review a number of policy driven assessment practices and have observed that the data provided through these practices are often questionable in their quality with regards to the norms applicable; they also point out that in policy driven assessment, the criteria used to evaluate student

performances are difficult to define. Other aspects according to the authors (Lissitz & Schafer 1993: 3-5) include the technical difficulties associated with authentic assessment and lack of teacher competency in several aspects of assessment including authentic assessment and performance assessment.

Portfolio assessment (Shepard 1991: 21); performance assessment (Brand 1992: 35); alternative assessment/ authentic assessment (Worthen 1993: 444-454; Maeroff 1991: 273-281) etc., are problematic for educators and learners alike. Shepard (1991: 21) remarks that educators became preoccupied with building portfolios when criteria for portfolio assessment were made known. Teachers ignored their professional teaching roles and developed criteria-specific portfolios to meet requirements, which led to the loss of the validity and reliability of the assessment process itself. While Brandt (1992: 36) reports that teachers usually have poor understanding and skills necessary to do performance assessment - especially in high stakes situations where promotion decisions have to be made on skills like high-order thinking and problem-solving and other complex learning capabilities, Maeroff (1991:274) cites examples where teachers coach learners for high performance, knowing what the tasks will be and how they will be assessed. This is what could happen with the common tasks for assessment (CTA) - the learners could be coached beforehand, who could repeat the same and give the expected answers. In authentic or performance assessment (Worthen 1993: 444-454), teachers are expected to test higher order skills like analysis, synthesis, oral expression, complex problem-solving etc., which provide opportunities for assessing learners in the performance of important tasks. But it is very doubtful how fairly teachers will do this assessment.

#### **2.6.4 Lack of resources and constraints of time and logistical problems**

Resources – financial, educational and material, are often scarce to find and are not budgeted for at the school or higher level and if allotted, are often ill timed.

Both Brandt (1992: 273-281) and Maeroff (1991: 35-37) observe that it is difficult for local educators without the financial resources, the technical means and the intellectual milieu to invent performance assessment with the necessary power and credibility. The process

becomes much time-consuming, cumbersome and is also fraught with complications and difficulties (for example – the integration of Learning Areas). It is easier to set outcomes, but difficult to set criteria and establish performance levels.

Worthen (1993: 450-452) also points out that while most test scores can be interpreted easily, it will be quite difficult to deal with summaries of student performance that are derived from portfolios or anecdotal records. Thus, it is difficult to use them to report learning outcomes for the entire class, school districts, states and so on.

Another problem according to Worthen (1993: 450-452) is the assessment of performance by sampling and the moderation exercise. The moderation at the cluster or district or provincial levels is quite unreliable. Furthermore, it is a very costly exercise that tends to over-promise (mostly by using a rich and defensible array of learner outcomes – out of which only a few are used in the assessment tasks) and therefore under-delivers.

Smith, Heinecke and Noble (1999: 157-191) report that teachers encounter a lot of problems in Outcomes-Based Assessment (OBA). These include purchase of materials for testing, the wording of questions, insufficient time-limits, inadequately prepared scores, vague scoring rubrics and lack of or inadequacy of training. This supports the view of Stiggins (1995: 11-19) who suggests that for instruction and assessment practices to improve in quality, educator professional development in a total environment that demands and supports quality assessment is crucial. This environment should include a district statement of assessment policy, teacher/ administrator partnerships, an integrated professional development plan and visible allocation of resources to support quality assessment.

Case studies in the U.K and Australia on Outcomes-Based Assessment point to problematic aspects like the difficulties of combining formative assessment with summative reporting, the differing information requirements of audiences, concerns about the validity and reliability of outcome statements and the lack of appropriate resources to support implementation (Brindley 1998: 45-85).

Yet another problem is the question of allowing learners to progress at own pace. Rault-Smith (2001:5) observes that schools can hardly make any provision for a learner who follows three months behind a class or four months ahead of a class. To what extent this learner-paced promotion or progression is practicable in South Africa will be a matter of wild guess or wait and see.

Smith *et al.* (1999: 157-191) observe that in the state of Arizona, there has not been an open debate on assessment policy and was implemented 'top-down'. They argue that, the shape of the assessment policy and policy change had more to do with political spectacle and the struggle for power, position, resources and the control over resources than with empirical or rational analysis, moral imperative, or democratic debate. Jansen (1998) and De Clercq (1997) have also indicated that this is what has happened with the government's policy of OBE implementation in South Africa.

## **2.6. 5 Conclusion**

The literature survey has indicated that assessment in Outcomes-Based Education is not a simple and straightforward issue. Problems range from lack of time, resources - human and material, teacher competency, technical and logistical problems and a number of other issues like policy development, capacity building, creating the environment and the right form of implementation. The realities of the situation in South Africa from the available literature indicate that the policy on curriculum reform was implemented without proper planning and doing the necessary groundwork. Thus as Jansen (1998) says, the implementation of Curriculum 2005 may well have to do more with power and politics than with educational and pedagogical imperatives.

## CHAPTER 3

### RESEARCH DESIGN

#### 3.1 INTRODUCTION

Qualitative research often encompasses an emergent design (McMillan & Schumacher, 1993: 374 -375). As the data collection involves mostly interviews and document analyses, the type of data collected and information received will mostly decide what needs to be done for further data collection. This investigation used two main methods: a literature review and an empirical investigation.

The literature reviewed comprised of policy and implementation practices with particular reference to assessment in Curriculum 2005 and Outcomes-Based Education in South Africa and elsewhere.

The empirical investigation consisted of the implementation of the Assessment Policy Guidelines in five secondary schools in the Polokwane circuit (formerly an educational district) in the Capricorn district (formerly the Central Region) of the Limpopo province mainly through document analyses and interviews with the educators who were the implementers of the policy.

A qualitative approach was used as the implementation is context specific and adopting a qualitative approach enabled the researcher to capture the nuances of the situation, as the schools in the study were different from each other in many respects.

The schools' as well as the educators' names have been changed to comply with the requirements of anonymity as per research ethics (McMillan & Schumacher, 1993: 399).

## 3.2 SAMPLING, ENTRY TO SITE AND RESEARCHER ROLE

### 3.2.1 Criteria for sample selection

The sample in the study consisted of five schools and the Grade nine (9) Natural Sciences educators (n = 6) in them as these educators were the policy implementers of the Senior Phase (Grade 9) Assessment Policy of 2002.

The schools were selected on the basis of the following criteria:

- Type/ variety of schools- representing a section of the types of schools in the province: These were:
  - two public ‘disadvantaged’ schools that formerly were administered by the former Lebowa Department of Education. These are named in the study as Bokmo (school A) and Masubu (school B) respectively;
  - one former Indian school that was administered by the House of Delegates is named as Taxo (school C);
  - one public school formerly classified as Model ‘C’ and was administered by the Transvaal Department of Education is named as Captri (school D); and
  - one relatively new private (independent) school named as Myng (school E).

(Pseudo names are used to disguise the names of the schools and the identity of the participants.)

- Location in the same education area (Circuit) of the Capricorn Educational District of the Limpopo province. Polokwane circuit, thus constitutes the area of the study where the schools are located. This ensured that the departmental notices, information and other official documents reach all the schools more or less at the same time so that there is a fair amount of uniformity as far as communication with the schools is concerned.
- The different identities and uniqueness of each school  
The factors that identify these schools as having different identities are their

location, physical infrastructure and resources, staff and learner composition and other aspects of school structure, culture and governance.

- Access to the researcher's workstation.

The characteristics of the schools are indicated in the table 3.2.1

**Table 3.2.1 Characteristics of participating schools**

<b>School</b>	<b>Type of School</b>	<b>Learners</b>	<b>Location</b>	<b>Economic Status</b>	<b>School fee per annum</b>	<b>Home language</b>
A- Bokmo	Former Model B	711	Township	Middle to Lower	R 350	Sepedi
B- Masubu	Former Model B	657	Township	Middle to Lower	R 350	Sepedi
C- Taxo	Former Indian (House of Delegates)	980	Suburb	Middle	R 1000	Sepedi English and other (minor)
D- Captri	Former Model C	850	Suburb	Middle	R 4920	Sepedi English Afrikaans and other (minor)
E- Myng	Private - (Independent)	273	Neighbourhood	Middle	R 6600	Sepedi English and other (minor)



### **3.2.2 Contextualisation of the schools**

The five schools chosen in the study basically formed a profile of the common secondary schools in the province and also constituted those that were convenient for the researcher for the study. Thus judgemental and convenience sampling is implied.

Schools A (Bokmo) and B (Masubu) are located in a main township near Polokwane and may be qualified as ‘under-resourced’ and/ ‘disadvantaged.’ English is the medium of instruction in these schools and is taught as a second language subject.

The third school ‘C’ (Taxo) is located in the predominantly Indian residential area of Polokwane.

The fourth school ‘D’ (Captri) is a former model ‘C’ school and is located in a predominantly white (middleclass) suburb of Polokwane.

The fifth school ‘E’ (Myng) is a relatively new independent (private) school located just outside Polokwane, mostly catering to children from black middle-income families.

All the schools except the independent school are now public schools under the Limpopo Provincial Educational Department and follow the Department of Education syllabi and curricula. The private school also follows the same curricula and administratively falls under the Limpopo province Department of Education. Schools C, D and E also are English medium schools where English is the first language.

The learner population in all these schools is mostly composed of black indigenous population group(s). There are a few learners from the Indian and coloured population in school C, and white, Asian and coloured population groups in School D in the specific Grade. School E has black learners like schools A and B.

The educator (staff) composition in the schools A and B are totally black, whereas those in school C are mostly Indian, one black and one white. In school D, it is mostly white,

one coloured and one black and in school E the educators are mostly Indian, coloured with one or two of the white and black population groups.

The schools reflect a fair profile of the types of schools in the province - although by no means represent them in their relative numbers- since only two black public schools are taken in the study. These five schools in the study will provide a glimpse of the understanding of the assessment policy guidelines and their implementation as is happening in at least a few of the schools at the circuit, district and provincial levels.

### **3.2.3 Choice of Learning Area/ learning programme**

As the researcher is a qualified teacher trainer with several years of experience in teaching natural science (biology) at the high school, general science at secondary and biology and subject methodology at college of education levels, the Learning Area in which the Curriculum 2005 assessment policy implementation to be examined was decided to be Natural Sciences (NS). Senior Phase final year (Grade 9) was chosen since Grade 9 is the final year of the GET phase, the assessment of which is externally moderated.

### **3.2.4 Selection of participants**

All the Grade 9 Natural Science educators in the schools were included as participants in the study. They were selected on the basis of the information provided by the schools in their capacity as Grade 9 Natural Science educators who were responsible for implementing the policy at the local/ school level. These policy implementers had the responsibility to implement Curriculum 2005 in Grade 9 through teaching - enabling learners to learn, assess them in whatever way (OBE assessment), monitor their progress and place them at their respective levels at the end of the academic year by following the Assessment Policy and Assessment Guidelines.

They were altogether six educators teaching Natural Science in these five schools: one educator per school; school 'B' had two educators in the same Grade which made a total of six (n = 6).

The overall picture of the participating educators is indicated in the table 3.2.4

**TABLE 3.2.4 Characteristics of participating educators**

School	Educators	Educator qualification	Educator Teaching experience	No. of NS learners in Grade 9	No. of contact (teaching) time in a weekly/ cycle
A Bokmo	Mabi John	B.A + STD	> 10 yrs	234	5 hrs/8 days
B Masubu	Retse Edward	B.A + JSTC;	>10 yrs	180	5hrs/8 day
	Mapo Daniel	STD	>5 yrs	134	
C Taxo	Many Mary	B.A (Sc) + PGC	> 10 yrs	114	4hrs/5day
D Captri	Bucks Lily	B. Sc+ Dip Ed	< 5 yrs	184	3 hrs/6day
E Myng	Osted Adam	B.Sc (4 yr)	<5 yrs	29	4hrs/5day

### 3.2.5 Entry to site

The researcher contacted the principals of the schools in the study in early August 2002 with a permission letter from the provincial (Limpopo) Department of Education and a personal letter. The letter sought from the principals of the schools, permission for interviewing the educators and collecting documents pertaining to Grade 9 Natural Science assessment in the form of learner and educator portfolios and any other relevant

material. All the principals voluntarily granted the permission – orally - and the educators were also introduced personally to the researcher so that at the time of data collection, the researcher could approach the educators directly.

All educators offered full support and co-operation. From that time, the meeting with the researcher and the educators (herein afterwards referred to as the participants/ educator participants) was arranged more informally for the purpose of data collection and recording.

### **3.2.6 Researcher role**

As in other qualitative studies of this nature (McMillan & Schumacher 1993: 386), the researcher in this study also assumes the role of ‘interviewer’ and has only a professional relationship with the participants. The researcher periodically visits the sites on official business.

## **3.3 DATA COLLECTION**

Data collection mainly involved the analyses of documents and interviews

### **3.3.1 Analyses of documents**

Field documents that were related to the study were the following:

- (i) the learner portfolio; and
- (ii) the educator portfolio,

as these documents contain most (if not all) the materials used for assessment.

These contained the assessment tools (instruments), the evidences collected from the learners, the reporting and other supporting documents in the continuous assessment (CASS) and the common tasks for assessment (CTA) in Grade 9 in Natural Sciences. The educator portfolio also indicated the final score or report for the purpose of promotion decision.

Any other documents/materials that were deemed necessary were also looked into

(for example, project-work and presentation work that was done in groups or could not be placed in the portfolio). This was based on the information gathered from the participants during the course of the interview.

#### ***3.3.1.1 Instruments for the analyses of documents***

These were self-developed verification tables (*'matrices' for the appraisal of the assessment tasks for each school and a 'cumulative matrix'*) to check whether the basic principles and assessment tasks as outlined in the Assessment Policy Guidelines for Grade 9 Natural Sciences have been complied with. Checklist instruments for Specific Outcomes and tasks for learners as well as learner and educator portfolio checklists (Appendices, DX, EX and FX) were also used. The validity of this was also ascertained by using the match between the guideline document and the evidences that must be found in the portfolio together with expert opinion as referred below in 3.3.3 and in 3.6.

#### ***3.3.1.2 Checklist/ questionnaire***

Personal checklist/ questionnaire (Appendix AX) was included for the participants for their biographical data and information concerning their school, classes, and teaching load etc.

#### ***3.3.1.3 Interviews***

The interviews were open-ended and used a semi-structured (Appendix BX, CX) interview guide to maintain direction for focusing the theme of the interview on the Assessment Policy and implementation at the school level.

This, for example, is evident in the information needed on the types of activities or tasks done, percentage of allocation to the four different themes and the Integration theme (20% each), type of questions in the tests, inclusion of the (nine) different Specific Outcomes (S.O s) in the three categories (clusters), which are *scientific process, scientific knowledge and science in (and) society*. Other matters included the processes of recording, reporting

and using the assessment results in progression/ promotion decisions, aspects of assessment of values and attitudes, national and local priority issues and assessment of learners with special education needs (LSEN).

Two or more interviews were arranged with each of the participants. Questions in these interviews were open-ended. Some of the questions involved matters of Curriculum 2005 policy information, assessment policy, teaching and actual assessment and record-keeping with a view to understanding their background, information concerning the assessment policy and to what extent they were able to implement them. The participants also expressed their own views and experiences regarding the implementation of the Assessment Policy Guidelines. The interview was guided also by the 'interview guide' earlier referred to.

More than one interview with the participants was necessary to ensure the full collection of data and to allow for the rechecking of the information with the participants to ensure the reliability of the information.

The validity of the interview guide was ensured by finding the match of the information sought with that contained in the policy document and by verification with the researcher's supervisor. There was also corroboration of the information sought by discussion with colleagues, curriculum advisors who conducted workshops in C2005 and assessment. Engaging in pre-data collection discussion with the participants also helped to fine-tune the matters addressed in the interview guide and the interviews.

### **3.3.2 Didactic analysis of the assessment instruments and strategies**

Didactic analysis of the forms of assessment and the items in the assessment instruments and the various assessment tasks are beyond the scope of the study. However, attempts were made to gather information from the participants themselves about the level, standard and the over-all quality of assessment as they understood it from the policy and guidelines and to what extent they were able to implement them in Grade 9 Natural Sciences assessment. This is a methodological limitation of the study.

### 3.3.3 Data collection

Data collection from the five different schools took place between the end of October 2002 and February 2003. This period was specifically chosen because this was the time set for the final assessment of continuous assessment tasks (CASS), common tasks for assessment (CTA) and the promotion of learners. Therefore the documents and results were available and easily accessible from the schools. Two interviews took place before the schools closed in December 2002 and the third one immediately after reopening in January 2003. Educator and learner portfolios were also collected for the purpose of document analysis.

Following evidences were sought from the learner and educator portfolios and interviews:

- (1) Whether all the knowledge, skills attitudes and values that are listed in the assessment policy relating to the nine Specific Outcomes and Critical cross-field Outcomes have been paid attention to. This was done by using the same grouping of the outcomes as in the Assessment Guidelines document (DoE 2002 b: 31- Table 2.1 on page 31) and trying to find the match with the forms,/ methods and /items of assessment;
- (2) Whether adequate number of tasks with relevant allocation of marks / credits have been given for the continuous assessment of learners. This was found out by establishing the match between the departmental policy, the educator and learner portfolio;
- (3) Diversification of types and modes of assessment (five) as stipulated in the policy- such as models, practical demonstrations presentations etc.,- this was established by checking on the variety of tasks and modes of assessment used by the educators, the learner evidences, the records kept and reporting done on them;
- (4) Whether the purpose of the assessment and the criteria have been made explicit before the assessment and ongoing constructive feedback from educators/ peers/ parents/ self have been included- this was found out through the interviews and verification with the portfolios;

- (5) Whether progression was allowed on the basis of the assessment results and whether the results were used to identify areas where learners needed support, remedial intervention or whether opportunity for accelerated growth was also provided for higher achievers. This was also evident from the interviews as well as from the analysis of documents;
- (6) Other aspects like authenticity, transparency of the process, contexts etc. were also established by interviews with the educators; and
- (7) Whether a final assessment of each learner's performance which was used to determine the learner's credit /mark allocation for the GETC qualification in Natural Sciences was also included (DoE b 2002: 29). The interviews and the documents cited also revealed this.

The tools used for the above data collection indicate whether the broad assessment principles and guidelines have been followed or not.

The focus will be to examine to what extent these practices and material evidences at the schools match with the assessment policy and the guidelines prescribed.

Questionnaires and interviews also generated both quantitative and qualitative data that were tabulated, organised and from which deductions were made.

### 3.4 DATA ANALYSIS STRATEGIES

The main task in data analysis is to make sense of the amount of data collected by reducing the volume of information, identifying significant patterns and constructing a framework for communicating the essence of what the data reveals (Best & Khan 1993:203). The first step in this endeavour will involve data organisation. This process involves grouping of information, coding information of similar kind and genre and describing the information by inductive reasoning.

After the major topics and subtopics that emerge from the interviews and document analyses have been identified, for example, policy information, assessment information, discussion and decisions on implementation at the local (school) level, training



received, support received, types of assessments done for continuous assessment, assessment for promotion decision/ progression, allocation of percentage of credits according to themes in teaching and assessment, resources used, levels of standardisation at local level etc. , the data collected were arranged and categorised according to the sub-topics and topics. From these, categories and patterns that evolved were identified, labelled and interpreted (McMillan & Schumacher 1993: 479-500).

Trustworthiness of the data was also established by informer rechecking and comparing the data from the different sources – for example learner and educator portfolios and also by checking for negative evidence (McMillan & Schumacher 1993: 498). This was followed by the step of data interpretation- explanation of the why and how of the findings. This enabled the researcher to attach significance to particular results and put patterns into an analytical framework (Best & Khan 1993: 204).

### 3. 5 VALIDITY AND RELIABILITY

The issues of validity and reliability of the data collection instruments were discussed under 3.3 in data collection. The research instruments used were validated and reliability tested by using expert opinion and pilot-testing with the participants themselves (McMillan & Schumacher 1993: 385-395).

Reliability was addressed by informer rechecking and gleaning the same information through consensus with other informants as well as by using triangulating techniques (Sanders 1992: 34).

### 3.6 LIMITATIONS OF THE RESEARCH

The scope of the study is limited to only finding out to what extent the particular schools in the study have been able to comply with the assessment policy and the guidelines set for Natural Sciences at the Grade 9 level in 2002 from the point of view of the educators and the situation prevailing at their schools. To this extent, policy is interpreted in very rudimentary terms- following the essentials of the assessment guidelines document.

Methodological limitations in this study include its limited scope involving aspects of pedagogy and didactic compliance of the mode and forms of assessment and the assessment instruments used. These are also excluded, as they are beyond the scope of the study.

### 3.7 CONCLUSION

The research design and the data collection strategies explained in this chapter have attempted to outline the procedure used in this research. The questions of the scope and depth of data collection and the limitations of the study are addressed under the items of validity, reliability and the limitations of the study. Other matters of data collection and analysis that may arise are addressed in the chapter dealing with findings and discussion (as they arise) as in any qualitative research.

## CHAPTER 4

### FINDINGS AND DISCUSSION

#### 4.1 INTRODUCTION

This chapter focuses on the findings of the study and analyses these findings in some detail, based on the data gathered in chapter 2.

First the observations made at each of the sites will be unfolded along with the categorization of these observations by using the analytical tools/ instruments. From this will follow the grouping of data collected from the different venues. From these groupings, a pattern may be established which will be discussed in detail. This will enable the formulation of the conclusions.

#### 4.2 FINDINGS

##### **4.2.1 Site 1: school A: Bokmo Secondary**

This school is located in a township near Polokwane and is considered disadvantaged. The school is over-crowded but still manages to produce good results.

##### ***4.2.1.1 Analyses of documents***

###### *(a) Learner portfolio*

The educator participant Mr. John Mabi supplied only two learner portfolios in which 10 of the learners group-work activities were also kept. This helped to get an understanding of the assessment activities at the school. Both portfolios were plastic document-filing display files in the pockets of which the learners kept their work. The files were neatly compiled and bore the name of the learner, the Grade and the Learning

Area (Natural Sciences). It did not contain the summary sheet the sample front cover with an index, showing the details as indicated in the Policy Guidelines Appendix A. The materials in the portfolios were not organised as (investigations or projects, assignments, tests/examinations, presentations and performances, translation tasks) required in the guideline document.

Examining the nature of the work and how they were marked and by confirmation with the participant, the researcher managed to group them. This is shown in table 4.2.1 along with the other groupings. The investigations and projects were also counted as presentations as they were done as group work and were in the form of project presentations. The educator participant confirmed this in the interview. The participant also showed me a project presentation – a paper mash model of a power generating station done as a group work for which 10 marks were awarded. But there was no evidence of this in the learner's portfolio. The number of investigations, assignments and presentations also showed a deficit (table 4.2.1); but the number of tests was more than five. The participant informed me that due to the inconsistency in the information they received from the Department (Education); not all assignments and other pieces of work by the learners were included in the portfolio. He informed the researcher that these activities were more than the recorded ones in the files.

Going through the topics taught in the year and also consulting the Grade 9 learner's book the educator used in teaching (*Science for All – Grade 9 learner's book*), it is evident that most of the topics (approximately 70%) belonged to the Life and Living theme and the rest was shared by the other themes. Topics under the theme Earth and Beyond were not included. This was because of the general agreement at the school to group it under a different Phase Organiser- in Human and Social Sciences. This was also revealed in the interview.

Looking at the Specific Outcomes clustered under 'processes', 'knowledge' and 'science in/and society', it was evident that the various assessment forms and instruments used attempted to address these (e.g., project and model presentations done in group-work), although most questions in the tests were based on 'knowledge' and basic 'understanding'. Problem solving skills component and other higher order skills

were not clearly discernable. Outcomes related to 'science in/and society' were evident in activities related to diseases, sports and pollution and generation of power.

All the activities were marked (either by involving learners themselves or by the teacher); but the criteria / assessment grids/ rubrics/ marking memo were not indicated. Conversation with the participant revealed that some essential criteria were given to the learners for doing the work (for example in the investigations and projects) and the correct answers formed the marking memo for the tests and examinations (which is kept by the teacher and not given to the learners before the administration of the test/ examination).

The marks of the assessment tasks given were used following the principle of 75%: 25% for the calculation of continuous assessment {year mark (CASS) and the final examination referred to as common tasks for assessment (CTA)} as required by the policy. The CASS mark was not constituted according to the percentage allocation (investigations and projects 40%; assignments 15%; tests & exams 15%; presentation and performances 15%; translation tasks 15%) as indicated in the policy guidelines). The participant also informed me that this was not possible because the information concerning these reached the teachers very late and the teachers were concentrating more on tests and examinations than the other items.

*(b) Educator portfolio*

The educator participant informed me that his portfolio was missing/ misplaced towards the end of the last term of 2002 and that all he could get was the continuous assessment (CASS) marks that he compiled and the final examination mark. The common tasks for assessment (CTA) were abandoned as the materials for this came very late and the part A could not be done properly, with the result that most learners failed part B. Because of this, the school administered its own final Grade 9 Natural Sciences examination by including some similar questions from the common tasks for assessment. The final examination constituted 25%.

The marks for the above were given to me as a copy of a computer printout. This

contained a list of 234 learners who wrote the examination. The final results were: pass - 226; fail - 8; highest percentage was 67; lowest was 17% and the Grade average was 48%.

No other data could be discerned from the educator portfolio. The educator used the book *Science for All Grade 9 Learner's Book* for teaching most of the topics. The book entitled *Teacher's Notes* was also not available.

There were no learners with special education needs (LSEN), according to the participant, the school only catered for 'normal' learners.

#### ***4.2.1.2 Educator (participant) interview***

The interviews with the participant, Mr. John Mabi, took place on five occasions (7 and 21 November and 5 December 2002 and on 17 and 24 January 2003) – all at his school. The lengthy semi-structured and open-ended interview (on 5 December 2002) was tape-recorded and the others were brief meetings to clarify points and issues during which brief notes were made. The number of interviews held helped to clarify and confirm the details of the number and type of assessment tasks that were given along with the participant's own impressions and opinions and ways for better organisation and management of the teaching and assessment processes. The main topics and issues that covered the interview are discussed under different headings.

##### **(a) Policy awareness**

The educator participant received the documents *Curriculum 2005 in a Nutshell* and *Assessment Policy GET Band* in late 2001, three years after the implementation of C2005 in schools in Grade 6 in 1998. He received the document *Curriculum 2005 Assessment Guidelines* later in March/April 2002. He informed me that due to lack of coordination and poor training, although he went through the documents, he was not confident in the ways and means of implementing OBE as it was intended. For example he was not confident in the OBE teaching methods and the development and administration of assessment tasks, creation of assessment criteria, performance indicators,

assessment grids and rubrics and making the whole process transparent to learners which means informing the learners about the outcomes and criteria beforehand.

(b) Assessment tasks

When questioned about the discrepancy in the number and the difficulty in categorising the type of tasks into assignments, investigations, projects, translation tasks, etc., from the portfolios of learners, the participant informed me that there was much confusion about the type and tasks of assessment during the course of the year. The curriculum advisors informed them in meetings and information conveyed to school that the assessment will be traditional and after some time they came up with the Assessment Guidelines document and said there must be the different kinds of assessment as in the guidelines and there will be a final continuous assessment mark and common tasks for assessment for the end of the Senior Phase promotion decision. This caused certain tasks in the portfolio to be less in number than that was required according to the guidelines. The participant also informed me that the curriculum advisors themselves were not much familiar with projects, different investigations, performances and presentations and the like. He said... “So we did what we thought were these tasks or grouped the already given tasks and put them to suit the required types”. For this reason, he did not include any index or table of contents in the educator or learner portfolios.

He said that he gave the following forms of assessment:

Assignments - short ones were more than 5; tests-3 of 50 marks each; and end-of-term examinations- 2; tests and examinations were given 60% credit whereas all the others were given 10% each.

The final assessment involved an examination set at school. The national common tasks for assessment (CTA activities A and B) could not be implemented properly because it came very late and when the school tried it, the most of the learners failed miserably. He said “so I took some activities/ questions from the CTA and mixed them

with my own questions and made a final exam”. This final exam was given 25% credit as required by the policy and all the year’s continuous assessment (CASS) was given 75%. The promotion decision was based on getting 35% aggregate in the two.

Full evidence on this could not be checked as the educator’s portfolio was not available for crosschecking. However the mark-list given to me indicated the working out according to the above statement.

(c) Assessment of outcomes

It was also problematic to identify the outcomes or the clustering of Specific Outcomes (as indicated in the Guidelines document) in the tasks or the amount of credit value given to the different themes (which are supposed to be 20% each). The participant informed me that this was because as in traditional teaching, most activities were ‘knowledge’ or information based. The extent of creativity was limited because of their own limited competency with these kinds of outcomes and ability to assess them. Other problems like the lack of resources, inadequacy of time and large number of learners (more than 60 per class with a total of over 230 in Grade 9 alone) also affected teaching and learning. In spite of this, the evidence showed that there were a variety of tasks done both individually and in groups.

The formative and remedial use of the assessment was mostly by discussion of the answers of the tests and examinations in the class and there was no special arrangement for learners with special education needs (LSEN) as these special needs children do not attend a normal school like theirs (Bokmo). Formative use of assessment was basically through remedial work (and or using them for the calculation of the final mark). About group work and other assessment tasks, this was what the participant had to say:

“...mm My brother .. the problem is .. I am teaching 232 learners in four classes.....Do you think I will be successful ?.... It is not easy to give individual attention to learners.. I give class-work, homework, projects, assignment.. I give group assignment... the group assignment is not fair.. because other children can hide.. and the work done is not good or unfair in



every respects...”. “..With Specific Outcomes we tried.. but that was difficult.. mostly ‘concepts and knowledge’, not much of ‘process skills’ and not any ‘social or ethical issues”.

(d) Allocation of (%) credits for themes

About the themes, the participant informed me that they (teachers) were guided by the different Phase Organisers in the Grades and that they followed -*Science for All Grade 9 Learner’s Book* (the *Teacher’s notes* book was not available at the school). This was why the topics were mostly from Life and Living with a little from Matter and Materials and Energy and Change. They paid little attention to the allocation of percentage for the themes. This was because of a lack of agreed upon curriculum and book(s) to follow and poor organisation of the curriculum and standards of delivery at schools.

(e) General comments by the participant

The participant had the following to say about OBE C2005 in general about the way forward:

“My experience is that this thing... (OBE / C2005) can work with proper planning...they must take teachers to specific workshops, the former lecturer must be trained to train teachers... we must sit down as block of schools and plan for next year to ensure standards, and develop material and support teachers in the class”

According to the participant, the policy has not been properly planned and implemented. He had this to say:

“It must be properly planned and budgeted for. Implementation is the problem.. the training .. one day, two days .. sometimes after school, this is not proper. ....Marking (assessment) is a frustration....we have not been properly trained.. there must be proper workshops ..six months training and

appoint temporary teachers... I am telling you these kids have not gained anything, we are going to have a problem in the transition to Grade 10 in the next term.. the children do not know many things, they are confused, there is a lot of confusion... Telling the subject advisors your frustration and confusion is pointless. .they are also tight.. they say ....the implementation is mandatory... they themselves are also frustrated and confused. . How do you implement OBE in a class of sixty.. Ah..ah..va... in a class of sixty how do you implement OBE?”..

#### ***4.2.1.3 Summary***

At this school the educator could not produce his own portfolio (as this was lost) and this somehow hampered the triangulation of data (verification procedure). The evidences collected from learners’ portfolios and the participant interview indicate that a fair amount of work and attempts at organising the material for teaching, learning and assessment purposes were done. Conflicting information and lack of coordination from within the schools and from the outside by way of subject and curriculum advise, lack of proper training through workshops and classroom support together with the large classes and large number of learners in the class all exacerbate the problems of teaching and assessment. The quality and quantity of work done by the teacher at this school appear to have suffered because of problems like lack of stipulated curricula, proper coordination and classroom support and a host of other reasons. This was also confirmed in the interview with other participants (in other schools).

TABLE 4.2.1

SCHOOL A BOKMO

## **4.2.2 Site 2: school B: Masubu Secondary**

This school also is similar to school A, ('disadvantaged' and also over-crowded in the lower grade classes) and is also located in the township where Bokmo is also located, but does not rank academically as high as school A. The general impression about this school is not very positive. With the appointment of a new principal in 2001, things are taking a positive turn. There were two educators Mr. Edward Retse and Mr. Daniel Mapo, teaching in Grade 9, which had more than 300 learners in 2002.

### ***4.2.2.1 Analyses of documents***

#### *(a) Learner portfolio*

Out of the two educators, Mr. Edward Retse, (the head of department of NS) referred to by the other participant as *the dominant one* was responsible for three classes and the junior one was responsible for two classes. The researcher collected five learner portfolios each from the two participants.

Observation of the learner's portfolio of the participant with two classes revealed the following:

Each learner's portfolio consisted of a standard 80-page A4 exercise book.

Each book had the name of the learner, the Grade and the Learning Area written on it. It did not contain the recording sheets- sample cover showing the details as indicated in the Policy Guidelines (DoE 2002 b: 68) in the Appendix A.

Each learner's portfolio had four to six class-work (may be also referred to as assignments) -mostly from one theme- Earth and Beyond, one home work (from Energy and Change-electricity) and two tests without the indication of total marks, duration or other details. The tests showed low-order questions from the two themes and only the percentage of marks was shown.

When one compares this with the work done by other schools in both content and type of tasks, there is a clear indication of lower standard, amount and quality of work done and performance by the learners.

The (portfolio) activities were not grouped as (investigations or projects, assignments, tests/examinations, presentations and performances or translation tasks) required in the guidelines document. All the assessment tasks were either simple class work /homework or tests.

Evidences like question papers or answer papers of the term-tests were not also in the portfolio. Therefore, the researcher could not ascertain the number of tests and examinations and had to rely on the information supplied by the participant in the interviews.

There were no categorization into different themes (20% allocation for the five themes) – as only a rudimentary work from the themes- Earth and Beyond, Energy and Change and very little of Life and Living, was done during the whole year by this teacher.

The addressing of the different specific outcome or their clustering under the three groups – ‘processes’, ‘knowledge’ and ‘science and society’ was also not evident as all the questions involved were basic knowledge and recall types.

The formative aspect of assessment was revealed only in the interview and some remarks made by teachers alongside the marked work.

The learner’s portfolios of the educator participant II, the other *dominant* teacher who taught 3 classes were also A4 size books containing short class work, assignment and tests – all of which were indistinguishable from each other- except one test. This also indicated a similar pattern as that of the other educator’s learner portfolios without a table of contents, year plan or index or record of achievement. There were three class-work/ assignments- not of the standards required according to the policy and one test which was also mostly composed of recall questions of 50 marks. The other tests (the participant informed me) were written like examinations in loose paper and were not

available. The evidence for this was missing, as there was no educator portfolio for the participant. The inconsistency of the situation was revealed while going through the learner's portfolios which showed that the two teachers were teaching different content from different books in the same Grade. The learners did not have any learner's textbook of their own and according to the participants, they were using borrowed books from a nearby school. These were (i) *An OBE Natural Science course Today – Learner's guide* published by Maskew Miller and (ii) *New Natural Science Grade 9- Learner's book* published by Hodder & Stoughton.

The themes in the class-work/assignments and tests consisted of almost 80% Life and Living and 10% each of Matter and Materials and Earth and beyond. The break-down of portfolio analysis is indicated in table 4.2.2.

The formative aspect of the assessment was revealed through certain comments written by the educator while he marked the tasks. Some of the comments were clearly negative ones that were likely to have the opposite effects on the learner. There was no evidence of accommodation of learners with special education needs.

*(b)(i) Educator I portfolio*

The teachers did not have portfolios; participant I had a general resource file in which all the resources he used for the various Grades were packed. This did not contain any tasks or activities designed for Grade 9. He said he organised some tasks from the learner's (text) book for activities to be done in class as either individual or group-work. He said he monitored these and marked them as group-work or presentation. He also said he used learner's peer-group and group leader's feedback for assessment.

The learning content that he taught was organised in the form of a notebook for Grade 8 and 9 combined. This had teacher's preparation notes on the following topics:  
from Earth and Beyond- Earth structure, Pangaea, mountains, earthquake, volcanoes, springs, rocks, weather and weather maps;  
from Life and Living- pre-historic life, fossils, geological time-scale, life of today, bio-diversity and reproduction.

from Energy and Change- some rudimentary information on force and magnetism. Matter and Material science consisted of some basic information on the phases of matter, types of materials and the atom.

The notebook also contained two test question papers and marks for continuous assessment and the final examination, and the final mark for promotion. The school did not administer Grade 9 common tasks for assessment as it did not arrive in time for the section A activities, which were also found to be very difficult for learners. Therefore the school administered its own examination for Grade 9 Natural Sciences. The promotion of learners was decided on a 75%: 25% allocation of credits for the year mark and final examination respectively. This participant had 132 learners in two classes and the other had more than 180 learners in three classes.

The lowest percentage of mark was 14, the highest was 88% and the Grade average was approximately 48%, with the result that most were promoted to grade 10.

Outcome categorisation/ clustering of the outcomes (into ‘processes’, ‘knowledge’ and ‘science and society’), percentage allocation for the five themes or the use of the assessment results for reporting learner progress could not be found. What were available, were the year’s continuous assessment marks and the final examination marks and the calculation of the final mark.

*(b) ii Educator II portfolio*

The second educator participant had nothing to give me except the question papers of two tests, and the class-work/ homework/ assignment books (portfolios) of some of his learners. This contained some activities – mostly homework/ assignments and one test. Most (over 80%) of the topics were from Life and Living and the rest from Matter and Materials. He said he also had a mark list made for the end of the year on a 75% continuous assessment and 25% end of year examination basis, but could not give me a copy. He had more than 180 learners; the highest marks were above 90%, the lowest below 25% and the average was 45%. He could not recall how many failed as according to him “failing was against the policy”. The pass mark was 35%.

I had to rely on the information supplied by him as he was not in possession of any documents.

The wide difference in the teaching content/ curriculum at the same school was blamed by the educator on the lack of coordination and poor support from within the school and curriculum support services. The two educators followed different books and different themes. While one concentrated on Earth and Beyond and Matter and Materials, the other concentrated mostly on Life and Living.

According to the participants there were no learners with special education needs (LSEN), as the school only catered for 'normal' learners. The portfolio did not show any accommodation for LSEN learners.

#### ***4.2.2.2 Educator (participant) interview***

##### ***(A) Participant I***

The interviews with the participant educator (I) Mr. Mapo took place on three different occasions – on 6 and 20 November 2002 and on 16 January 2003. The important issues covered according to the semi-structured open plan are recorded and some parts transcribed.

##### ***(a)(i) Policy awareness***

This educator said that he was not aware of the policies and the documents and his head of department who attended the workshops and meetings did not give him the relevant information. When I showed him the documents (*Curriculum 2005 Provincial GET band Assessment Policy and the Curriculum 2005 Assessment Guidelines in Natural Sciences*), he told me that he was not familiar with any of those documents and has not been informed about them.



(b)(i) Assessment tasks

Upon questioning him about how the learner's and educator's portfolios should be organised, what assessment tasks should be included and what procedures should be followed in the administration of continuous assessment, selection and grouping of outcomes, criteria for assessment and using them for diagnostic, formative and summative assessment, the participant was at a loss to explain.

He said that up to the arrival of the common tasks for assessment (CTA) information, (which was very late), he has not been able to do the kinds of tasks required.

(c)(i) Assessment of outcomes & (d)(i) Allocation of % credits for themes

The participant indicated that his main responsibility was with Grades 10, 11 and 12 and that the other educator, was responsible for the GET Grades - 7, 8 and 9. He said:

“ You see, I was not even informed about the CASS marks and portfolios for Grades 9 until this term (Term IV) towards the end. If I had been informed, I would have had all the necessary things in good time. You can see how I did the CASS for grades 10, 11 and 12 and even the external moderator commented positively about this. Since the other educator is the H.O.D for NS, he attends the workshops and meetings.. when he comes back, he does not give the full information but criticizes the whole thing. What we should do or how we should do is not mentioned. He has responsibility for three classes- about 180 learners and I have two classes – 120 learners. Because of this apparent lack of communication, it seems things are not done as they should be”.

He also informed me that due to the special situation in the school, the CASS mark was weighted only 25% and the CTA 75%. But while reconfirming with the principal, the principal informed the researcher that the CASS was credited with 75% and the examination was credited 25% for the final assessment. He also informed me that the whole assessment procedure – especially the General Education Senior Phase CTA

“was a nuisance”.

(e)(i) General comments by the participant

The participant expressed the view that the introduction of OBE through C2005 was done as a ‘top-down’ policy implementation without much thought to what is happening and what will happen at school level. There was no adequate training or support or proper coordination. A lot of work has to be done to improve the capacities of the teachers, the situation at the schools and other levels of operation if the programme has to succeed.

(B) Participant (II)

The interviews took place on four different occasions – on 6 and 10 November, 5 December 2002 and on 16 January 2003- all at the school in the educator’s office which he shares with two others. The important issues covered according to the semi-structured open plan, were tape-recorded.

(a)(ii) Policy awareness

The participant told me that he was aware of the policy documents as and when they were made available by the department to the school and that he attended some (two or three) workshops that were conducted from 2001. He told me:

“At first, I was negative about it, but when I discovered the goodness of it, children were able to communicate, to ask, .. wholesome development ..., now I am positive... I got all the documents.. the Curriculum 2005 in a Nutshell, The Assessment Policy and Guideline Document .. I got all of them”.

When questioned about the requirements in the policy and how he was able to carry out the assessment activities and keep records of them, he became a bit apprehensive and a bit irritated and remarked:

“For what?.. then he continued... “even during the time of apartheid, we did not like the inspectors and did not comply and now it is like the way we are- the Department did not give us anything.. no books, no materials, and even the CTA assessment things have arrived late. ..What are we supposed to do? ... Look, this learner’s resource book (which he showed me) is from another school and I got it from a learner in my class.. he has been using this ... Let the authorities give us everything and then may be we will be ready for OBE”.

(Later when I mentioned the matter to the principal, he also acknowledged with me that he had a problem with the specific educator and that he was trying his best to take control of the situation.)

*(b)(ii) Assessment tasks*

Although the participant was aware of the various assessment tasks, their numbers and credit allocation, he did not follow them or informed the fellow junior teacher about them. The reason he gave was that, for most of the time, they were still following the traditional system of assessment. He said he gave a number of class work/ assignments; about eight tests, many class-work, oral assignment and homework (not the types required according to the policy or recorded in the learner’s portfolio). He did not follow the allocation according to policy or gave credits as per the policy. This, according to him was because of several reasons – large numbers of learners in each of the classes, lack of facilities, lack of time, overloading, lack of competency in many of the areas and kind of assessment and other such reasons.

This is what he had to say:

“The assessment policy – at the beginning of the year.. it is not always written work, you can assess the children from the beginning. We cannot give individual attention.. even in groups.....It is a problem.... So far we are carrying on the former method .. the children are not ready so far .. The problem of so many children, not having books.”

When the researcher asked “How did you standardize it with other schools?”

His reply was..

“Everyone interprets this OBE in his own way - there is no coherence every one interprets in his own way, there is no uniformity.... We work on individual basis .. there is no uniformity in the interpretation of the policy .. the subject advisors are not doing their jobs.. the conveners of the OBE started with the outline .. of the policy,..... but there is no coherence”.

He said that the workshops that he attended were poorly organised and conducted and did not gain much from it.

He said that two examinations were given- half yearly, and the end of the year.

The continuous assessment credit allocation was 75% and examination credit was 25%.

The average mark was above 40%; highest was > 90%; the lowest was less than 25%.

*(c)(ii) Assessment Outcomes & (d)(ii) Allocation of (%) credit for themes*

Since most of the tasks the participant did in assessment were simple class-work, homework and tests, and they were very few,- mostly from Life and Living, there was no much evidence that could be collected. He said he made the learners do some assignments, but could not furnish any proof. The outcomes were evident only in the performance in the tasks given and they were mostly simple ‘knowledge’ and ‘understanding’ types of questions, the answers for which were in the learner’s portfolio/ workbook. The allocation of more than 80% of the credit was for Life and Living and the rest were for Earth and Beyond. This, he said was mainly because of the book that he followed.

It was seen that he covered only a very limited portion of the curriculum according to the book. The other educator (participant I) did different topics and themes because they had the freedom to do so in OBE and he followed a different book.

(e)(ii) General comments by the participant

The participant was very critical of the end of year common tasks for assessment and their late arrival. The school did not get any time to do the (10hr. section A). He said “It was terrible when they tried it. The children failed miserably in both sections (A & B) and they had to give their own examinations in most cases”. He was also very critical of the Department in implementing OBE without proper planning. According to him the people who want to implement OBE at all costs are “impressionists” who want to gain political capital out of everything. The subject advisors are “not doing their job and OBE is done haphazardly” without any relevance and touch with the realities of the classroom (all the problems mentioned earlier) and the future scenario is bleak. According to him OBE can function properly in schools which are well staffed, equipped and have low teacher pupil ratio.

**4.2.2.3 Summary**

In this school also as the educators could not (did not) produce their own portfolios, triangulation of data for verification became problematic. The researcher tried to overcome this problem in the validation of data by interviewing the principal, thereby getting authentic information from an elite source and conducting informer rechecking.

School B could be considered as a normal school when the situation prevailing at most of the schools in the region or province is taken into account. The teachers are some how carrying on with the business of their daily lives without a conscious attempt to make an effort to get things right. The prevailing disorder, confusion and inadequacies some how seem to favour a situation where lack of accountability or the failure to fulfil responsibility could be blamed on many factors outside oneself and this tendency is slowly becoming the ‘social order’ of things that happen or do not happen.

TABLE 4.2.2

SCHOOL B MASUBU

### **4.2.3. Site 3: school C: Taxo Secondary**

Taxo Secondary school, situated in a predominantly Indian suburb of Polokwane, has fairly good infrastructure and staffing, although in the past few years there has been an overcrowding of learners at the school due to the change in the social policies and the demographics of the area.

#### ***4.2.3.1 Analyses of documents***

##### *(a) Learner portfolio*

The educator participant Mrs. Mary Many is a veteran teacher of many years experience in the profession and is well qualified in the teaching of the sciences. The participant gave the researcher 10 portfolios belonging to different learners. Most of them were ring files and contained all the assessment tasks performed by the learners along with most of their class notes. Even the class notebook were punched and kept in most of them. Some of the portfolios were display files in which all the materials were kept.

Perusal of the portfolios revealed the following:

Forms of assessment tasks and numbers: There were more than three investigations/  
projects: microscope; cells, properties of light, magnetic field etc.;

There were many (>5) assignments, several tests (but no practical test); presentations and performances were also more than three and translation tasks were also more than three. The content of some of the work done was beyond the level of Grade 9 (for example topics in genetics, chromosomes and genes etc). The teacher's explanation for this was that after Grade 9, when the learners go into high school with its final school certificate (Matriculation) examination, they should be able to cope with the demands of the syllabus – because according to the teacher, OBE did not contain “serious curriculum that demands proper learning and understanding in science”.

The themes in the learner's portfolio showed the following approximate allocation:

Life and Living 50%; Matter and Materials 25%; Energy and Change 15%; and the integration of the three 10%. This completely excluded the theme Earth and Beyond. The participant explained that Earth and Beyond belonged to geography in the Human and Social sciences Learning Area and she did not pay attention to it. If there was something in what she taught, it was purely by chance.

By looking through the learner portfolios, it was clear that the educator paid attention to all the groups (types) of Specific Outcomes- scientific knowledge, concepts etc, science process skills and science and society, although it was purposefully not revealed to the learners. But there was no clear indication of their percentage (credit) allocation for each group of tasks. Some of the common tasks for assessment piloting activities (Grade 8 pilot test) were also done as assignments and class work. This was also found in the portfolio.

The recording and reporting evidence was the marked learner's work and for projects and presentations, there was a school's reporting form. The cover page showing the details as required in the Policy Guidelines (Appendix A) was not in the learner's portfolios.

The use of the work done by the learners in promotion/ progression was evident in the marking and comments made by the teacher in the learner's work for formative and summative evaluation purposes.

The details of the learners' and educator's portfolio summary are shown in table 4.2.3.

*(b) Educator portfolio*

The educator portfolio consisted of a bulky resource file (lever arch file) in which the participant kept all the written/typed/ compiled materials used for teaching in the Grade and another file, which was used as the marks register. Inspection of the resource file revealed that the educator was very clear about what she has to do and what she was doing. Even the common tasks for assessment pilot tests in Grade 8 have been used for



teaching her class. All the activities and tasks carried out by the learners were also in the educator's file, but with much more information and other resource materials like worksheets, tasks, question papers, marking memo and so on.

There were no grouping according to themes or percentage allocation but all the groups of Specific Outcomes ('processes', 'knowledge' and 'science and society') were given attention.

The indication of Specific Outcomes was given by a four-column table which had the following items: skills, knowledge, insight and personal statements and decisions etc. Most of the task belonged to the 'knowledge,' 'understanding', and 'processes' categories. Higher-level content included chromosomes, DNA and genes, basic genetics, human karyotype, transport in mammals, and excretion. Assignments and project presentations included leaf herbaria with diagrams, Newton's colour disc and a presentation on pollution, acid rain etc.

All the activities were more than the required numbers. This was also confirmed by checking with the learners' portfolio and in the interview. Most of the marks were recorded and the continuous assessment (CASS) mark was calculated out of it. The 75% for CASS was calculated like this: tests: 15%; term 1, 2, 3 exams: 10%, 25% and 10% respectively; assignments, performances and translation tasks: 15%). The final examination constituted 25%. Common tasks for assessment (CTA) could not be conducted as it arrived very late for school's examination programme- although similar questions were used. The final examination consisted of two papers, each of one and half-hours duration and carried a total mark of 200.

The percentage of allocation for CASS for each of the above according to the policy guidelines (investigations and projects: 3/year - 40%, assignments: 3/month, (5 used) - 15%, tests and examinations: 5/year- 15%, presentations and performances: 3/year-15%, translation tasks: 3/year-15% which makes a total of 100% of CASS) or the allocation of 20% of each of the four themes and 20 % for integration was not adhered to in the final CASS calculation.

The lowest mark in the final assessment was 16%, the highest was 82% and the average was 45%. There were 114 learners in three classes in Grade 9, out of which according to the participant, 30 were likely to fail.

#### ***4.2.3.2 Educator (participant) interview***

The educator participant is a properly qualified person (science graduate with teaching diploma and many years (>10) teaching experience at secondary /high school levels. The OBE experience that she had was “a weekend workshop by the National Union of Educators which contained a module for assessment in OBE”. The best workshop in OBE that she attended was a privately arranged one initiated by some school principals in Polokwane. The school paid for this and the educator was serving like a mentor in OBE for other educators in her own school as well as some neighbouring schools. According to her, the workshop in assessment conducted by the Provincial Department of Education in 2002 was a “joke and an insult to educators” and her impression was that incompetence and lack of professionalism was exposed at this workshop.

##### **(a) Policy awareness**

The participant was aware of the policies and school had copies of these. The Assessment Policy Guidelines reached the school towards the middle of 2002 and she was already practicing many of the assessment practices even before she received the guidelines document because of her extensive teaching experience, the way she herself learned and the workshops she had attended earlier. As she did not receive the common tasks for assessment in time for examination, she set her own examinations using some of the CTA activities of the pilot model.

She said “We did not get any CTA activity- section A or B. I don’t know about other schools. I have used similar activities for our own CTA for the Grade 9 for the year-end examination”.

(b) Assessment tasks

According to her, the information about the different types of tasks as indicated in the policy reached the school late “at the 11th hour... teachers were confused about what to do and how they should be organised”. The workshop conducted by the department clarified only some of the issues. She said she had different kinds of assessment and gave many activities from the Learning Area.

These were investigations, projects, assignments, tests and examinations, presentations, performances and translation tasks- all of which were assessed, recorded and used in formative and summative ways.

Assessment criteria were given for projects and learner portfolios for each term (portfolios were allocated 25 marks according to criteria- which the learners pasted on the inside cover) and they were assessed based on their portfolio at the end of the term.

The allocation of credits was like this:

Portfolio assessment: assignments and projects constituted 10% of the CASS mark, tests: 15%, term exams: 15, 25 and 10 % each for 1st, 2nd and 3rd respectively, and the final exams: 25%.

The end of year examination which consisted of two written papers with 200 marks was used for constituting the 25% of credit as required in the common tasks for assessment. She also informed me that she learned from the newspapers that the CTA assessment was not compulsory in the province in 2002; but she did not receive any official information from the Department (Education) or from her principal. It was apparent that the school has applied its own discretion in this matter.

As there was no syllabus or any prescribed book to follow, she did what she thought was useful and necessary and compiled her work for Natural Sciences in Grade 9.

The educator used *Successful Natural Science Grade 9' Learner's book and 'Sample chapters – An incomplete practical model'* published by Oxford University press

written by Davies, Lightfoot et al. There was no teacher's guide available for these with the teacher. She also followed quite a number of other books and teaching resources.

In answer to the question, "How did she complete the syllabus?" She replied:

"There is no syllabus to complete.. you go on and on... that is what you have been told.. I was not able to finish.. then I had the roll out stuff—pre –CTA activity .. as you can see and go on with it .. then the CTA did not materialize at the end. ... How can you go on.. with this ... as part of empowerment?"  
....."This CASS is a good thing. If the teachers do not do their work .. it will show".

(c) Assessment of outcomes: & (d) Allocation of (%) credits for themes

The Specific Outcomes or clustering them in to categories was not done following the policy, but followed a plan developed by the teacher herself. The outcomes included were 'skills', 'knowledge', 'insight' and 'personal growth'. The educator did not follow the credit allocation for Specific Outcomes as dictated by the policy.

Construction of teaching, learning and evaluating activities according to the credit allocation also seemed to be problematic. This is perhaps an area where teachers from different schools can collaborate – to develop uniform themes, activities and outcomes and develop common grids for identification of Specific Outcomes and assessment criteria so that the same meaning is conveyed across the board.

Another area for joint determination of tasks and activities is the allocation for the themes in Natural Sciences. The distribution of themes (Life and Living 20%, Matter & Materials 20%, Energy and Change 20%, Earth and Beyond 20% and integrated topics 20%) according to the policy was not followed because of the absence of textbooks / resources written according to the allocation. This problem is also experienced in the assessment and tasks given for assessment.

Types of assessment included projects, speech (oral presentation), practical work, tests,

assignments and examinations.

*(e)General comments by the participant*

According to the participant, children do not learn in this OBE method, the curriculum content is much neglected, there is no comparability and uniformity of standards because the textbooks (resources- learner and teacher resources) are not comparable in content, coverage (scope and depth) and do not maintain uniform standards across the Grades. Some are of very poor standard and there is no attempt in organizing curriculum content and its coverage in a meaningful way through which the required knowledge, skills and other attributes are developed in all learners.

She is also of opinion that it is very difficult to practice group-work with large classes – she has 30-35 learners in a classroom suited for 25 learners. Although group-work evaluation was done through presentation and projects, since all the members of a group get the same mark, she thinks that group-work and the evaluation of group activities are not of good educational and evaluative value. This was also the view expressed by some other participants in the study.

The teacher was of the view that she was already practicing OBE teaching and assessment, although what she sees in South Africa is a repetition of the unsuccessful practices in New Zealand, Australia and Scotland. According to her, “if OBE has failed in these countries, why try and do the same mistakes here in South Africa?”

**4.2.3.3 Summary**

Although the participant was not able to compile individual learner profile (summary sheet) in the learners’ portfolio, all the activities were available and were marked and recorded in the teachers’ mark book. The quality of work done and the number of tasks done appear to indicate that Mrs. Many, the participant was able to translate most of the OBE assessment policy into tangible actions beyond the level seen in all the other schools surveyed in the study.

TABLE 4.2.3

SCHOOL C TAXO

#### **4.2.4 Site 4: school D: Captri Secondary**

Captri is a relatively well-equipped school located in a middleclass area of Polokwane. Most of the learners belong to the black or white population groups. There are a few Asian and coloured scholars which give the school a multiracial and multicultural appearance. Educators are mostly white (all except one in 2002) and the school governing body has also appointed several educators to maintain an approximate teacher pupil ratio of 1:25. Mrs. Lily Bucks, a trained science graduate with about four year teaching experience is the Natural Sciences educator in the Grade.

##### ***4.2.4.1 Analyses of documents***

###### *(a) Learner portfolio*

More than 10 portfolios were checked. Each portfolio consisted of a plastic-covered, school-made rose file on the front page of which was pasted a standard covering sheet bearing the learner's name, grade, Learning Area, a computer generated diagram of some science laboratory apparatus, the model of an atom and the name of the school. On the front inside of the cover page was pasted the standard title cover of the learner's portfolio (Appendix A) as required in the Policy Guidelines. Most of the learners did not fill this part and therefore the teacher's signature was also not appended. The file contained most of the learner's activities from Grade 8. Therefore continuity and sequencing was visible, although the activities were not sequentially arranged.

Following items were neatly filed:

Class / monthly/term tests; practical work; assignments; investigation and projects; and translation tasks and/or any other activities done in class or outside, but which can be presented in the file. Other activities done- as projects, group-work (model), posters etc were displayed in the classroom.

Following topics could be identified from the activities done:

Microscope and examination of onion cell, elements, symbols, formulae, reactions of

acids with metals and bases, force, energy, work, mass, density, pre- CTA activity (from Grade 8 pilot test), some translation tasks using municipal monthly account, diagram of a flower, bar-graphs, project display on fashion, use of laboratory apparatus, and the monthly tests (more than three) and corrections etc.

The topics were from the following themes:

Life and Living; Matter and Materials; and Energy and Change with similar allocation (30-35%) of credits. Earth and Beyond was not included. This was because, according to the participant, the theme 'Earth and Beyond' was outside the scope of Natural Sciences and taught under Human and Social sciences. Integration was also not given clear attention- although some integration could be discerned in the projects/ poster presentations.

Although investigations/projects- 3, tests- 4, exams- 2, - (no practical), short assignments >5 and group-work projects- 2, were separate and marked, other activities (like translation tasks, presentations etc. were integrated with one or more of the tests, projects or assignments. Some of the translation tasks were from the common tasks for assessment pilot testing in Grade 8 as seen in school 'C' documents.

The Specific Outcomes (individually or clustering them into categories) were not given special focus. Most of the activities were 'knowledge' and scientific 'processes' based although some of the items – like the project on fashion, activity with the municipal monthly statement etc. could imply that attention was also paid to 'science and society' aspects.

Recording evidence was mainly that of the marking and from the interview and by checking with the educator's portfolio. No expended opportunities were visible as all learners were assumed to be normal and formative use of the activities were obvious from the correction work done by the learners.

*(b) Educator's portfolio*

This consisted of three files – one was (i) the educator's resource file, (ii) a test and



examinations file and the third one, (iii) the marks register.

The educator's resource file contained all the resources that the educator used from Grade 8. The materials in them were neatly organised and filed. So sequencing from one Grade to the other could be established. It was filled with so many documents that sorting everything out and arranging them according to the learner's portfolio was a laborious and found to be not necessary as with school C. The educator used five different natural science books for the Grade and the materials were drawn from these and other resources consulted by the teacher.

The educator's test and examination file contained the four tests and the two examinations along with their memoranda. The tests and examinations were computer typed and indicated reasonable fairness in the level of appropriateness as evidenced from the resources used in teaching at the Grade, although most of the questions used were of a 'conceptual knowledge' and 'understanding' type and some were of scientific investigative processes type. This was evidenced by the use of the *Pilot Model Standardization in the Senior Phase (Grades 7,8 and 9) Section C Learning Area Pack* in developing continuous assessment activities and similar items in the tests and examinations.

The mark register showed matching of the work done with the marks recorded for each of the tasks, but the index sheet showing summary of work done (Appendix A- in the Assessment Guideline) was not filled in. The assessment summary form and record of learner's work (Appendix B and C in the Assessment Guideline) were also not available.

There were 184 learners in 6 classes. Marks for all the tests (4), examinations (2), assignments and investigations (6) / project presentations (2) were all recorded.

More credits were given to term examinations and monthly tests than the other tasks in the continuous assessment mark calculation (tests-10% each, term exams-15%, final exam - 25% other assessment tasks 5%)

The percentage of allocation for CASS for each of the above according to the Policy

Guidelines (investigations and projects: 3/year - 40%, assignments: 3/month - 5 used-15%, tests and examinations: 5/year- 15%, presentations and performances: 3/year-15%, translation tasks: 3/year- 15% (100% of CASS) or the allocation of 20% of each of the four themes and 20 % for integration was not adhered to in the final continuous assessment credit calculation. This, according to the participant was because there was no clarity or common understanding or what resources (book) to follow, what outcomes to target, assessment standards and criteria to apply and how to develop grids and rubrics across the school, in the district or in the province.

The teacher herself developed assessment criteria for the tasks. For some activities these criteria were given to learners when the tasks were given (for example the study of metals and the fashion project),

Continuous assessment was given 75% of the final credits as required in the policy and the final examination 25% - 2 papers of one hour each (125 + 95 marks respectively served as the common tasks for assessment).

Out of 184 learners more than six (6) got above 90%, the Grade average was 68% and the number of fail (less than 35%) was four (4) , the lowest mark was 24%.

All the files showed organisation and professionalism. Table 4.2.4 shows the break-down of the details as identified from the learner's and educator's portfolio.

#### ***4.2.4.2 Educator (participant) interview***

The participant (Mrs. Bucks) is a young, energetic graduate with a diploma in Education with about 4 years teaching experience. She appeared to be a very enthusiastic science educator. She taught six classes of Grade 9 and one in Grade 8; Grade 9 had 184 learners in 2002 with five to six periods of 55min in a seven-day cycle.

The interviews took place in November (7 and 11) and on 3 December 2002, as the teacher would be on leave early in 2003. Notes were taken during the interviews and the first two interviews were tape-recorded. All the three interviews were held at the

school – two in the teacher’s science classroom and one in the vice-principal’s (vacant) office.

(a) Policy awareness

The participant told me that she saw the policy (Assessment Policy GET band) in May 2002, and received the policy guidelines document towards the end of August. She said that she had no formal training in Curriculum 2005 and OBE and its assessment practices. She attended one meeting in August 2002 where the general aspects of common tasks for assessment were discussed briefly along with the construction of rubrics.

The participant was very pleased with the work she has done with the Grade 9 classes, although she was not exactly sure whether she did the correct things in the correct way as far as OBE was concerned. She said she was trying her best with what she knows and what she has gained by consultation with other teachers who were equipped with OBE methods.

She showed me some of the presentations of her Grade 9 that were stuck on the wall of her classroom as part of the presentation by the learners. She also told me that she gave the learners specific research tasks with their outline and the assessment criteria beforehand and the assessment was based on what the learners achieved.

(b) Assessment tasks

The participant showed me both her and her learners’ portfolios which contained most of the items as listed in the policy- investigations, projects, presentations, tests and examinations. For the tests and examinations, the criteria were basically the marking memoranda (marking scheme). She told me that individual work (test and exams) and group work (heterogeneous) – projects, assignments and presentations done were not exactly in the ratio as required as per the policy.

Projects and presentations seemed to be popular with the class- although, in the

beginning, the brighter and better performing learners resented the idea of sharing the marks with less able and lazy classmates. This issue was solved by assigning a different group leader for each task, demanding evidence of co-operative work and the need to make presentations (oral) by the different members of each group. Group leaders had to fill in a form that indicated what they did together and what part each learner contributed to the whole project.

On the matter of the final assessment she informed me that as the materials for common tasks for assessment arrived late, there was no sufficient time for the learners to do the tasks of section A; and section B was also not available. She said:

“Look you know what ... I only received the teachers guide last week – not even the learners one -- Section A up to now – nor the section B.... How am I supposed to conduct CTA?... therefore I have spoken to the HOD and the principal and we have agreed to base our promotion decisions on the basis of the CASS- mainly test, examinations and the other tasks...”

An examination was given instead of common tasks for assessment. The final promotion mark was based on 75% for CASS and 25% for the examination. She said “We want to get used to the different types of assessment.. we can do this better next year”.

### (c) Assessment of outcomes

Mrs. Bucks had initial frustrations about identifying the Specific Outcomes (SO) and assessment criteria (AC) for each type of task, as no task or standards were established for these. She remarked.. “I was not sure- neither am I confident at this stage, whether I am doing the right thing”. Aspects of outcomes coming under ‘science in/and society’ - SO 4, SO6, SO8 and SO 9 were not catered for, as she was not sure about the tasks or activities that could be used to assess them. She continued:

“I was not sure about the development of grids and rubrics- but now I am becoming more confident and better equipped. ... The biggest problem is

the development of a common curriculum with common standards- there is no agreement of what type of tasks e.g. translation tasks and at what level of complexity that the learner should be familiar with.”

Because of the above difficulties, the Specific Outcomes as outlined in the policy were not given their allocation in the assessment tasks. Most of the tasks tested ‘knowledge’ and ‘process skills’ in the three learning themes. Very little attention was paid to ‘science and society’.

(d) Allocation of % credit for themes

This was also problematic. The participant informed me that she did not have the proper information in time and could not plan because of the uncertainties and confusion surrounding the whole issue. She said:

“I did not stick to the 20% each for the different Learning Areas at this stage – my work was mostly biology, the normal physical science (Matter and Material and Energy and Change), and fashion; my distribution was approximately same (33%) for each of the three different themes”.

Although credit allocation according to Specific Outcomes was indicated in the *Leerarea: Natuurwetenskappe Graad 7/8/9* borrowed from an Afrikaans school, this was not implemented or indicated in the educator portfolio. She said she did not know how to do the allocation.

(e) General comments by the participant

The participant was frustrated and confused with the C2005 implementation in general and the assessment practices in particular. The main reason was the Department’s (Education) uncoordinated efforts with OBE implementation. According to her, the Department did not make any effort to ensure that similar things are taught. She was of the opinion that curricula should have been jointly developed at least at the district level in an attempt to maintain parity in standards. Therefore there was no uniformity in standards or curriculum coverage.

She remarked:

“We need the Department to do the coordination in this... so that in the beginning of the year, it calls together teachers from the different schools in an area, set the tasks, the Specific Outcomes, the assessment criteria and the rubrics and other things like relevant content, the resources to be used and the integration of themes etc. This will help to create a fairly uniform curriculum to be taught and then assessment standards can be developed even for the whole province. This will assure the teachers that they are doing the right thing. The teachers could get together in several meetings and come to a common understanding and distribute the tasks according to their preferences and capability, a joint- resource thus developed can be used across the district, area or province. .. this could also have been done with the CTA, had it been received in time... and the teachers were prepared for this”.

She feels that in the normal school situation, this will be difficult for a single teacher, and it multiplies the workload of the teacher without enhancing learning. She said “I am willing to learn these so that I can apply this next year at least”. She seemed to be really upset about this lack of coherence and common understanding across the Senior Phase and the Further Education and Training (FET) band. The participant said that she was not sure about the different assessment tasks and was upset about the lack of coordination.

#### ***4.2.4.3 Summary***

It appears that Caprti Secondary school, due to the resourcefulness of the teacher as well as that of the school’s more favourable situation, was able to make better progress in implementing the curriculum and its assessment policy than schools A and B. The participant is supportive of OBE and is of view that a coordinated effort by educators with sufficient curriculum support from all quarters is necessary to make meaningful progress and real change in the way of teaching and learning at schools.

TABLE 4.2.4

SCHOOL D CAPTRI

#### **4.2.5 Site 5: school E: Myng private school**

Myng is a relatively new English medium private (independent) school where the learner population is mostly black and the educator population is white, coloured, Indian and black. Grade 9 Natural Science was taught by Mr. Adam Osted, who has a four-year B. Sc degree and about four years of teaching experience in different settings; but also has several years of work experience in other fields. There was only one class in Grade 9 with 29 learners.

##### ***4.2.5.1 Analyses of documents***

###### ***(a) Learner portfolio***

Each learner's portfolio (10 were collected) consisted of a standard ring file binder in which the learners kept all the assessment activities arranged in chronological order. Each file had the name of the learner, the Grade and the school on the cover page and the front covering sheet showed the Limpopo province Department of Education learner's portfolio summary sheet (NPDE / FET Annexure page 75 CASS Guidelines). This was the only school so far, which provided a summary index of the activities done as indicated in the Assessment Policy Guidelines document, although it was different form the one indicated in the guideline document (Appendix A) itself. However, this shows a concise summary of the assessment tasks along with marks obtained and moderated with the details of the school, the teacher and the moderator.

All the tasks were numbered and arranged in chronological order in the sequence: tests, assignments, practical, examinations, final/ trial exam and total CASS mark. Each file had five tests, two examinations (including the final), two lengthy assignments and two practical activities. These assignments were mostly in a question and answer type model and the practical work contained experimental reporting, translations tasks like graphs and diagrams.

Only three themes were treated – Matter and Materials, Energy and Change and Life and Living. Most of the topics were from Matter and Materials (chemistry) and Energy



and Change – which were approximately 40% each and the rest about 20% from Life and Living. There was also no attempt at integration.

Most of the outcomes targeted belonged to the ‘knowledge’ and ‘process skills’ categories of the Specific Outcomes with mostly the traditional type of subject matter and questions and answers. Subject content was given a fairly high importance and was of a fairly high standard (with structure of atom, chemical formulae and chemical equations, calculations involving electric current, structure of the cell, microscopic work on paper, structure of flower etc.). Specific Outcomes in the ‘science and society’ category (4,6,8 &9) were not given any attention.

On the whole, the learners’ portfolios will give anyone a good impression about the work done, even though some of the tasks were not in adequate numbers as required in the policy. Correction work done by the educator was the main method of using the assessment in a formative way.

*(b) Educator portfolio*

The contents of the educator portfolio matched fairly with the learners’ portfolio. It was a lever arch file, with all the resources, the activities and recordings of all the marks of the learners in the Grade. It was neatly done and well organised.

All the tests, examinations and assignments with their memoranda, part of the pre-common tasks for assessment activity for Grade 9 (pilot test), with their answers and the practical/ investigations done by the learners were also included. The overall marks summary sheet of the learners was also available. This used a standard school generated format. Other resources used by the teacher, as well as a text book - *The Web of Life* by Fiona Clitheroe and Ruth Vanfield published by Maskew Miller- Longman) was also shown to the researcher.

All the work, excluding the final examination was given 75% of credit (The marks allocation was: tests: 500, assignments: 100, experiments/ investigations: 100) all of which constituted 75% credit; the final examinations consisted of two papers with a

total of 200 marks was given 25% credit. This follows the same credit allocation for continuous assessment and common tasks for assessment as in the policy. Out of the 29 learners in the class, the highest mark was 70%. The lowest was 30 and three who got less than 35 failed at the end of the year. Summary of the analysis is given in table 4.2.5.

#### ***4.2.5.2 Educator (participant) interview***

The interview with the educator took place on 3 occasions: 11 and 29 November 2002 and 17 January 2003. Notes were taken on all the occasions and the lengthy, semi-structured interview was also tape-recorded. All the interviews took place at school in the staff room and/ classroom in the mornings.

The participant, a middle-aged South African of Indian origin, holds a four-year degree in physics major with mathematics and chemistry as minors. He had been in many different positions and jobs, ... as tour guide, adult education teacher and so on, but has taught in the formal teaching situation in schools for just over 5 years – mostly in junior schools.

##### ***(a) Policy awareness***

The participant told me that although the school had all the policy documents – the Curriculum 2005 document, the Assessment Policy document and the Assessment Policy Guidelines document, he became aware of these only towards the end of the second term when he had to implement the assessment plan for Grade 9 in 2002.

He started teaching in the OBE mode (Curriculum 2005) towards the middle of 2002, late in the second term when the school also shifted into the OBE mode. (The school was following traditional syllabus until then. This was due to the fact that in the Curriculum 2005 (OBE mode), there was no fixed syllabus but the school wanted to follow a standard syllabus since it was a private school and wanted to set good standards.

This is what he told me:

“ To be honest, I do not have an in-depth knowledge of OBE, it was just the ideas I got from the principal, other teachers and I got some information which I picked up from here and there , from my teaching... from some informal sessions and some meetings and so on. I have not implemented OBE consequently, but I have attempted to assess students in a manner that goes beyond the traditional methods of testing students with examinations and tests... I will use the OBE assessment records to supplement the marks of the exams and test if a student failed or is performing poorly. ...One thing that is intervening is that you have to teach in OBE and you have to cover a syllabus, it is very difficult to... , ...for example you have to teach chemical equations, concepts in energy, etc....OBE came in during the course of the year... not in the beginning of the year... we were doing the traditional teaching with (old) syllabus.”

Therefore as a last-ditch effort to save the situation as the school was presenting learners for the common GET Grade 9 examination, the participant had to implement the assessment plan in the policy guideline.

Although the documents – the Assessment Policy and the Assessment Guideline were available at school, the participant was not familiar with them as he received the documents late- towards the end of the second term when he attended a discussion session (workshop) organised by the department. He had to implement some of the aspects in the policy (e.g. tasks like presentations, practical) etc in a hurry to make up the continuous assessment (CASS) activities.

#### (b) Assessment tasks

When questioned about the type of assessment tasks, he said he was giving the learners the normal assignments, tests, term examinations and some homework but when he went through the policy (guidelines document) he became aware of other things.

He said “ I stopped what I was doing... and started doing the work for CASS and CTA... some activity on pollution which they gave us”.

This was also seen in the practical work and the common tasks for assessment pilot activity done by the class when documents were checked. Only two practical and a pilot (CTA) activity were done and they were done towards the end of the year in November.

The educator participant was not sure about investigations and projects. He remarked: “I don’t know whether doing the structure of the flower is investigation or not. I did not get the whole information ,.. more importantly, the necessary hands-on experience. I did not receive any training for the CASS or the CTA”.

He said he gave his Grade 9 class two tests every term, some experiments and the final examination of two hours with 200 marks.

#### (c) Assessment of outcomes

The participant said he did not go through the documents fully or understood them completely. He said that the indication of the Specific Outcomes and their assessment was “too abstract” and the workshop that he attended was “too general”. If he had to concentrate on concrete tasks and measuring of outcomes through these tasks, he needs to attend Learning Area specific outcome and assessment measurement workshop. This is the same feeling expressed by most other teachers who said that they did not gain anything even in the Natural Sciences assessment workshop that the Provincial Education Department organised for the teachers in the area.

Therefore it was difficult for him to categorise the outcomes into the different clusters or categories. But, he said that since he is a science and mathematics teacher, most of his assessment tasks he set were problem-solving types, and those that tested knowledge and understanding. He also included questions that tested concepts and principles, process or application of processes types and some specific manual skills – e.g. in practical work. But since he did not have a science laboratory, real subject practical work and its assessment was problematic and he did not have practical tests. He did not also have performances and presentation tasks, as he did not know how to do them or assess them. He did some translation tasks like graphs and diagrams. He also did not give assessment

criteria prior to the task because most of his assessment tasks were tests, assignments and examinations.

He also said that he does not know how to construct grids and rubrics but shall try them with the little information that he has. This was the reason why his assessment tools were written tests, examinations or assignments.

(d) Allocation of (%) credits for themes

The participant informed me that he was doing the traditional subjects – physical science (physics and chemistry) and biology (life sciences) from standard seven textbooks and started using the *Web of Life learner's and teachers book* from the third term because it was recommended in the workshop as a resource to follow for C2005 implementation. He said he taught mostly physics, chemistry and a little of biology. He did not teach Earth and Beyond or attempted to integrate except when he did the common tasks for assessment piloting tasks. He said he was not familiar with integration. This information was in line with the findings in the documents (40% for physics- Energy and Change, 40% for chemistry (Matter and Materials) and 20% for biology (Life and Living). The allocation in the tests and examinations was also more or less like the above.

He did not pay attention to the clustering of outcomes as most questions were based on the knowledge and understanding of concepts and processes and problem solving types – this means only two clusters of outcomes ('knowledge' and 'science processes') were catered for. 'Science and society' or other skills or attitudes were not given particular attention. The allocation in the continuous assessment and final examination was as given below:

Experiments = 100; assignment = 100; tests = 5X100; final examination = 200. All the tests and other tasks constituted 75%, and the final exam constituted the other 25%

There were no learners with special education needs or ways of accommodating them except for the usual remedial work after homework, tests or examinations.

*(e)General comments by the participant*

The participant was also of the view that as there was no specific curriculum or structured syllabi for Natural Sciences and scientific ‘knowledge, understanding and skills’ (laboratory skills) have been trivialised; teachers did what they thought was right. He also believed that there was no adequate training for teachers to shift over to the OBE mode of instruction and assessment. This should have been better organised by the Department of Education.

***4.2.5.3 Summary***

The documents and the interview revealed that the participant educator did what was normally required in a school teaching situation, although the number and the types of some of the tasks that were done were not adequate. But the quality of the tests, examinations and the assignment given were in most cases quite high when compared with most of the other schools in the study.

TABLE 4.2.5

SCHOOL E MYNG

## 4.3 DISCUSSION OF THE FINDINGS

### 4.3.1 Introduction

In this introductory part, I wish to make a brief overview of the structure of the discussion, taking into account the design of the study and its findings.

One of the important aspects of the design is the reduction of data into manageable units and categories before establishing any pattern. This reduction of the data by grouping them into categories is achieved by developing analytical tools into which data can be fitted. This was done by using matrices in the form of tables (tables 4.2.1; 4.2.2; 4.2.3; 4.2.4; 4.2.5 and a cumulative record table (CRT): 4.2 into which the portfolio documents (learner's and educator's) and the key interview data would fit. The key items and their sub-divisions in these tables indicate the requirements in the Curriculum 2005 Assessment Guidelines. For example, the five forms of assessment with their percentage allocation: investigations and projects 2+1 (40%); assignments 5 or more (15%); tests and examinations 5 (15%); presentations and performances: 3 (15%); allocation according to themes: (20% each) and so on. The table for each school (tables 4.2.1; 4.2.2; 4.2.3; 4.2.4 & 4.2.5) indicate the details of the work done and data available at each school whereas the cumulative record table (4.2) indicate the summary of the records at the schools as well as its confirmation with the filling in of appendices A, B and C of the guidelines document. Thus, the tables not only give a comprehensive picture of the assessment profile in Natural Sciences in Grade 9 at each school, but also present the situation on a comparative basis with each other and with the Assessment Policy Guidelines for 2002.

This discussion is done in two steps:

- (i) a brief review of the findings at each site is presented along with its discussion; (4.3.2.1 to 4.3.2.5) and
- (ii) the summary of the findings (as in the cumulative record and interview) is discussed.



### **4.3.2 Findings at each school: a summary**

#### ***4.3.2.1 Discussion of findings at site 1: school A: Bokmo Secondary***

Almost all assessment tasks were done- although, the investigations and projects were only two (instead of three) and they may not have been of the expected duration (10 notional hours). The allocation for each of the tasks for constituting continuous assessment marks did not follow the norm set in the guidelines - tests and examinations were given 60% credit whereas all the others were given 10% each (as per the interview). The percentage allocation for the five different themes (Matter and Materials, Energy and Change, Life and Living, Earth and Beyond and Integration) was also not followed. The reasons given for this was lack of a properly structured syllabus, the 'textbook' used, lack of coordination and the internal arrangement at the school for treating Earth Beyond topics under the Human and Social Sciences (HSS). Allocation of assessment items in to Specific Outcomes or under clusters of Specific Outcomes for credit calculation also did not take place. The interview revealed that this was because of several reasons – some of which were: (i) lack of competency in this regard; (ii) set curricula with examples of assessment items and tasks done using Specific Outcomes as criteria; (iii) lack of time for the organisation and management aspect of this in large classes; (iv) large number (234) of learners in the Grade for the teacher; (v) lack of proper training or curricular support; and (vi) lack of resources. This resulted in most of the assessment tasks being set for testing basic knowledge and understanding as in conventional settings and curricula.

Reporting and recording evidences were only learner's portfolios and educator's mark-list. The recorded and reported results were used in promotion decisions; but evidence for this could not be found in the learner's portfolio. The only record in the learner's portfolio was the marks awarded for each task. The educator (did not have a portfolio as it was lost) had the records of the marks that were used in compiling the final mark used in promotion decision. This also included the final examination marks. None of the forms as indicated in the Curriculum 2005 Assessment Guidelines (Appendices A, B or C) was available or filled in. Criteria for certain tasks – model making and project presentation were given orally; but not for others- as they were mostly tests and

assignments. Added to this was the frustration of the educator in not being able to compile assessment grids and rubrics or being able to assess investigations, projects, performances and presentations, as he felt unsure and incompetent in this regard. The educator also experienced difficulties with the common tasks for assessment (CTA).

The findings reveal that the educator had attempted to implement the Curriculum 2005 policy in a way that was possible under the circumstances.

Although the educator is positive towards the OBE methodology of teaching and learning, most of the problems highlighted by De Clercq (1997); Jansen (1998); Valley and Spreen (1998); and Motala (1997) are evident. The findings at the school also support the view that it is difficult for most educators to assess higher order skills like oral expression and complex problem-solving skills. This has also been reported by Brand (1992); Maeroff (1991); and Worthen (1993). Rault-Smith (2001) has indicated that educators do not have the training to make promotion decisions based on descriptive information they are expected to gather through grids and rubrics as in OBE assessment tasks like projects, presentations and investigations etc. Portfolio assessment also seemed to be problematic as indicated by Shepard (1991). All this, along with the non-delivery of the common tasks for assessment (CTA) in time by the provincial Department of Education and its higher presumed difficulty level, created a situation where the educator had to rely mostly on the traditional tests and examinations for continuous assessment and the final assessment. The educator also did not like to base assessment decisions of learners based on group-work assessment tasks, as these are prone to much cheating or abuse.

The documents also did not show evidence of recording the assessment tasks and their results in the format as given in the guidelines document. This could be because of the fact that 2002 was the first year of General Education and Training (GET) Senior Phase assessment and certification (by a report card) and as there were problems with the common tasks for assessment (CTA) administration, there were also problems with policy dissemination and appropriate training of staff. Therefore, most educators ignored these aspects of assessment, as they did not get information and appropriate training in time. This resulted in the Education Department in issuing a circular (dated

14-11-2002- Appendix D) that CTA was optional which gave the educators the freedom to compile the continuous assessment marks and the final examination marks as they deemed fit.

#### ***4.3.2.2 Discussion of findings at site 2: School B: Masubu Secondary***

This school characterises a typical scenario, which could be quite uncommon, or could be common among the practices found in the so-called disadvantaged schools. By all standards, both the quantity and quality of work was inadequate and poor. Two educators were responsible for the Grade 9 Natural Sciences. The main educator, the head of department for the Learning Area was responsible for three classes with a total learner population of over 180, and the other had responsibility for two classes (132 learners). Both had other teaching responsibilities. Some of the highlights of the Grade 9 teaching and assessment of Natural Sciences in this school are:

- (i) both educators followed different learning themes and content – followed different ‘textbooks’ as this was allowed in OBE practice;
- (ii) the head of department, who was responsible for three classes and who attended most of the OBE workshops, did not communicate relevant information to the other educator (according to the other educator) – one had policy information and the other did not have the information (as per the interview records);
- (iii) the above educator (HOD) also failed to monitor what was going on in the other classes in Grade 9 – learners exercise books showed clearly different content matter and assessment tasks etc. showing lack of coordination;
- (iv) both educators did not have portfolios or proper mark records;
- (v) both educators did not have properly organised learner portfolios;
- (vi) both did not have adequate content coverage or tasks of assessment;
- (vii) according to both the educators, they did not even have a “textbook” and therefore had to rely on “borrowed” books from the nearby schools.
- (viii) learner’s did not have their own ‘textbooks’ or other resources, but relied on some notes given by the teachers;
- (ix) the school is under-resourced (has no science laboratory) and over-

crowded with an average learner population of 60 or more learners in the General Education and Training Grades;

- (x) the educator participants complained that they do not have the necessary skills, time or resources to teach and assess in the OBE way.

Most of the findings (through document analysis and interview) corroborate the above observation. Forms of assessment tasks indicated that only very few assignments and class work/ home work were given by the two educators. There were no investigations or projects, presentations or performances or translation tasks. According to the educators, tests and examinations were not in the learners' portfolios (books). (*But one educator had a test in the learner's exercise book.*) According to the educators, two examinations were given and they were recorded separately. This makes it clear that the percentage allocation for the types of assessment tasks could never have been followed because most of the tasks were not given. Therefore it can be presumed that the continuous assessment (CASS) marks must have been generated from the examinations/ tests – which amounted to 75%. A final examination (instead of the common tasks for assessment) which constituted 25% of the marks, was used with CASS mark to decide on promotion.

The assessment tasks reflected mostly low-order questioning which showed that higher order-skills, scientific processes and attitudes were not tested. Not all themes were treated in their right proportion. Most of what very little was taught was from the theme Life and Living – but here also there was no agreement in the content covered by the two educators. Among the other themes treated, when one educator concentrated more on Earth and Beyond, the other concentrated on Matter and Materials and (a little on) Energy and Change. Integration of themes was also not clear through any of the work done.

Recording and reporting of assessment was also poorly done by the educators. None of the assessment forms according to policy was filled in either in the learner's book or the educator's mark record. The only record available was the final continuous assessment mark, the examination mark and the final mark. This clearly amounts to a level of negligence on the part of the educators who tend to blame everything on factors outside

themselves (as revealed in the interview).

There was clearly no attempt at internal standardisation or external intervention apart from the remark from the principal that some teachers are not co-operative in their efforts at the school and always tended to find faults with the system. He also observed that the OBE assessment and the implementation of the common tasks for assessment was a “nuisance”.

Although this school experiences most of the problems that Jansen (1998); De Clercq (1997); Vally and Spreen (1998); Motala (1997); and Rault-Smith (2001) and others have highlighted, evidences gathered at the site indicate to problems that lie deeper. Some of these problems may be: a deep resentment with the whole system; the lack of a clearly defined teaching and learning culture at the school – at least with some of the members of the staff; ignorance and / disregard of the ethics and values of teaching as a profession; or a lethargy that seems to indicate this is all what one can do under the prevailing conditions (like more than sixty learners per class and the lack of required resources like textbooks). This clearly indicates a level of anarchy that can prevail in a system, when there is no sufficient preventive, corrective and regulatory mechanisms. According to the two educators, all the faults remain with the factors outside themselves except for openly acknowledging the fact that they do not have sufficient knowledge and skills in the OBE method of teaching and assessment.

This confirms the findings of Shepard (1991); Brand (1992); Worthen (1993) Maeroff (1991); and Rault-Smith (2001) that teachers are not trained and lack confidence in most of the aspects of assessment. The school needs to do some introspection and have to come with a practicable instructional policy agreed to by all its stakeholders. This goes a long way to confirm the researcher’s belief that the prevailing chaos, confusion and inadequacies create a situation for some participants to use that situation to carry on with what best suits them to maintain the status quo.

#### ***4.3.2.3 Discussion of findings at site 3: School C: Taxo Secondary***

The situation at Taxo Secondary is completely different from the situation at Masubu. The educator had 114 learners in three classes with an average of 38 learners per class, besides the other classes allocated to her. This teacher also acts as a mentor to other teachers in the school on matters of OBE. This educator has attempted to go beyond the norm by incorporating into her teaching and assessment strategies the different ways and means of teaching and evaluating Natural Science. The educator and learner portfolios tend to prove this point.

The type of assessment tasks given, their variety and content coverage and allocation seem to reflect more alignment with the policy guidelines. Most of the tasks given were more in numbers than the basic requirements according to the guidelines (more than three investigations and projects, more than five tests and examinations). Their length and quality were appropriate although some of the topics covered were beyond the Grade 9 level - drawn from textbooks or other resources of a higher Grade. There was no evidence of practical examination, although practical skills are assessed in different ways (e. g. through projects and presentations). Four themes were covered – Life and Living, Matter and Materials, Energy and Change and the Integration theme- although, not in equal proportions. Life and Living composed nearly 50% of the work. The theme Earth and Beyond was not included as the school did this under a different Learning Area as in three other schools in the study. The assessment tasks indicated coverage of almost all the clusters of Specific Outcomes- ‘processes’, ‘knowledge’ and ‘science and society’. ‘Knowledge’ type of questions dominated the tasks followed by ‘science process skills’ and topics from ‘science and society’, which had the smallest component.

Recording and reporting evidences were clear both in the learners’ portfolios as well as in the educator’s portfolio. There was also a form for the assessment of learners’ portfolios, which proved that the educator has tried to comply with the requirements in the policy guidelines. But the format of these reporting instruments was not according to the prescribed format in the policy guidelines. The educator herself designed both the portfolio recording form and the overall mark reporting form. This shows evidence

of own initiative and attempts to solve problems before they arise on the part of the educator. (The summary form for learners' portfolios as well as that of the educator's arrived later in the year).

All the recorded marks were used in promotion decision, although, the credits for each type of tasks in calculating continuous assessment (CASS) was not adhered to. The explanation given for this was that some of the work produced by the learners and the assessment measures (e. g. for group-work) were unreliable. More emphases were given to examinations and tests and the final assessment. The forms indicated in the guidelines document (Appendices A, B and C) were not available or filled in. The teacher informed me that most of these multiplies the administrative work of the teacher without improving teaching or learning quality and she has decided to comply with the requirements in the school policy and the recording and reporting evidences were in compliance with the school and subject policy.

Looking at the totality of work done and assessment measures adopted, it is clear that Taxo Secondary school has done fairly well in terms of the C2005 Assessment Policy.

What is seen here is an attempt to make the whole programme successful with the commitment and resourcefulness of the educator. What is also clear is that, it also highlights some of the problems indicated by Jansen (1998) and De Clercq (1997) – like overloading teachers with too much of administrative tasks without improving efficiency. Added to these are the logistical problems associated with organising OBE teaching and assessing activities with the other activities of the school in the conventional set up. The teacher also felt that even with 38 learners and limitations of physical space in a class, teaching in the OBE mode becomes strained and difficult.

#### ***4.3.2.4 Discussion of findings at site 4: School D: Captri Secondary***

In school D also, there seems to be a number of efforts initiated by the educator to teach and assess in the OBE way. The educator, although younger with fewer years of experience, has also made attempts to contact other educators in neighbouring schools involved with OBE curriculum development and implementation and to apply the

policy requirements into classroom practice. This is evident in the educator and learners' portfolios as well as from the information gathered in the interview. The number and types of tasks given and the recording and reporting procedures seem to indicate compliance with the policy guidelines. Although the educator could not teach all the themes (Earth and Beyond was excluded), she has attempted to address the different clusters of Specific Outcomes. But the credit allocation (weighting) for them was found to be not according to the policy guidelines. This was apparently because of the difficulties in creating specific tasks according to the Specific Outcomes and being unable to assess them in a pedagogically sound manner. The educator has made it clear that she found it difficult to create tasks like presentations, performances, scientific process and application testing ones and generate appropriate grids or rubrics for them. This goes along with the contention (Shepard 1991; Brandt 1992; Worthen 1993; Vally and Spreen 1998; Rault-Smith 2001) that teachers find themselves incompetent or unsure about the assessment methods in OBE.

Added to the above the administrative burden, the responsibility of teaching 184 learners in five classes, lack of sufficient coordination and in-school support and lack of timely communication leaves many gaps in the proper understanding of the policy and its implementation. This is evident in all the schools including Captri, in the failure to conduct common tasks for assessment, administering the final examinations in a manner the school saw fit and in ignoring several requirements including the completion of recording and reporting forms as required in the policy. But fairly enough, the educator has shown sufficient foresight in recording and reporting learner performance in a manner that goes beyond the conventional school set up. This is also evident in the attempt by the educator in giving prior criteria for portfolio, performance and project assessment and in evaluating group-work and presentations by learners, although the educator was not so confident in these assessment tasks and measures. The educator also showed the willingness to learn and the enthusiasm to do a better job with OBE teaching and assessment in the year ahead.



#### ***4.3.2.5 Discussion of findings at site 5: School E: Myng private school***

This school is characterised by its attempts to maintain the conventional norm together with a degree of flexibility and adaptation to the OBE mode in its teaching and assessment practices. This is evident in its ‘change-over’ into the OBE mode towards the middle of the year to avoid being in the list of schools that did not comply with the General Education and Training requirements. This is understandable- given the fact that this is an independent school that must essentially maintain the quality in education expected of it by its fee-paying community i.e. the parents and the learners. The themes taught remained the same as found in the earlier general science syllabus- with physics, chemistry and biology components. There was no allocation for geography (Earth and Beyond) or attempts at integration except though the introduction of the Common Tasks for Assessment Piloting activities - like pollution and the translation tasks. Thus the school has made a virtue out of necessity. Similarly, there was no serious attempt at the clustering of Specific Outcomes and linking them to the assessment tasks as required in the policy guideline or making the criteria for assessment explicit before the activities themselves. This was because, most of the assessment activities were tests and examinations. These were in sufficient numbers, but the other tasks were not. There was also the problem of educator confidence and competence as earlier referred to (Worthen 1993; Maeroff 1991; Brandt 1992; Rault-Smith 2001).

However, Myng school has proved to be the only school which has filled in the portfolio summary sheet (similar to Appendix A in the Assessment Guidelines) as required in the policy. The level and the quality of the written assessment tasks also show a performance beyond the levels found in two other schools in the study.

#### **4.3.3 The emerging pattern: a brief comparison of the findings**

##### ***4.3.3.1 The common features among the schools in C2005 (OBE) assessment***

Some of the common features that link these schools in the assessment policy implementation are:

- Most of the schools showed similarity in recording and reporting the marks of the assessment in the conventional reporting form as required in their own school policies. This was a departure from the guidelines document *Curriculum 2005 Assessment Guidelines for Natural Sciences Senior Phase*.
- Most of the schools had learner and educator portfolios, although not compiled according to the policy guidelines document.
- The allocation of 75%: 25 % for internal and final assessment for promotion decision: This similarity does appear only on the surface as the types of internal assessment tasks, the quality and the numbers of the tasks involved differed widely from school to school. One school in the study had only one test, one examination and three assignments/ class-work to constitute continuous assessment marks, whereas another school had numerous assignments, and more than the required number of tests, performances, projects and translation tasks to constitute continuous assessment (CASS) marks.
- None of the schools in the study was able to carryout investigations, projects, and performance assessment tasks as required in the policy; but three of schools made serious efforts in carrying out these tasks. These schools however, were not confident in their attempts at these tasks and therefore did not allocate the required 40% of the marks of CASS to the above tasks. Their mark allocation ranged from 10 - 15% only, according to the interviews with the participants.
- Another similarity that emerges when looking at the total picture, is the inability among most of the educators to assess tasks like performances, investigations, projects and translation tasks. This had prompted the educators to allocate more weighting (credits) to tests and examinations in their CASS calculation than anything else; whereas, the policy allows only 15% of the credits for tests and examinations.
- Another area of similarity and a bone of contention is the assessment of Specific

Outcomes – as individual outcomes or clusters of outcomes like ‘scientific knowledge’, ‘scientific processes’ and ‘science in/and society’. In nearly all the assessment tasks set in all the schools, the thrust was on basic scientific knowledge and understanding with very little emphasis on processes – except some problem-solving and data-collection for the assignments, projects, investigations, presentations and or translation tasks. This again shows the high emphasis placed on science as a body of knowledge, facts and principles rather than something to work with and create more knowledge and understanding and apply in real-life situations. There was very little evidence for this and the Specific Outcomes related to science in /and society (SO s 4, 6, 8 & 9), values and attitudes, issues of national priority were entirely left out or only given rudimentary importance. This was because the educators themselves were not confident in setting the tasks and assessing them objectively.

- Another core issue was the inability of all the schools to record and report the results of assessment (continuous and final) in line with the policy guidelines. Only one school had the learner summary sheet filled in as required, but even in this school, the summary form for teachers (Appendix B) and the record of learner’s work (Appendix C) were not included or filled in. The reason given for this by educators varied. But it was mainly due to lack of coordination, appropriate training / workshops, lack of competence and the late arrival of the materials for the common tasks for assessment (CTA). This, inadvertently multiplied the administrative work of teachers and made their tasks even more difficult. Teachers blame the lack of coherent policies, proper coordination and the lack of tangible measures to support them along with timely communication and training for their inability to comply with most of the requirements. These are also exacerbated by numerous problems facing the schools like over-crowding, lack of resources and others as elaborated earlier (2.6.4; 4.2).
- Another serious issue was the inability of all the schools to implement common tasks for assessment (CTA) as originally planned. Three schools (schools C, D and E) did not conduct the CTA as these arrived very late. The other two, tried to administer them, but had to abandon them as the CTA activities were “much

beyond the level” of the learners. All the schools finally conducted their own examinations (that varied widely in mark allocation, time allocation and quality). These were given 25% of the weighting (credits); all the continuous assessment (CASS) items together (which also varied widely in many respects) were given 75% of the credits.

- The schools also showed similarity in their inability to make assessment process transparent by giving the learners prior knowledge of assessment criteria and performance indicators- as this kind of assessment was new to most of the teachers. However three schools made some positive attempts in this regard.
- All the participants were in agreement that the inadequacy of the training they received for OBE implementation, the poor quality of the workshops they attended, the lack of coordination in terms of developing common Natural Sciences curriculum implementation and assessment strategies and practices and the lack classroom support as the main reasons for their failure to match with the requirements in the policy.
- They all felt that the Curriculum 2005 policies (OBE and its assessment) were introduced without proper planning and thinking ahead.

#### ***4.3.3.2 The differences among the schools***

The differences among the schools in their assessment policy implementation emanate from their widely different curricula, staff competencies, learner population and a host of other issues that the schools face and the local conditions and contexts. These may be non-co-operative staff, poor governance, inadequate supervision and mentoring and lack of resources- mainly improperly constituted curriculum and textbooks. This gave the freedom to educators to do what they wanted without thinking about the consequences of such a move.

This created a picture in the different schools of having divergent standards, poor

monitoring and accountability. The quality and quantity of work done in the different schools are vastly different - like the divergent colours of the 'Rainbow Nation'. One school in the study (school B) stands completely apart from the other schools in its poor delivery with regard to curriculum coverage and assessment practices. The educators in this school had no portfolios; all that the learners had was a 80-page exercise book in which appeared three poorly constituted assignments and a single test, the quality of which was poor. Characteristically, this is not the school with the poorest infrastructure or highest educator learner ratio. What was found here was a lack of commitment, accountability and the will to get ahead.

The other schools in the study, although compared fairly better in terms of curriculum delivery and assessment policy implementation, were found to adopt the policy in a way that suited them in order to comply minimally with the policy guidelines. Even with these schools, curriculum delivery and the assessment policy implementation varied widely, thus making the whole implementation procedure non-uniform and skewed.

#### **4.3.4 Conclusion**

Thus, it is apparent that the attempts by the schools to implement C2005 Assessment Policy in Grade 9 Natural Sciences in 2002 have been to a lesser or greater extent affected by a variety of factors outside and inside the school and by the educators themselves. This observation therefore supports the reports of Darling-Hammond (1990) and Spillane *et al.* (1996) that policy implementation is much affected by local conditions and the contexts under which the local actors have to implement the policy. Thus I would go along with Jansen (1998) and Motala (1997) in arguing that the introduction of C2005 through OBE and finally through the assessment policy in a 'top-down' fashion has only "widened the gap that traditionally exists between policy vision, conceptualisation and formulation and actual implementation or practice".

TABLE 4.2 CRT

CUMULATIVE RECORD TABLE

## CHAPTER 5

### SUMMARY OF FINDINGS AND RECOMMENDATIONS

#### 5.1 INTRODUCTION

This chapter concludes the study with a summary of its findings and by making appropriate recommendations. A summary of the dissertation is also provided.

This aim of the study was to analyse and describe the Curriculum 2005 Assessment Policy, the guidelines for its implementation in the Senior Phase in the Natural Sciences Learning Area in 2002 and its implementation in Grade 9 in five different secondary schools in the Polokwane circuit of the Capricorn district of the Limpopo province. The design of the study consisted of review of relevant literature, collection and analysis of educator and learner portfolios and interviews with the participants. Based on the findings of the study, some conclusions are drawn.

#### 5.2 SUMMARY OF THE RESEARCH

This study attempted to find out the implementation of Curriculum 2005 Assessment Policy in the General Education and Training (GET) band with its Outcomes-Based Education (OBE) assessment practices in selected schools in the Polokwane circuit in the Capricorn district of Limpopo province. Curriculum 2005 was introduced in the country in the General Education and Training band in 1998 to phase in Outcomes-Based Education. This follows that the assessment practices at the schools must also be in line with the Curriculum 2005 (OBE) policy. A policy document for assessment in the General Education and Training band was issued in 2000 (NPDE: 2000) for implementation in the schools, although the finer details of the assessment at the end of the General Education and Training Senior Phase was only issued between May and June 2002. This was by means of a document entitled 'Curriculum 2005 Assessment Guidelines'. The first year in which schools across the country had learners who have completed the Curriculum 2005 in the Senior Phase after starting with it in 1998 or later in the various lower grades was 2002.

This study was aimed at finding out to what extent the educators of Natural Sciences (NS) in Grade 9 in the selected schools were able to implement and report on the assessment practices that comply with the requirements as set out in the policy guidelines document. The selection of schools was mainly based on their location, learner and educator population and the type of schools according to a former categorisation as models B, C, House of Delegates (Indian) and private – although according the present categorisation all except the private (independent) school belong to the public school category.

Other aims of the study were to find out the educators' knowledge of the policy itself, their own perceptions and views of the implementation of the policy and to relate the findings to current literature on the topic. The study also makes certain conclusions and recommendations in the light of the findings.

The research design involved data collection by the following qualitative methods:

- (i) Literature survey in the area of Curriculum 2005 and its assessment policy, which also involved the available information from South African sources and information on OBE based assessment practices outside South Africa;
- (ii) Collection and analysis of documents which consisted of educator and learner portfolios of Grade 9 Natural Science from the schools in the study; and
- (iii) Extensive interviews with the participants in the study who were all Grade 9 Natural Science educators in the schools involved in the study.

Data collection that involved literature survey was extensive and lasted the whole duration of the study. Data collection involving educators and document analysis lasted from October 2002 to February 2003. Documents were analysed by using self-developed instruments in the form of matrices by verification with the Curriculum 2005 Assessment Policy Guidelines after constructing checklists for each of the items required according to the policy. Expert opinion was also sought from colleagues who were subject advisors, the participants themselves as well as the researcher's supervisor.



Most of the interviews with the participants were open-ended; but on certain occasions, the interviews followed a semi-structured pattern to give it a general direction and seek information specific to the policy as it relates to all the schools. An interview-guide was developed in consultation with the supervisor for getting specific information and giving a general direction for data collection. Notes were taken in the interviews and most of the semi-structured interviews were tape-recorded.

Anonymity and confidentiality were assured, and informed consent was obtained from the participants; hence pseudo names were used for both schools and participants. Reliability of the information was assured by informer rechecking data and by means of negative questioning. Triangulating techniques were also used to verify data collected through interview and document analysis.

The findings of the research are discussed in 5.3.3 under the summary of the research findings (5.3) as *conclusions of data analysis*.

The recommendations involve a properly planned and organised phasing in of a programme or a policy like the Curriculum 2005 (C2005) and its assessment policy by involving all the relevant stakeholders, rendering sufficient training and back-up support service during the period of trial and a programme of progressive implementation which will lead to building up capacity and confidence at the grassroots level of implementation.

## 5.3 SUMMARY OF THE RESEARCH FINDINGS

### **5.3.1 Aims of the research and its design**

The principal aim of the Assessment Policy (NPDE 2000: 3) was to enhance to each learner the provision of education that is continuous, coherent and progressive and also to improve the expertise of educators by diversifying the modes of assessment by designing, developing and using appropriate assessment instruments. Therefore, this research was designed to investigate by qualitative measures as referred to in research design (3.1; 3.2; 3.3; 3.4 & 3.5), the extent to which the implementers of the policy were familiar with the Curriculum 2005 Assessment Policy, the guidelines for its implementation in Grade 9 in

Natural Sciences and to what extent they were able to implement the policy guidelines as intended in 2002.

The answers to the above questions were investigated in three stages (i) by trying to analyse the policy and the implementation guidelines and interpret them in the light of available literature; (ii) by analysing the most important documents available – which were the educators' and learners' portfolios and (iii) by interviewing the educators who were the implementers of the policy in five different secondary schools in the Learning Area of Natural Sciences.

### **5.3.2 An overview of the literature review**

The literature survey (2.2) indicates that the implementation of OBE and its modes of assessment are riddled with a number of problems. Some of these relate to the particular educational legacy and an overwhelming desire for political and social leaders to bring about rapid changes without giving proper thought to the nuances of the situation in South Africa and to the fragile classroom teaching and learning situation that prevails in its schools. There was no proper consultation at the different levels with the relevant stakeholders – especially the teachers before the implementation of C2005 and the assessment policy that emanated from it.

The literature survey under OBE assessment and implementation review (2.6) also indicates that, even in developed countries where educator expertise and competencies are higher, and resources are better, the level of competency and confidence of educators with OBE assessment tasks like performance assessment, authentic assessment, investigations, projects, assessment of tasks involving complex practical skills, problem-solving abilities and the assessment of attitudes etc. are low. The validity and reliability of these tasks are also questionable when performed under certain conditions. Maeroff (1991); Brandt (1992); Brindley (1998); Smith et al. (1999); and Worthen (1993) indicate this in their research. This is also the expressed views of South African educationists and academics like De Clercq (1997); Jansen (1998); and Rault-Smith (2001).

### **5.3.3 Conclusions from data analysis**

#### ***5.3.3.1 Inadequate knowledge, poor communication and coordination***

Participants (who were educators in the Natural Sciences Learning Area in the specific Grades in the schools in the study), did not reveal either in the interview or by verification of the documents like educator and learner portfolios used (4.2.1; 4.2.2; 4.2.3; 4.2.4 & 4.2.5), sufficient knowledge of the details of the curriculum and the assessment policy (GET band) or the methods of assessment and record keeping. According to them there was no proper organisation or coordination of efforts by the authorities at the local school or higher levels into organising or creating the right kind of communication and support and training structures necessary for educator development and sustaining such structures at the different levels. Even communication within the school (among educators teaching the same Learning Area) was also so limited that in one school (4.2.2), the two educators who were also participants in the study were teaching different curricula and assessing the learners in their own different ways. Participants themselves have commented quite adversely about this lack of curricular coordination and poor support among educators within the area.

#### ***5.3.3.2 Poor competence and skills in OBE assessment methods***

This study also helped to confirm the findings from literature surveyed (2.6) that teachers do not feel confident or competent in handling the variety of assessment tasks and developing the kind of assessment tools and instruments that are required to test and assess learner capabilities through activities like investigations, projects, assignments, group-work, translation tasks, the assessment of skills and attitudes. Participants in four out of the five schools admitted that they were not familiar (4.2.1.3; 4.2.2.3; 4.2.2.4; 4.2.5.3) with most of these assessment measures and no one was confident in the measurement of skills (both practical- manipulative and complex problem-solving) or attitudes or the ways and means of making the whole process transparent. They had no clear idea of developing grids or rubrics for each kind of task and informing the learners about the outcomes i.e., making the whole process transparent before the assessment and matching performance with properly authenticated criteria. What they were familiar with, were the most common

forms of assessment, which were class-work, simple assignments, tests and examinations etc., as revealed in the interviews (4.2.1.3; 4.2.2.3; 4.2.5.3). These assessment tasks mostly tested learner's knowledge and seldom concentrated on creative and problem-solving (application) levels of questioning.

#### ***5.3.3.3 Unfamiliarity with the methods and forms of recording and reporting***

The participants were also not familiar with the recording and reporting of learner performance according to the policy document requirements, apart from the recording of the numerical scores in their assessment tasks. The analyses of the documents as well as interviews with the participants (4.2) revealed that the information concerning the multiple tasks of assessment and the assessment policy reached them very late in 2002 and they were not able to carry out the variety of assessment tasks, record the scores and provide other required information as indicated in the policy. As a result, much of the recording and reporting of assessment scores were done according to the requirements of the school policy, which did not, in most instances match with that of the Assessment Policy Guidelines. The records that were available from the participants also varied according to their competencies, and their own willingness to comply with the basic requirements. Participants in two out of the five schools did not have properly constituted records, marks or educator portfolios. What was available in these two schools were very sketchy and are liable to questionable authenticity. None of the participants completed the record of learners' work as required in the guidelines document (Appendices A, B and C: *A – Sample front cover for a Learner's portfolio together with index, B – Assessment summary form for teachers and C – Record of learner's work*) or were able to explain comprehensively what and how they were expected to fill in the forms B and C. This clearly showed lack of competency with the task, poor training and support and inadequacy of information provided to the educators.

#### ***5.3.3.4 Portfolio problems***

Another serious omission on the part of most of the participants' and their learners' assessment documentation was portfolio compilation. Two participants – both educators in one school, did not have any portfolio to show, apart from some preparation notes, a loose

bunch of question papers in Grade 8 and 9 and the marks for some of their tests and examinations. With another educator in another school in the study, the portfolio was found to be missing towards the end of the year. The available evidences were the marks of the final overall assessment and learners' portfolios. In most instances, the educators did not know how to organise their portfolios in a manner suitable for presentation according to the specifications in the guidelines document. The other three schools in the study made genuine efforts to compile both educator and learner portfolios. These were composed of fairly neatly and systematically organised files containing the different tasks done in the year, although a table of contents with index according to the guidelines document was not constituted. The participants in these schools had their own portfolios, which in two out of the above three schools, consisted of three files – a teacher resource file, the Grade 9 assessment file and a marks register. This was the system followed traditionally in these schools and not necessarily a practice started with the introduction of OBE through C2005. However, the evidences indicate that the OBE way of compiling portfolios was new to all the participants and their learners.

The presentation of the learners' portfolios and the contents in them varied widely from very poor to fairly good. This also followed a pattern that follows the educator portfolios. The best presentation was from the school (4.2.3) where most of the assessment tasks were done according to the policy guidelines and the worst was from the school (4.2.2) where the two educators in the Grade had no portfolios of their own. This quite clearly indicates the need for teachers to be role models capable of leading learners through examples.

#### **5.3.4 The common features observed among the schools**

Most of the participants admitted (4.2 & 4.3) that they did not have sufficient knowledge about the details of the assessment policy and its implementation procedures or the ways and means of making the process transparent to learners (about outcomes, expectations, applicable criteria and awarding of scores) or using assessment in formative ways.

The uniformity in all the schools in the study in matters relating to the assessment policy and its implementation relates more to what they were unable to do than to what they were

able to do as revealed through the literature survey (2.4; 2.5), document analysis and interviews with the participants (4.2). The most important among them are given below:

- Forms of assessment: two investigations or projects which require 10 hours each and a third one that requires three hours with a total credit value of 40%; three performances and presentations with a credit value of 15%; and three translation tasks with a value of 15%. None of the schools were able to carry this out or allocate credits are required.
- Themes and percentage allocation according to themes (2.5.3): No school in the study conducted teaching or assessment according to the five different themes (Life and Living; Matter and Materials, Energy and Change Earth and Beyond and Integration theme) – or the allocation of 20% to each of the themes. Therefore the assessment also did not comply with the requirements of each theme. The participants reasoned that there was no properly constituted curriculum or textbook or coordination between the schools in the area and each of them were free to decide on what curriculum to teach and assess. Added to this, was the fact that Earth and Beyond was taught in four of the five schools as part of geography under the Human and Social Sciences Learning Area.
- Allocation of the nine Specific Outcomes or clustering the Specific Outcomes into the three groups like ‘scientific processes’, ‘knowledge’ and ‘science and society’ (2.5.2.2): This also proved to be extremely problematic for the participants. Most of them were not familiar with the creation of assessment tasks that involve the assessing of scientific process or creating tools and assessment tasks that assess ‘science and society’ which also involve attitudes. Most of the participants did not have any kind of practical work or creative problem solving tasks in their assessment. Therefore, most of the allocation of credits was for the knowledge component of the Specific Outcomes (SO s 2 and 7). This also raises the question of the validity of the whole assessment exercise.
- Another area of serious contention is the inability of all the schools to conduct the common tasks for assessment (CTA), mostly because these did not arrive in time for the end of year assessment. The two schools that tried them, abandoned them (4.2.1.3; 4.2.2.3; 4.2.3.3; 4.2.4.3 & 4.2.5.3). This was because, according to the participants, the tasks were very difficult and the learners were failing. All schools had their own end of

year examinations that were weighted with 25% of the credit requirements for pass. This was because all the schools applied the same formula (75% for continuous assessment and 25% for end of the year examination) as per the policy, but the standards and levels of competency in the Learning Area and the quality of the assessment tasks themselves were very different. As result, all the schools had high number of passes and most of the learners were promoted to Grade 10. This has been a serious flaw in the implementation of the assessment policy at the national and the provincial levels. The participants also echoed this sentiment and indicated that with the kind of curriculum they taught and the kind of assessment policy they implemented, they were quite sure that most of the learners lack fundamental knowledge and skills and they will be unable to cope with the demands of the syllabus in the different subject disciplines of biology, physical science and geography in Grade 10. Two of the participants remarked that the learners “do not know anything”.

- Yet another problem was that the participants were unable to use assessment tasks in formative ways and adopt remedial or accelerated teaching according to learner needs. Most of them admitted lack of competency in this regard (4.2.1.3; 4.2.2.3; 4.2.3.3; 4.2.4.3 & 4.2.5.3) and their ability to cater to learners with special education needs and also believed that all the learners in their schools were ‘normal’ and the only remedial measures they adopted were the discussion and corrections of the tests and examinations.
- There was also no significant attempt by any of the participants in the study to include topics of national priority like HIV aids, environmental education or links with higher education or integration across themes. This, in the participants view, was particularly because of lack of sufficient exposure to such themes, integration of themes and topics, lack of proper curriculum support materials and other resources. This was also revealed in the interviews with the participants.
- All of the above contributed to the disparity in the compilation of educator and learner portfolios with the result that none of the participants in the study was able to compile either the educator or the learner portfolios or make the necessary recordings of the assessment tasks and the scoring by learners as required in the policy. Three of the

schools had fairly constituted educator and learner portfolios that more or less followed the traditional system, although the learner portfolio compilation is a new development with the OBE. Although learner portfolios were compiled in four of the five schools, there was no holistic assessment of the portfolio in the schools. Portfolios were simply used as a record of all the activities of the year.

### **5.3.5 Concluding remarks about the findings**

Based on the findings of the research, it is fairly reasonable to assume that the Curriculum 2005 assessment policy information and the implementation of the policy guidelines by the participants of the schools in the study indicate lack of sufficient knowledge and competence for putting the policy into practice. This is understandable, considering the various factors that came into play during the course of the implementation of the curriculum and its assessment policy, the particular situation of each school and the capacity of the individual educator in the study.

It also indicates that the fair amount of success achieved by any of the schools in the study was dependent on the initiatives and creativity of the individual educator and the educator's commitment to tasks rather than to the outside intervention efforts which were very limited and poorly organised and conducted. This was revealed in the interviews with the different educators.

The above findings reinforce the statements made by De Clercq (1997); Jansen (1998); and Motala (1997) about the widening gap between policy formulation and policy implementation especially in the context of Curriculum 2005 and OBE in South Africa. Thus, the researcher also agrees with the above authors that OBE implementation in South Africa is more likely to widen the existing gap between resource-rich and resource-poor schools because the curriculum implementations initiatives were driven more by political imperatives rather than by the realities that exist at the school level. This may be thus, another example of the widening gap between policy formulation and policy implementation.



## 5.4 RECOMMENDATIONS

### 5.4.1 Introduction

There still exist, a lot of gaps and disparities in the training and preparation of educators in their pre-service and in-service professional development as revealed in the literature review and in the findings (2.6; 4.4). Attempts to close these gaps by bringing the resource poor schools and under-skilled educators to certain norms and standards that are found in the fairly resourced schools or a to national norm is imperative. It will be only in such a situation that teachers will feel the challenge and motivation for personal and professional development. From this point of view, based on the findings and literature reviewed, some recommendations are made under the following categories:

(i) Educator development; (ii) Resource and material development; (iii) School development; (iv) Adequate planning, preparation and phasing in of the process as part of policy implementation; (v) Organisation, management and intensive support at different levels- including the classroom; and (vi) Effective feedback mechanisms for constant appraisal and introduction of adequate control measures and checks and balances.

### 5.4.2 Educator development

All the participants in the study, through the documents analysed and in their interviews (4.2) revealed that they lacked competency in the different methods of assessment. Although implementation of the assessment policy was the key issue in the research, the implications of the participants' response go beyond assessment. It involves all aspects of C2005 and OBE curriculum, teaching, learning and assessing. Most of the educators were not confident in most of these aspects, hence the great disparity between policy requirements and practice. Teacher training – both pre-service and in-service training and development, catering to the specific requirements of the curriculum and its implementation (2.4.1) must become an on-going part of the programme of implementation. This must become one of the foci points of departmental intervention.

### **5.4.3 Resource and material development**

All the participants in the study revealed in their interviews (4.2) that there was no properly developed or coordinated curriculum and there was no proper guidance in this regard. According to the findings, all the teachers followed different curricula content and themes (syllabi) by following different books and resources to such an extent that, while two schools in the study ( 4.3.2.3, 4.3.2.4) did fairly well in matters of content coverage and other activities done, one school (4.3.2.2) did extremely poorly on both counts. This contributed to a wide disparity in the standards and levels of performance of the learners when the schools were compared with each other. In matters of assessment also, this depicts a similar picture. The participants indicated that, had there been a curriculum / syllabus developed for the Senior Phase Natural Sciences at the local Circuit or District levels, they would have followed it and there would be comparable standards of teaching and assessment across the schools. This emphasises the need for the development and supply of standardised materials in the form of a properly constituted curriculum, textbooks and other resources to ensure uniformity in standards across the schools.

### **5.4.4 School Development**

Inadequate human and material resources, lack of physical infrastructure in the form of ample working , learning and teaching space for learners and educators and very high classroom pupil teacher ratio (in some cases more than 60 learners in a class) were mentioned by most participants in the interviews (4.2.1; 4.2.2; 4.2.3; 4.2.4; 4.2.5) as serious problems in the school teaching situation. This has also been reported by Vally and Spreen (1998); Motala (1999); De Clercq (1997); and Jansen (1998) in the South African context (2.6). The solution is to provide the human, material and other physical resources necessary by making adequate provision for them in the education budget and making sure that the resources are available and ready for use at the earliest opportunity.

### **5.4.5 Adequate planning, preparing and a programmed phasing in of the policy**

According to the participants, (4.2) the government has rushed into the C2005 implementation without much thought to the impact this will have on the fragile classroom

teaching and learning situation, especially in resource-poor schools - into which category most of the schools belong. This has been clearly brought to attention in the literature survey (2.2). Although this curriculum transformation is a step in the right direction, as expressed by most of the participants, an educational curriculum implementation and assessment policy of this nature should have been better planned and prepared. As Jansen (1998) indicates, this should have involved all the stakeholders, especially the educators themselves and more time should have been given for preparing the right kind of school infrastructure and resources and for implementing the programme.

#### **5.4.6 Coordination, organisation, management and intensive support**

One of the most crucial factors identified by the participants in the study as revealed in the interviews (4.2) was the lack of proper coordination, communication and curriculum support from the curriculum support (advisory) services. Conflicting communication from the department was also blamed for the poor delivery, organisation and management of the programme. The participants (4.2.1, 4.2.3, 4.4.4 and 4.4.5) suggested the idea of forming local groups or clustering of schools at the Circuit level for joint curriculum planning, resources and other material development, including the planning of assessment and standardising assessment activities across the schools (in the area) so that parity of standards and uniformity in teaching and assessment can be maintained. Some of the participants were even willing to take the lead, provided they get the necessary support and assistance from the relevant quarters.

In this regard, it is suggested that the GET curriculum advisors at the local level take the lead and create a platform at the local level for this kind of interaction among the schools and co-ordinate the activities of the educators and provide the necessary support. Clustering of schools with this idea could be a step in the right direction.

#### **5.4.7 Effective feedback, appraisal and adjustment**

It is not only important to put the above mentioned programmes and structures into place; but also crucial to have an effective programme of monitoring through appropriate feedback mechanisms for appraisal and adjustment. The success of initiatives like these

depend on effective monitoring and feedback mechanisms and constant, constructive and progressive support from all levels. This was constantly indicated by all the participants (4.2) in their interviews. Most of them worked as if they were islands in an ocean of change and were groping in the dark. This situation has to change by installing mechanisms at every level – from the school to the national policy-making levels for effective feedback, appraisal and adjustment.

#### **5.4.8 Concluding comments**

The pace of the curriculum change through Curriculum 2005 along with its assessment policy implementation was very rapid. Neither did teachers get sufficient insight into the whole process, nor were they adequately trained to carry out their professional functions in a manner that could raise the standards of the learners. This happened due to a variety of factors like lack adequate professional competence, lack of a common curriculum with resource materials, coordination of their efforts and lack of classroom support – to mention a few of the most crucial ones among a long list of others. This follows that the curriculum pacing should have been slower; it should have been properly paced-in with in-service training, resources for teacher and learner development, upgrading of the conditions at the schools and those of the learners and with the appropriate classroom level support.

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Appendix AX

**QUESTIONNAIRE AND SEMI-STRUCTURED INTERVIEW GUIDE**

**Educator profile**

Gender M / F

Type of school: A B C Independent

Educational Qualification A. M + STD (3yr) /National Diploma (4yr)

B. Degree (B. A/ B. Sc) or post-graduate

Professional Qualification: STD National diploma Degree (B Ed / M Ed)

Teaching Experience: 1- 3 Yrs. Under 5 years 5-9 yrs 10yrs +

OBE and curriculum 2005 Training received:

Class details : Number of classes taught: No of periods /week

No of classes taught in Grade 9: No of learners:

Number of hours spent in each class of Grade 9

## **Appendix BX- Interview Guide**

Assessment given :

Types of assessment:

How they were assessed

How they were recorded

How they were used in the learner CASS decision:

Training received for assessment (CASS) :

Training received for CTA:

How CASS and CTA were used in decision on learner progress and assessment of outcomes – construction of grids and rubrics

APPENDIX BX (CONTINUED)

Knowledge of policy	Way of implementation
<p>1. Policy Document</p> <p>1. Type of workshop/ training</p> <p>2. Mentoring</p> <p>3. Piloting study</p> <p>4. Documents available</p> <p>5. Documents made</p> <p>6. Learner's profile</p> <p>7. Educator profile</p> <p>8. Recording and reporting</p> <p>9. Verification procedure</p> <p>10. Moderation – external</p> <p>Feedback</p>	

## Appendix CX – Portfolio (Educator and Learner) guide check

### Continuous assessment policy guide check

1. Continuous assessment CASS – credit allocation (18) for N. S makes up 75%

2. Constitution of CASS – allocation of marks/ credits

Process skills 7, problem solving 4, and decision-making 3

Facts/ concepts/ principles etc 4, contested nature (indigenous knowledge)-2

Management and development of resources-1, science and culture 1, ethical issues, bias and inequities- 1, Socio-economic development-1

3. Common Tasks for Assessment (CTA) ( 6 credits) must also reflect the same proportion of allocation.

4. Contents of the Assessment Profile in NS

Whether outcomes and assessment criteria have been made known to the learners before hand? How? When? Evidence?

Evidence of teaching?

Evidence of learner's performance in all assessment tasks

All assessment tasks, assessment grids used to assess the tasks, any expanded opportunities given – learners with special educational needs- (LSEN) check for adaptations to tasks and record of any special concessions

Items in the Teacher's portfolio: Type of assessment selected, assessment tasks given to learners , the assessment grids, any information relevant to the performance of learners

5. CTA – Does it involve practical work? – Does it serve as a moderating tool for CA?

6. How is the second component constituted? Is there opportunities for individual work? Does it cover the mastery of the outcomes covered in the first component?

7. CASS – compulsory forms of Assessment

1. Investigations/Projects

2. Assignments

3. Tests and Examinations

4. Presentations and Performances

5. Translation Tasks

8. Allocation according to themes:

Life and Living 20%

Energy and Change 20%

Matter and Materials 20%

Earth and Beyond 20%

Integration of the Above 20%







(Appendix A)

Sample front cover for a learner's portfolio together with an index

Page 68 of the Assessment Guidelines Document (DoE 2002 b)



(Appendix B)

(Page 69 of the Assessment Guidelines Document – DoE 2002 b)

Assessment summary form for teachers

(Appendix C)

(page 70 of the Assessment Guidelines Document DoE 2002b)

Record of Learners' work

(Appendix D) Departmental Circular