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TEACHERS' ATTITUDES TOWARDS THE IMPLEMENTATION OF OUTCOMES BASED EDUCATION (OBE) IN SOUTH AFRICA

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OUTCOMES BASED EDUCATION (OBE): LOOKING AT TEACHERS' ATTITUDES AND PERCEPTIONS

A research report submitted to the Faculty of Education,
University of the Witwatersrand, in partial fulfilment of the requirements
For the degree of Master of Education (Educational Psychology).

Johannesburg, 1999.

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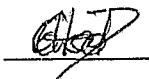
DECLARATION

I hereby declare that this thesis is my own unaided work. It is being submitted for the degree of Master of Education (Educational Psychology) at the University of the Witwatersrand, Johannesburg. It has not been submitted for any degree or examination at any other university.



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ABSTRACT

Education in South Africa is presently changing from content based to outcomes based education (OBE). Literature review suggests that OBE is not a new invention. It has had many names in its history and is rooted in mastery learning. Unlike mastery learning, which follows a behaviourist approach only, OBE follows a holistic approach that is consistent with current learning theory based on cognitive psychology. OBE, in South Africa, is strongly influenced by the Australian and New Zealand Curriculum Frameworks. The question remains whether OBE can be successfully adopted in developing countries such as South Africa.

For change in education to be effective and long lasting, teachers need to view the process as desirable and necessary. Teachers' perceptions of OBE will either aid or hinder its successful implementation in South Africa. This study investigates the attitudes, perceptions and feelings of competence of teachers towards OBE. The sample constituted 124 teachers from six different types of primary schools, namely a Private School and a historically: Black School, Coloured School, Indian School, White English speaking School and White Afrikaans speaking School.

The study showed that 64 percent of respondents expressed negative attitudes towards OBE. Feelings expressed, amongst others, were that of scepticism (17 percent), insecurity (16 percent), worry (15 percent), confusion (14 percent) and apprehension (seven percent). Only 36 percent of respondents expressed positive attitudes towards OBE.

The results of this study provide reasons for concern. The results indicate that unless major changes in teacher attitudes towards OBE are developed through appropriate interventions, its implementation could encounter serious problems.

Key Words: Outcomes Based Education, Mastery Learning, Curriculum Framework, Attitudes, Perceptions, Competence.

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CLARIFICATION OF TERMS

Assessment Criteria: Assessment criteria provide evidence that the learner has achieved the specific outcome. The criteria indicate the observable processes and products of learning which serve as a culminating demonstration of the learners achievement. The criteria are derived directly from the specific outcomes and form a logical set of statements of what achievement could or should look like.

Cognitive Education: Cognitive education stresses cognitive and social modifiability, metacognition and the education of intellectual and other processes. These approaches and goals are seen as relevant to all learners, including those with special needs.

Critical Outcomes: Critical cross-field outcomes are generic and cross-curricular. They underpin the learning process in all its facets. They are not restricted to any specific learning context, but they inform the formulation of specific outcomes in individual areas of learning for all learners at all levels on the NQF.

Curriculum: This term includes all aspects of teaching and learning.

Curriculum Framework: A curriculum framework is a philosophical and organisational framework which sets out guidelines for teaching and learning.

Instrumental Enrichment: Instrumental Enrichment is described as a strategy for learning to learn. It uses abstract, content-free, organisational, spatial, temporal and perceptual exercises that involve a wide range of mental operations and thought processes. The aim of the Feuerstein Instrumental Enrichment program is to change the overall cognitive structure of the performer by transforming his passive and dependent cognitive style into that characteristic of an autonomous and independent thinker.

Mediated Learning Experience: Mediated Learning is a vital approach that ensures effective learning. The human mediator interposes himself between the learning organism and the world of stimuli to interpret, guide and give meaning to the stimuli. Through mediated learning the individual develops efficient thinking skills which enable him or her to become an autonomous and independent learner.

Outcomes Based Education (OBE) Approach: Outcomes-Based Education should be driven by the outcome displayed by the learner at the end of the educational experience (process).

Objectives Of The National Qualifications Framework: The objectives of the National Qualifications Framework are to create an integrated national framework for learning. Access, mobility and progression are key objectives, as is the need for enhancing quality in education and training. Attention must be given to the speedy redress of past discrimination in education, training and employment. Through these objectives, the NQF contributes to the full personal development of each learner and the social and economic development of the nation at large.

Outcomes: Outcomes are the results of learning processes, formal, non-formal or informal and refer to knowledge, skills and attitudes within a particular context. Learners should be able to demonstrate that they understand and can apply the desired outcomes within a certain context.

Specific Outcomes: Specific outcomes are context specific. They are informed by the critical outcomes but formulated within the context in which they are to be demonstrated. They describe the competence which the learners should be able to demonstrate in specific contexts and particular areas of learning.

1. INTRODUCTION

1.1. Education In The South African Context

Education and training in South Africa has been characterised by gross inequalities, irrelevant curricula, 'chalk and talk' teaching methods and limited skills training (Marock, 1997). The legacy of apartheid can be blamed for the severe inequalities found in all aspects of education provision as it ensured that education and training was provided to a selected group of South Africans only (Foks, 1997).

In our rapidly changing society one of the major challenges that South Africa is faced with is the need to transform its education and training system which has been dominated by many years of apartheid educational policy and international isolation (Butcher, 1997). The outcomes based education (OBE) curriculum, phased into schools from 1998, has been designed to ensure that all learners, regardless of race, have access to knowledge, understanding and skills so that individuals can be "life long learners" (Marock, 1997, p.59) and can continuously develop knowledge and insights with new experience. Educational equality, critical thinking, problem solving through questioning and inquiry, sharing and co-operation, and effective communication are encouraged and promoted through OBE (Jansen, 1997; Marock, 1997).

1.2 OBE: A New Invention?

OBE is not a new invention. It has had many names in its history, such as Transformation Education, Competency Based Education, Skills 2000, Performance Based Learning, and/or Results-Based Curriculum. Critics have quoted Dr. Carl Rogers by saying "change the name of [the reform policy] as fast as necessary to stay ahead of the critics" (Celano, 1996, p.1).

1.3 Defining OBE

OBE may be defined as an educational approach that focuses not only on what students learn, but how they learn. It starts with the belief that all students can learn and succeed (Raburn (cited in Schwarz & Cavener, 1994, p. 327) OBE refers to a "structure at a school and district level that stresses clearly defined outcomes, criterion-referenced measures of success, instructional strategies directly related to student abilities and needs, flexible use of time and

learning opportunities, recognition of student success, and modification of programs on the basis of student results" (Blondin-Andrew, 1998, p.1).

1.4 Prevalence Of OBE

Apart from South Africa, other countries in the world such as the United Kingdom, the United States, Canada, Australia and New Zealand have implemented OBE (Mkhatshwa, 1997). Literature review on OBE (Brighton, 1995; Reagan, 1997; Roche, 1998; Schlafly, 1993) suggests a mixture of both positive and negative attitudes towards OBE. Articles such as "Outcomes-Based Education: Miracle Cure or Plague" (Manno, 1994) and "What is OBE: A White Knight to the Rescue or a Disaster in the Making?" (Bonville, 1996) highlight the controversial nature of OBE.

1.5 Theoretical Basis Of OBE: Mastery Learning

Literature review does not support a specific learning theory for OBE. Articles by Kruger (1997) Manno (1994), Schwarz and Cavener (1994) and Slavin (1987), however, suggest that OBE has deep roots in Mastery Learning (ML), a behavioural/educational method popularized by Benjamin Bloom in the late 1960s, which became widespread in the early 1980s (Manno, 1994). The principle defining characteristics of ML methods is "the establishment of a criterion level of performance held to represent mastery of a given skill or concept, frequent assessment of student progress towards the mastery criterion, and provision of corrective instruction to enable students who do not initially meet the mastery criterion to do so on later parallel assessment" (Slavin, 1987, p.1). The concept of pass/fail is radically altered to credit/try again (Kruger, 1997). Skinner's behaviour modification techniques are central to achieving ML results (Bonville, 1996).

1.6 Criticisms Levelled Against Mastery Learning

According to Schlafly (1993, p. 5) learners of ML are "recycled through the (learning) process" until they meet the requested outcomes. Faster learners are not allowed to progress. They are given horizontal enrichment or told to do peer tutoring to help the slower learners. Roche (1998) has criticized ML by stating that through it, objective standards of achievement are lost. Standards are simply lowered until all students, regardless of intellect or ability, are able to

meet those standards (Bonville, 1996; Celano, 1996). Schlafly (1993) states that, mastery learning, the predecessor of OBE, was a gigantic failure and had to be abandoned in disgrace in 1982.

1.7 How Can OBE Work If ML Has Failed?

The ML and OBE models both assert that all students can learn and that outcomes or competencies will be attained through learning processes (Schwarz & Cavener, 1994). The framework, incorporated by the two models, however, differs. ML follows a behaviourist approach, while OBE follows a holistic approach that is consistent with current learning theory based on cognitive psychology. Unlike ML, which defines discrete learning outcomes in terms of behaviour only, OBE incorporates an understanding of learning outcomes as complex combinations of personal attributes (such as knowledge and culture), thus enabling the performance of a variety of tasks (Preston & Walker, 1993). A constructivist framework, in which learners construct their own knowledge and are able to make connections, associations and linkages between new and existing knowledge (Udvari-Solner, 1996), is adopted.

Furthermore, in comparison to ML, where students are given horizontal enrichment tasks, students following the OBE curricula are given expanded "opportunity and support for learning success" (Schwarz & Cavener, 1994, p. 329). Teachers need to adapt their teaching style to a child's learning style (More, 1997), provide enrichment assignments to strong students, alternative instruction for slow learners, and allow each learner enough time to ensure that the curriculum is implemented and outcomes are achieved.

In summary, the success of OBE is based on its holistic approach.

1.8. Prominent Models On Which OBE Is Based

Before South Africa's framework for OBE can be looked at, it is essential to examine the models on which it is based. Both the Australian and New Zealand curriculum frameworks for OBE have been particularly influential in shaping South Africa's new education system (Jansen, 1997). For this reason Australia's, as well as New Zealand's curriculum frameworks need to be critically examined.

1.9 The Australian Curriculum Framework

The competency-based education movement in Australia evolved out of an overall microeconomic reform agenda with an emphasis on efficiency, effectiveness, costs and outcomes (Stanley, 1993). Three national reports: The Finn Report, the Carmichael Report and the Mayer Commitee's Report were influential in shaping competency-based education (Borthwick, 1993).

The seven key competencies, representing a new minimum outcome for schooling that were identified by the Mayer Committee, included: (1) Collecting, Analysing and Organising Information; (2) Communicating Ideas and Information; (3) Planning and Organising Information; (4) Working with Others and in Teams; (5) Using Mathematical Ideas and Techniques; (6) Solving Problems; and (7) Using Technology (Carmichael, 1993).

The Mayer Committee adopted a broad definition of key competencies which acknowledged that performance is determined not only by skill but also by knowledge and understanding. Competence was defined as a person's capacity to achieve in a given situation and his or her ability to transfer knowledge and skills to new tasks and situations (Borthwick, 1993; Holland, 1993). The Mayer Committee stressed its belief that the key competencies needed to be compatible with the broader goals of learning and should form an integral part of general education. In line with Carmichael's Report (1993) the Mayer Committee emphasised that the key competencies are "competencies essential for effective participation in the emerging patterns of work and work organisation across industries and occupations" (Randall, 1993, p. 53).

Eight learning areas: English, health, languages other than English, mathematics, science, studies of society and environment, technology and the arts have been identified by the Australian Education Council. Each of the learning areas has associated statements and profiles. Learning area statements elaborate on the common and agreed goals for schooling, they clarify a curriculum area by outlining its essential elements and show what is distinctive to the area. Profiles comprise a description of the typical progression in learning outcomes achieved by learners during the years of schooling for each of the eight learning areas. The profiles consist of: (1) a level statement - which describes the quality of students' achievement at a particular level; (2) a list of student outcome statements, organised within strands, which

describe the skills and knowledge that students gain as they progress in that area of learning; (3) pointers which assist teachers in understanding the meaning of the outcomes; and (4) illustrated work samples of student work which are characteristic of the level (Malcolm ,1997 a; Randall, 1993).

1.10 The Benefits Of Competency-Based Education

Industry groups, including both employers and workers, have accepted the key competencies as being essential competencies that all students should develop through schooling to make the entry to work as efficacious as possible (Dellit, 1993). Teamwork rather than individual work; participation in management and multi-skilling rather than separate skill classifications which are essential for a healthy workforce are promoted (Holland, 1993).

1.11 Criticisms Levelled At Competency-Based Education

Stanley (1993) and Randall (1993) have criticised the notion that outcomes and competence are linked. Carroll (cited in Stanley, 1993, p.148) indicates that people use a variety of different strategies in performance, so that one has to be cautious in deducing particular competencies from such performance. The assessor's subjectivity furthermore, influences the assessment of a competent performance.

According to Soucek (1993) performance does not guarantee the presence of knowledge. In competency-based education the focus is on distinct competence/skill modules rather than on knowledge and understanding per se. The documents speculate that understanding and knowledge will develop through the skill-learning and skill-testing situations. Competence and performance are equated as being the same. Norris (cited in Soucek, 1993) has contested this by stating that competence involves potential, whereas performance is about executing a task. Wood and Power (cited in Soucek, 1993) have also described performance and competence as distinct entities. They believe that successful training requires both knowledge and understanding, as well as demonstrable performance of tasks.

Stanley (1993) has criticized competency-based education for its provision of minimum standards through the acquisition of generic competencies. Psychometric and neuropsychological research has shown that many individuals are unable to achieve

competence in all skills and learning areas and demonstrate specificity rather than generality of ability. Review of expert literature has also indicated that specific skills and ways of thinking are not transferable across domains. Competency-based education's emphasis on transfer of skills may thus be questioned (Stanley, 1993).

Dellit (1993) has questioned the origins of the key competencies and their merit in school education. Porter, Rizvi, Knight and Lingard (1992, p.53) have argued that the Australian pedagogy and curriculum are constructed solely with industrial ends in mind. It is increasingly the employers, not educationalists, who decide what is to be taught in the classroom (Soucek, 1993).

In competency-based education there is a danger of creating the impression that economic productivity at both macro and micro-level will be enhanced through education and training. The assumption, contained in the competency agenda, that unemployment will be lessened once the skill level of young people has improved, is however, an ideological hoax (Porter, Rizvi, Knight and Lingard, 1992). Soucek (1993) believes that one of the problems with competency-based skilling is associated with its tendency to divide and separate clusters of skills, without providing useful structures for the learners to make connections between these discrete skills. In competency-based education, educational concerns are reduced to the discrete area of technical knowledge. A person's lifeworld interests (world of personal experiences and interests) are subsumed under systemic interests (focusing on workplace or industry). The competency movement denies society its capacity to think critically. It does not permit the person to invest an emotional effort in the learning task. The learner perceives the task as belonging to someone else and may not be challenged to autonomously and creatively resolve the task (Beevers, 1993; Soucek, 1993). When students work in groups a "bystander effect" (Weiten, 1992, p. 607) may result.

Porter, Rizvi, Knight and Lingard (1992) have criticized the lack of attention given to a theory of learning and teaching within the competency-based movement. According to Preston and Walker (1993) the holistic approach to education is often ignored. Instead the behaviourist approach to education which is geared towards economic productivity is adopted. The deficiency of the latter approach is that it does not give significance to attributes (knowledge, capabilities, skills, attitudes) and does not describe how they are structured into competencies which enable the person or group to achieve a set of tasks to an appropriate standard and

thus make the individual or group competent in that role.

1.12 Teachers' Attitudes Towards Competency-Based Education

Dellit (1993) has found that teachers in general are responsive to Mayer's list of competencies and recognize the value of competency-based education. Teachers are, however, still uncertain of the origin of competencies, are sceptical about assessment and reporting procedures and are concerned about the impact on their workloads. They experience difficulty adapting their teaching style to a child's learning style and are confused by the terminology of competency-based eduation (Schwarz & Cavener 1994). David McKinnon (cited in Burrow, 1993, p.112) highlights some of the dominant paradigms that exist in Australian schools: "The control of the learning process is still placed with the teacher and not the student. Fragmentation of the learning process occurs socially through streaming and technically through compartmentalisation of school subjects. Extrinsic rewards for work and achievement in the form of marks, grades, certificates, position in class, prizes and teacher approval remain predominant. An uneven reward structure based on competition rather than co-operation in which success for some means failure for others prevails. Rule conformity is still highly valued as the normative basis of learning and school work. Hierarchical school organisation characterised by superordinate/subordinate relations between students, administrators and teachers, and between high and low status subjects continues to dominate school management". It appears that much more teacher training on competency-based education is needed for it to be implemented successfully.

1.13 The New Zealand Curriculum Framework

The New Zealand Curriculum Framework specifies seven essential learning areas: Language and Languages, Mathematics, Science, Technology, Social Sciences, the Arts, Health and Physical Well-being; which depict in broad terms the knowledge and understanding which all students need to obtain. The essential learning areas provide the framework within which the essential skills: Communication Skills, Numeracy Skills, Information Skills, Problem-Solving Skills, Self-Management and Competitive Skills, Social and Co-operative Skills, Physical Skills, Work and Study Skills; attitudes and values are developed (Te Anga Marautanga o Aotearoa, 1993).

All the essential skills are vital if the individual is to achieve his or her potential and to participate fully in society, including work. The teaching curriculum needs to ensure that all learners have the opportunity to develop the full range of the essential skills to the best of their ability. As attitudes to learning are influential in shaping the process, quality and outcomes of learning and assessment, the New Zealand school curriculum is geared towards encouraging positive attitudes towards learning. Commonly held values such as honesty, reliability, respect for others, respect for the law, tolerance, fairness, caring or compassion, non-sexism, and non-racism are reinforced through the school curriculum. It is hoped that the school curriculum will help learners to develop and clarify their own values and beliefs and respect values and attitudes which are different from their own (Te Anga Marautanga o Aotearoa, 1993).

Various forms of assessment are employed within the New Zealand Curriculum Framework. School-based assessment is used to diagnose individual student's progress and enhance teaching and learning by ascertaining learning strengths and weaknesses, evaluating students' progress against the demarcated achievement objectives, and reviewing the usefulness of teaching programmes. Assessment at key transition points (school entry, form 1 and form 3) will help to determine the needs of groups of students as they enter new phases of schooling and help teachers to target resources more productively. School achievement records, which also contain details about the scholars involvement in school activities, provide collective information on a student's school achievement which is passed on from year to year and from school to school. National Monitoring Standards are there to evaluate educational standards on a national level. The objective is to provide information on how well overall national standards are being sustained and where improvements might be needed (Te Anga Marautanga o Aotearoa, 1993).

Nine principles guide the curriculum in New Zealand schools:

1. It establishes direction for learning and assessment in New Zealand schools
2. It fosters achievement and success for all students. At each level, it clearly defines the achievement objectives against which students' progress can be measured
3. It provides for flexibility, enabling schools and teachers to design programmes which are appropriate to the learning needs of their students
4. It ensures that learning progresses coherently throughout schooling
5. It encourages students to become independent and life-long learners.

6. It provides all students with equal educational opportunities
7. It recognises and values the unique position of the Maori in the New Zealand society and ensures that all students will have the opportunity to acquire some knowledge of Maori language and culture
8. It reflects the multicultural nature of New Zealand society
9. It relates learning to the wider world

1.14 The Australian And New Zealand Curriculum Framework Compared

The Australian curriculum and the New Zealand curriculum are both guided by similar education principals. Both curricula make use of Key Competencies or Essential Skills (Appendix A), incorporate essential learning areas and make use of similar assessment procedures (Borthwick, 1993; Te Anga Marautanga o Aotearoa, 1993). The main distinction is the use of different terminology. The benefits of competency-based education and criticisms levelled at competency-based education are also applicable to the New Zealand Curriculum Framework. In comparison to competency-based education in Australia, the New Zealand Curriculum Framework however, appears to incorporate more of a holistic educational approach, thus enhancing its success.

1.15 Education In South Africa: The Past

Education under the apartheid regime in South Africa emphasised compliance, conformity and passive absorption of information (Skuy, Young, Ajam, Fridjhon & Lomofsky, 1998). Rather than being outcomes based, the previous education system was content based. Education was focused on knowledge and was separate from training which focused on skills. Education failed as it did not prepare the learner for life in the South African society and in the workplace (Kros, 1997; OBE, 1997).

1.16 OBE In South Africa: Background, Origins And Model

The new structure for education and training in South Africa, called the National Qualifications Framework (NQF) is designed to promote lifelong learning, integrate education and training, recognise learning gained outside of formal institutions and allow for flexible, portable credits and qualifications (French, 1997). Overseen by the South African Qualifications Authority

(SAQA), the NQF is based on principles derived from the White Paper "Education and Training in a Democratic South Africa", published in March 1995 (Mkhatshwa, 1997, p.2), principles derived from the Australian Curriculum Framework, the New Zealand Curriculum Framework and work done in Canada, England and Scotland. The NQF distinguishes between three bands of education: General Education and Training (Grades 1 - 9, or Adult Based Education and Training), Further Education and Training (Grades 10 - 12) and Higher Education and Training (French, 1997) (Appendix B). In NQF proposals, teaching is shifted from an emphasis on content coverage to a focus on core competencies or outcomes (Appendix C) which learners should be able to demonstrate in different fields of study (Jansen, 1997).

Eight learning areas, closely resembling Australia's learning areas and New Zealand's essential learning areas, with cross curricular emphasis have been identified (Monyokolo & Potenza, 1997): (1) Languages, Literacy and Communication; (2) Human and Social Sciences; (3) Mathematical Literacy, Mathematics and Mathematical Sciences; (4) Technology; (5) Natural Sciences; (6) Arts and Culture; (7) Economic and Management Sciences; and (8) Life Orientation.

Each of these Learning Areas will have general or critical cross-field outcomes (Marock, 1997; OBE, 1997). Critical cross-field outcomes (also known as key competencies in Australia or essential skills in New Zealand) are generic and cross-curricular. They underpin the learning process in all aspects, are not restricted to any specific learning context and underlie all qualifications. The following critical cross-field outcomes were adopted by the SAQA (French, 1997; Kruger, 1997). The ability to:

- identify and solve problems in which responses display that responsible decisions using critical and creative thinking have been made
- work effectively with others as a member of a team, group, organisation, community
- organise and manage oneself and one's activities responsibly and effectively
- collect, analyze and critically evaluate information
- communicate effectively using visual, mathematical and/or language skills in the modes of oral and/or written presentation
- use science and technology effectively and critically, showing responsibility towards the

environment and health of others

- demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation.

In addition to the general or critical outcomes, each of the 8 Learning Areas will also have specific outcomes (Appendix D). Specific outcomes describe the competence which learners should be able to demonstrate in specific contexts and particular areas of learning at certain levels. Specific outcomes should serve as the basis for assessing learners' progress (Kruger, 1997). Specific outcomes and the 8 learning areas will become more specialized (Appendix E) as the child progresses from the Foundation Phase (Grade 0 - Grade 3) to the Intermediate Phase (Grade 4 - Grade 6) and from the Intermediate Phase to the Senior Phase (Grade 7 - Grade 12) (Marock, 1997; OBE, 1997).

The Continuous Assessment Model (CASS) has been proposed as an assessment model for South Africa (Kruger, 1997). OBE assessment methods must take into account all features of the expected outcomes and be appropriate for the age and maturity of the learners. The purposes of assessment entail: "measuring the achievement of set standards (for individuals, groups or sectors), systems monitoring or quality assurance, measuring capability (knowledge, skills and values), measuring generic competencies such as transfer of learning and application of learning in a context, measuring progress in a learning situation or learning pathway, selection for access (to jobs or further education and training), opening access, motivation, diagnosis of learning problems, diagnosis for remediation, evaluation of learning programmes, driving socio-economic change and enhancing productivity, through the recognition of prior learning and/or experience" (GDE, 1997). Suggestions for the assessment of learners on the OBE curriculum include: portfolios, observation sheets, written assignments, pen and paper tests, interviews and oral presentations, peer/mentor assessment, self assessment, projects, practical assignments, simulations, external assessors and computer-assisted assessment (OBE, 1997).

1.17 The Implementation Of OBE In South Africa

The following time frame was proposed by the Department of Education: Grades 1 and 7 in 1998, Grades 2 and 8 in 1999, Grades 3 and 9 in 2000, Grades 4 and 10 in 2001, Grades 5 and 11 in 2002 and Grades 6 and 12 in 2003 (Kruger, 1997). Due to implementation difficulties

OBE was introduced only to Grade 1 in 1998. Grade 2 and Grade 7 will be targeted in 1999 (Sinclair, 1999). The Department of Education has been conducting National In-service Education Programmes for teachers throughout the implementation period of OBE.

1.18 The Benefits Of OBE For South Africa

On a theoretical level OBE appears to have many advantages. These include increased teacher autonomy, improved attendance, enhanced student self-esteem and high achievement of learner outcomes (Schwarz & Cavener, 1994). Through OBE, curriculum design, as well as teaching becomes learner centred, flexible and innovative (Malcolm, 1997).

Marock (1997) believes that OBE has an important role to play in the socialisation process of children and in the formation of values that are considered influential to society. OBE prepares learners for higher education and work. It provides the learner with thinking skills, life skills and social skills which are of paramount importance in the work place. Godsell (1997) believes that people who will succeed in the 21st century information society will be those who can link data and judgement, correlation and cause, analysis and action, and manage competition and co-operation. The general and specific outcomes of OBE, as well as the notion that education is a lifelong learning process, will ensure that new knowledge, skills and attitudes are constantly developed with new experience (Foks, 1997).

1.19. Problems Standing In The Way Of A Successful Implementation Of OBE

Hofmeyr (1997), Jansen (1997), Schwarz and Cavener (1997) believe that a paradigm shift from content based education to OBE is difficult to achieve. According to Skuy (1997) the new proposed curriculum does not give clear guidelines as to how a student can be transformed from a passive to an active learner, or from a rote learner to a critical thinker. It does not provide the mechanisms for enhancing the learner's motivation, nor does it indicate the approach that will permit learners to develop the ability to research and analyze things for themselves. Furthermore, a gap between learning theory and OBE exists.

According to Malcolm (1997 b & c) a shift from content centred/teacher centred education to learner centred education is furthermore complicated by the huge classes ranging from 60-100 students, the lack of resources (water and electricity) and the presence of eleven official

languages. The teacher's difficulty in believing and respecting students' knowledge, as well as his or her different cultural background and beliefs hinders the success of learner centred education.

Jansen (1997) states that highly competent teachers with refined curricular, pedagogical and assessment skills are needed in order to make a change from content based education to OBE possible. Results from the National Teacher Education Audit in 1995 (Hofmeyr, 1997) revealed that teacher education in South Africa is extremely fragmented. Teacher education institutions operate in solitude. The field of education does not appear to have a national vision and purpose and its crucial part in national reconstruction and development is very poorly understood.

Furthermore a shift from a topic-based curriculum to one that is outcomes based is difficult to accomplish as national in-service training programmes for the OBE curriculum is poor (Jansen, 1997). Hofmeyr (1997) states that the impact of in-service programmes on improved teaching and learning is questionable because of the short courses or workshops offered without any follow up for teachers in schools.

Another criticism levelled at OBE stems from the fact that the national curriculum framework has not been sufficiently debated. Its successful implementation will depend on how educators and learners will respond to it, regardless of how good it may sound theoretically. Monyokolo and Potenza (1997) claim that there is no evidence to suggest that OBE can be applied to developing countries. Although OBE may seem appropriate to address the needs of South Africa, importing models from contexts that do not look like South Africa's may be shortsighted. Foks (1997) highlights the fact that in countries such as Australia, New Zealand and Scotland - complex and time-consuming bureaucratic structures and processes have undermined implementation and that there is nothing to suggest that this will not be the case in South Africa.

1.20 Studies Investigating South African Teachers' Attitudes And Perceptions Towards OBE

To date, published and empirically sound research, investigating South African teachers' attitudes and perceptions towards OBE, remains unavailable. Informal survey studies by

Malcolm (1997 b), Mostert and Reagan (1997), however, suggest that teachers in South Africa are confused and apprehensive about OBE.

Western Cape teachers are questioning whether the "outcomes based curriculum will work in South Africa, where circumstances differ from those in countries from which it has been copied" (Mostert & Reagan, 1997, p.1). Educators have expressed concerns that increasing frustration, classes of 50 - 60 pupils per teacher, high stress, over-hasty implementation of the system and a lack of sufficient information could create chaos. The acting principle of Maitland econdary School (cited in Mostert & Reagan, 1997) remarked that the changes were "being rushed" and were "bound to fail as long as the imbalances of the past were not addressed " (p.1).

According to Mostert and Reagan's article most principals and teachers in black township schools are positive towards OBE. However the radical Pan Africanist Student Organization has criticized the government for implementing the new curriculum while black schools are facing a crisis. Literature review on OBE in the United States suggests that opposition to OBE primarily comes from conservative groups and religious-right organizations. Studies have also shown that teachers at private schools are less concerned and worried about OBE as they are able to follow and implement their own curricula design (Manno, 1994).

Informal studies have suggested that teachers' attitudes towards and perceptions of OBE are predominantly negative. Research by Skuy, Fridjhon and O'Carroll (1998) on the "educational goals of educators and teachers in South Africa" however, shows that teachers favour an educational system that is outcome-based and cognitively oriented, despite the previous emphasis on content and rote learning.

1.21 The Importance of Teacher Attitudes And Perceptions For Educational Change

For change in education to be effective and long lasting, all people involved need to view the process as desirable and necessary. Studies of educational innovation (Huberman, cited in Skuy & Vice, 1996, p.135) suggest that desirable change is linked to a person's perception of a situation and his or her understanding of a variety of options that exist as solutions. Support for external or internal change to the education system has to be generated amongst the whole society. Twichin and Demuth (cited in Skuy & Vice, 1996, p.136) stress the importance

of teachers' perceptions, attitudes and behaviour in determining the success or failure of new projects in schools. A teacher's age, language, level of qualification, year teaching qualification was obtained, exposure to workshops, socio-economic status and type of school taught at may influence his or her attitudes towards and perceptions of educational innovations.

Results from Skuy and Vice's (1996) study, examining attitudes of white teachers towards racial integration showed, for example, that Afrikaans speaking teachers (the language of the dominant group under the apartheid regime) displayed the most negative attitudes towards integration. Similarly, a study by Christie (1998), examining the attitudes of professionals at schools towards mainstreaming children with special needs, showed that teachers' attitudes differed with age and experience. Lack of exposure and training was also a major cause of teachers' negative attitudes towards mainstreaming.

The success of OBE is dependent on teachers' attitudes towards and perceptions of OBE. It is important to identify factors that stand in the way of implementation so that the educational change can be effective and long lasting.

2. THE STUDY

2.1 Rationale

Education in South Africa is presently undergoing fundamental change. The new political dispensation in South Africa has replaced the content based, rote-learning based curriculum of the apartheid regime with an OBE approach.

OBE is not a new invention. It has had many names in history and has deep roots in Mastery Learning. Unlike mastery learning, which incorporates a behaviourist approach, OBE follows a holistic approach that is consistent with current learning theory based on cognitive psychology. Countries such as the United Kingdom, the United States, Canada, Australia and New Zealand have implemented OBE (Mkhatshwa, 1997). OBE in South Africa is particularly modelled on the Australian and New Zealand curriculum frameworks. Eight learning areas, each with general or critical cross-field outcomes, have been identified by the SAQA.

OBE is seen to have many benefits for South Africa. It prepares learners for higher education

and work, develops critical thinking, increases teacher autonomy, enhances student's self-esteem and produces a high achievement of learner outcomes (Schwarz & Cavener, 1994). The lack of sufficient in-service training programmes for teachers, big classes, language difficulties and high stress levels among teachers in South Africa (Mostert & Reagan, 1997) may, however, hinder a successful implementation of OBE. The lack of attention given to a theory of learning and teaching, the lack of clear guidelines as to how a learner can be transformed from a passive to an active learner (Porter, Rizvi, Knight & Lingard, 1992; Skuy, 1997), teachers' difficulties in deducing particular competencies from learners performance (Carroll, cited in Stanley, 1993, p.148) and the hierarchical school organisation, characterised by superordinate/subordinate relations between students and teachers (David Mc Kinnon, cited in Burrow, 1993), may further stand in the way of ensuring a smooth transition from content based education to OBE.

To date, only informal surveys (Malcolm, 1997 b; Mostert & Reagan, 1997) investigating teachers' attitudes, perceptions and competence towards OBE have been published. An informal study by Mostert and Reagan (1997) on teachers' attitudes towards OBE suggests that teachers in South Africa are confused and are apprehensive about OBE. Educators express concerns that increasing frustrations, over-hasty implementation of the system and a lack of sufficient information could create chaos. A study by Skuy, Fridjhon and O' Carroll (1998) however illustrates that teachers favour an educational system that is outcome-based and cognitively oriented, despite the previous emphasis on content and rote learning.

Studies have suggested that teachers' attitudes towards OBE are influenced by political orientation (Mostert & Reagan, 1997) and types of schools taught at (Manno, 1994). Studies by Skuy and Vice (1996) and Christie (1998) have shown that teachers' attitudes towards educational innovations are influenced by language, age and training received.

For change in education to be effective and long lasting, teachers need to view the process as desirable and necessary. The competence and attitudes of teachers will either aid or hinder the successful implementation of OBE. It is important to identify doubts, concerns and resistance towards OBE in order to design interventions that will motivate teachers to successfully adopt OBE. The purpose of the present study was to assess teachers' attitudes towards and perceptions of OBE in South Africa. Teachers' feelings of competence in relation to OBE were also examined. A further aim was to discover whether an adequate number of

training courses on OBE have been provided.

Education in South African schools is undergoing systemic change. It can thus be postulated that teachers' attitudes and feelings towards OBE will vary according to age, years of teaching experience, exposure to OBE training, type of school taught at and political orientation.

2.2 Research Hypotheses

The following six research hypotheses were formulated for the study:

1. The majority of South African school teachers will be negative towards OBE.
2. The acceptance of OBE will vary negatively with age.
3. The acceptance of OBE will vary negatively with years of teaching experience.
4. The acceptance of OBE will vary negatively with exposure to OBE training.
5. The acceptance of OBE will vary according to the type of school.
6. The acceptance of OBE will vary according to a teacher's political orientation.

2.3. Sample

The sample constituted 124 teachers from six different types of primary schools, namely: (1) a Private School; and a historically (2) Black School; (3) Coloured School; (4) Indian School; (5) White School - English speaking; and (6) White School - Afrikaans speaking.

The return rate for the questionnaires was as follows: 100 % for the historically White English speaking school, 86 % for the historically White Afrikaans speaking school, 77 % for the historically Indian school, 77 % for the Private School , 61 % for the historically Coloured School and 29 % for the historically Black School (refer to Appendix F to obtain the number of respondents for each school).

Biographical details of the sample of teachers, i.e. gender, age, home language, political orientation, level of qualification, year teaching qualification was obtained, length of time taught at present school, grades currently taught, position held at school and type of syllabus followed, is given in Table 1 below:

Table 1: Frequencies And Percentages For Biographical Details Of Teachers

Independent Variable	Frequency	%
Gender		
Male	32	26
Female	92	74
Independent Variable	**Frequency**	**%**
Age		
20-25	13	11
26-29	12	10
30-34	14	11
35-39	20	16
40-49	46	37
50-59	15	12
60 +	4	3
Language		
Afrikaans	38	32
English	75	62
Isizulu	3	3
Sesotho	2	2
Xitsonga	2	2
Political Orientation		
ACDP	0	0
ANC	10	26
DP	25	66
Freedom Front	0	0
IFP	0	0
NP	2	5
PAC	0	0
UDM	1	7
Qualification		
Teaching Diploma	50	40
Teaching Diploma plus Further Studies	42	34
Teaching Degree	14	11
Teaching Degree plus Postgraduate Studies	18	15
Year Teaching Qualification Was Obtained		
1997	9	7
1995-1996	9	7
1992-1994	7	6
1989-1991	11	9
Before 1989	86	71
Length Of Time Taught At Current School		
0-6 months	8	6
7 months - 1 year	12	10
2-3 years	24	20
4-6 years	22	18
7-9 years	18	15
10-15 years	20	16
16 years +	19	15
Grades Taught At School		
Nursery School	0	0
Grade 0	6	5
Grade 1	16	13
Grade 2	22	18
Grade 3	23	19
Grade 4	33	13
Grade 5	38	31
Grade 6	44	36

Grade 7	49	40
Nature Of Appointment		
Full-time staff member	109	90
Part-time staff member	12	10
Nature Of Syllabus		
State school syllabus	94	76
Private school syllabus	0	0
State school syllabus and private school syllabus combined	29	24

2.4 Procedure

2.4.1 The Gauteng Educational Aid Centre was contacted to obtain the names of one school in each of the six specified categories of schools to yield the best representative sample.

2.4.2 The Gauteng Department of Education was notified of the planned study and permission was granted to conduct the research.

2.4.3 A questionnaire was designed to assess teachers' attitudes, perceptions and feelings of competence towards OBE.

2.4.4 A pilot study involving seven black teachers, who did not form part of the final sample, was conducted, to test whether there were any items that teachers had difficulty understanding and to test whether each item was precisely phrased to elicit the answers that the researcher sought. Ambiguous items were rephrased and were clearly defined and superfluous items were left out.

2.4.5 The questionnaire was submitted to the Gauteng Department of Education for approval and further scrutiny. This resulted in the questionnaire being further refined.

2.4.6 The principals of the six schools, chosen for the study, were contacted telephonically to request permission for their staffs' participation in the study.

2.4.7 The questionnaires were personally delivered to and collected from the six different types of schools. Each school was given one week to complete the questionnaires.

2.4.8 The principals were given specific directions for handing out and collecting the questionnaires on the same day, thus minimising the risk of questionnaires not being returned.

2.4.9 For the purposes of confidentiality and to enhance the likelihood of truthful answers, teachers were not required to identify themselves by name.

2.5 Measure

2.5.1 Questionnaire On OBE

A questionnaire was selected as a measuring instrument to assess the attitudes, perceptions and feelings of competence of 124 teachers towards OBE. A copy of the questionnaire is contained in Appendix G.

2.5.2 The Structure Of The Questionnaire

The questionnaire was based on an extensive literature review on OBE. It comprised six different sections. Sections One to Five consisted of questions that were mainly of the closed type. Teachers were provided with a limited choice of answers. Section Six was open-ended. Here teachers were given the opportunity to voice their opinion and personal understanding of OBE. Section One was included so that hypothesis two, three, four, five and six could be investigated. Sections Two, Three, Four, Five and Six were constructed to test hypothesis one.

Section One was constructed as follows: Thirteen questions requested biographical information. The variables obtained were: gender; age group; home language; political orientation; name of the school; level of qualification; year qualification was obtained; length of time taught at current school; years of teaching experience; number of classes taught; maximum number of pupils in their class; minimum number of pupils in their class; grade(s) currently taught; whether they were full-time or part time staff members; and whether or not the school followed the state school syllabus.

Section Two contained 26 statements on OBE. A four-point scale was constructed from which the respondents had to choose whether they "strongly disagreed", "disagreed", "agreed" or "strongly agreed". The statements were designed to assess teachers' attitudes towards and perceptions of OBE (statements 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 16, 22, 25 and 26), feelings of competence in relation to OBE (statements 1, 2, 14, 15, 22 and 23), perceived implementation difficulties (statements 8, 17, 18 and19) and requirements for OBE to be a success (statements 4, 20, 21, 23 and 24).

Section Three and Section Four were presented mainly in multiple-choice format. In Section Three, teachers were given eight multiple-choice questions in which they were asked to mark the one box that was more/most true and two open ended questions. The questions were designed to assess teachers' perceptions of education in South Africa (questions 1 and 2), knowledge of OBE (questions 3, 4 and 5) and attitudes towards and perceptions of OBE training programmes (questions 6, 7, 8, 9 and 10).

In Section Four teachers were given four questions and were instructed to mark the box or boxes that applied to them the most. The questions were designed to assess teachers' attitudes towards OBE (question 1), knowledge of OBE (questions 2 and 3) and knowledge of content based education (question 4).

In Section Five teachers' feelings of competence with regard to OBE were assessed. A four point scale was constructed from which teachers had to chose whether their feelings of competence towards OBE and their feelings of competence towards the assessment procedures identified in OBE were "poor", "less than adequate", "adequate" or "good".

Section Six comprised ten sentence completion exercises which allowed teachers to express their opinions related to attitudes, perceptions and feelings of competence towards OBE (sentences 1, 2, 3, 5 and 7), OBE's assessment techniques (sentence 9), training programmes (sentence 10), content based education (sentence 6) and education in South Africa (sentences 4 and 8). Teachers were also able to voice their opinion on OBE under general comments.

The overlap in content and issues tested between the different sections of the questionnaire was aimed at lending credibility to the answers given by teachers in each of the sections.

2.6. Statistical Analysis

The data gathered from the study was subjected to relevant statistical analyses:

2.6.1 The Cronbach Coefficient Alpha was calculated for statements on OBE, feelings of competence towards OBE and feelings of competence towards the assessment procedures of

OBE. The Cronbach alpha coefficients for the three categories of items were 0.77, 0.86 and 0.90 respectively, indicating that the test components were reliable.

2.6.2 Statistical procedures used to test hypothesis one: (a) The frequency and percentages of the continuum of teacher responses across the six schools were computed for Sections Two, Three, Four, Five and Six to determine the attitudes, perceptions and feelings of competence of teachers in relation to OBE. (b) The average number of hours on OBE teacher training was calculated to help explain negative or positive attitudes towards OBE. (c) A principal component analysis was conducted on Section Two to determine whether the total variation in the data could be described with a much smaller number of components.

2.6.3 Statistical procedures used to test hypotheses two, three, four, five and six: The General Linear Models Procedure was used to determine the presence of a significant difference across teachers' ages, year of qualification, exposure to OBE training, different school types and political orientation. A multiple comparison test, the Bonferroni (Dunn) T test, was used to determine where the significant difference occurred.

3. RESULTS

3.1. Hypothesis One: The Majority Of South African School Teachers Will Be Apprehensive Towards OBE

3.1.1. Factor Structure

The factor structure of the 26-item scale of Section Two (composed of closed statements) was analysed in a principal component analysis. Eight components were initially retained by the Eigen value criterion, i.e. there were eight values > 1, and rotated by Harris-Kaiser oblique rotation (Appendix H). The rotated factor pattern revealed eight principal components, however, the fifth principal component was loaded on by only two items, and the seventh and eighth principal components were loaded on by only one item (Appendix I). A scree plot of the Eigenvalues (Appendix J) was done, to determine whether the last three identified principal components could be discarded. Results indicated that there were not enough items to support the last four principal components and they were accordingly dropped from the analysis. The remaining four principal components were shown to have satisfactory internal

consistency and together accounted for 47 percent of the variance in the scores. Four factors, each measuring a different construct, were yielded in Section Two.

The first component measured teachers' general attitudes and perceptions towards OBE and accounted for 20 percent of the variance in the scores. The second component measured teachers' feelings of competence towards OBE and accounted for ten percent of the variance in the scores. The third component measured difficulties associated with the implementation of OBE and accounted for nine percent of the variance in the scores. The fourth component measured teachers' requirements for OBE to be successful and accounted for seven percent of the variance in the scores.

3.1.2 General Attitudes Towards And Perceptions Of Education In South Africa

Results of the open-ended question of Section Six (Appendix K) revealed that a large proportion of teachers (23 percent of the sample of teachers) were concerned about education and the standard of education in South Africa. Table Two illustrates teachers' perceptions of education in South Africa. Results were obtained from the open-ended questions of Section Six.

Table 2 Teachers' Perceptions Of Education In South Africa

In South Africa Education is:	Frequency	%
In turmoil/in a crisis/lacking clear direction	22	23
Deteriorating	18	19
Not given top priority	17	18
Struggling due to lack of funds	8	8
Essential	8	8
Unbalanced	6	6
Of a fairly high standard	4	4
Undergoing tremendous change	4	4
In danger due to lack of discipline	2	2
Stable in white schools	1	1
Trying to change too many aspects at once	1	1
Only now awakening	1	1
Of major concern	1	1
Too content based	1	1
Trying to come together	1	1

Total number of responses given by teachers = 95

3.1.3 General Attitudes And Perceptions Towards OBE

Appendix L contains a table comparing the percentage of agreement expressed by the teachers to the statements contained in Section Two. To determine the extent of positive and

negative attitudes towards OBE all negative statements of Section Two and responses given on the four-point scale were reversed. It could thus be deduced that teachers who marked boxes one and two had negative attitudes and perceptions towards OBE, while teachers, who responded by ticking boxes three and four had more positive attitudes towards OBE. An analysis of results indicated that 63 percent of the sample of teachers (27 percent strongly opposed, 36 percent apprehensive) displayed a negative attitude towards OBE. Only 37 percent of the sample of teachers were positive in their response (28 percent positive, nine percent very excited). Results from the open-ended questions of Section Six corresponded with these findings by showing that 49 percent of the sample of respondents were negative, 20 percent of respondents were uncertain and only 12 percent of respondents were positive in their attitude towards OBE (Table Three).

Table 3 Teachers' Attitudes Towards OBE

Teachers' attitudes towards OBE are:	Frequency	%
Negative	58	49
Divided/uncertain	24	20
Positive	14	12
Sceptical	11	9
Indifferent/apathetic	3	3
Apprehensive	2	2
Stereotyped	1	1
Scary	1	1
One of nervousness	1	1
One of non commitment	1	1
Important	1	1
Responsive	1	1

Total number of responses given by teachers = 118

3.1.4 How Do Teachers Feel About OBE?

Results from Section Four (Appendix M) suggest that the majority of teachers (57 percent of the sample of teachers) are sceptical when they hear of OBE. 27 percent of teachers indicated that they were confused, 18 percent of teachers felt anxious and 16 percent of teachers felt negative towards OBE. 25 percent of the sample of teachers demonstrated positive feelings towards OBE, 21 percent of teachers indicated curiosity and 15 percent of teachers indicated excitement towards OBE. Table Four lists teachers' negative, positive and neutral feelings towards OBE, obtained from the open-ended questions of Section Six.

Table 4 Teachers' Feelings Towards OBE

When I hear of OBE I feel:	Frequency	%
Negative Responses	88	75
Sceptical	15	17
Insecure	14	16
Worried	13	15
Confused	12	14
Apprehensive	6	7
Negative	6	7
Incompetent	4	5
Frustrated	4	5
Unprepared	3	3
Inexperienced	2	2
Depressed	2	2
Disillusioned	2	2
Upset	2	2
Stressed	1	1
Despondent	1	1
That it is a waste of time and money	1	1
Positive Responses	28	24
Positive	12	43
Excited	8	29
Interested	4	14
Curious	1	4
That we should give it a chance	1	4
Confident	1	4
Prepared and ready in Grade One	1	4
Neutral Responses	2	1
That it is not the only educational way	1	50
That teachers need to find out more	1	50

Total number of responses given by teachers=118

3.1.5 OBE : Success Or Failure?

Results from the open-ended questions of Section Six (Appendix N) indicate that teachers are unsure as to whether OBE will succeed or not. 42 percent of the sample of respondents believe that OBE will fail. Of the 42 percent, teachers have indicated that OBE is a waste of time and money (36 percent), is good in theory but not in practice (29 percent), is too broad and unstructured (10 percent), is not necessary as content based education produced satisfactory results (seven percent), is impractical (five percent) and is geared to produce lower standards of education (two percent).

40 percent of the sample of teachers believe that OBE will succeed. Of the 40 percent, teachers have indicated that the principles of OBE are good (33 percent), that its pupil oriented and flexible approach can accommodate a wide range of learners (23 percent) and that it is more effective than content based education (18 percent). 18 percent teachers feel that OBE is necessary in South Africa but should be used in conjunction with other methods.

3.1.6 Feelings Of Competence Towards OBE

The percentage of respondents who expressed positive feelings of competence in relation to the items comprising each of the principal components was computed, and compared to the percentage who expressed negative feelings of competence. Results from Section Two indicated that most teachers (75 percent of the sample of teachers) did not feel well prepared for OBE and that their knowledge of the assessment techniques for OBE was poor (65 percent). An analysis of Section Five, however, revealed that 43 percent of the sample of respondents indicated that their feelings of competence with regard to the variety of different assessment procedures identified in OBE were adequate, while 21 percent rated their feelings as being good. Most highly rated were written assignments, pen and paper tests, oral presentations, projects, practical assignments and simulations (Table Five).

Table 5 Teachers' Feelings Of Competence With Regard To The Variety Of Different Assessment Procedures Identified In OBE

ASSESSMENT TECHNIQUES	POOR COMPETENCE		LESS THAN ADEQUATE COMPETENCE		ADEQUATE COMPETENCE		GOOD COMPETENCE	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Self-assessment by learners	30	29	28	27	36	34	11	11
Portfolios	13	13	34	35	39	40	11	11
Written assignments	8	8	7	7	51	51	35	35
Pen and paper tests	5	5	13	13	48	47	36	35
Oral presentations	5	5	13	13	47	44	41	39
Peer assessment	12	12	38	37	40	39	14	14
Projects	7	7	16	15	51	48	32	30
Practical assignments	5	5	13	13	53	52	32	31
Simulations	7	7	38	28	55	55	10	10
External assessors	15	15	44	44	33	33	8	8
Computer assisted assessment	18	18	39	39	32	32	10	10
AVERAGE		11		25		43		21

A further analysis of Section Five (Table Six) revealed that teachers' feelings of competence with regard to the methodology of OBE clustered around the median.

Table 6: Teachers' Feelings Of Competence With Regard To OBE

OBE	POOR COMPETENCE		LESS THAN ADEQUATE COMPETENCE		ADEQUATE COMPETENCE		GOOD COMPETENCE	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Focusing students on the learning outcomes of OBE	7	7	37	36	50	48	10	10
The principle of continuous assessment in OBE	3	3	28	26	48	45	28	26
Providing students with the opportunity to develop critical outcomes	5	5	25	24	56	53	20	19

Teaching the eight learning areas of OBE	7	7	45	43	42	40	10	10
Ability to assess students using OBE assessment criteria	13	12	40	38	46	43	7	7
Employing OBE teaching methodology	11	11	36	34	48	46	10	10
Ability to successfully implement OBE	7	7	44	41	53	50	3	3
Classroom management with OBE	11	10	31	29	51	48	14	13
AVERAGE		8		34		47		12

3.1.7 Attitudes Towards The Assessment Procedures Of OBE

Results obtained from the open-ended questions of Section Six showed that 60 percent of the total sample of teachers' attitudes were negative, 32 percent of teachers' attitudes were positive and eight percent of teachers' attitudes were neutral with regard to the assessment techniques of OBE. Table Seven illustrates teachers' negative and positive responses.

Table 7 Teachers' Attitudes Towards OBE's Assessment Techniques

When I hear of OBE's assessment techniques I feel:	Frequency	%
Negative Responses	64	60
Worried	12	18
Confused	10	16
Insufficiently prepared	8	13
That there will not be enough time in a school day to implement it	7	11
That more training for educators is necessary	5	8
Uncertain	4	6
Anxious	4	6
Sceptical	3	5
Upset	2	3
That we should not have to change	2	3
Negative	2	3
Exhausted before starting	2	3
That the assessment techniques are unrealistic for the large class situation	1	2
That more pupils will slip through the safty nets	1	2
That there has not been enough research done	1	2
Positive Responses	34	32
Positive	12	35
That teachers have been assessing like that all the time	7	21
Competent	5	15
That it is child centred	3	9
Interested to learn more	2	6
Excited	2	6
That we should move away from final examinations to continous assessment	2	6
That perhaps there will be a change in South Africa	1	3

Total number of responses given by teachers = 106

Although many teachers were apprehensive in their attitude towards the assessment techniques of OBE, an analysis of Section Four (Appendix M) showed that most teachers agreed with the principals of OBE assessment: 79 percent of the sample of teachers indicated that assessments should happen all year through; 67 percent believed that assessment was integral to learning and teaching; 58 percent stated that assessment should focus on how well

learners apply skills; 55 percent believed that assessment is about understanding what pupils have learnt; and 43 percent of respondents indicated that assessments should not only be in the form of examinations. The idea that assessment should happen only at the end of the year, that assessment should only involve examinations, that assessment is about comparing students' performance to one another, and that assessment is separate from learning and teaching was rejected.

3.1.8 OBE Training

Results from Section Three (Appendix O) indicated that teachers, on average, have received eight hours of teacher training on OBE (SD = 14.53). Most training has been in the form of multiple workshops (28 percent), workshops and lectures (26 percent). 25 percent of respondents indicated that they had not been exposed to any form of OBE training. Despite the provision of in-service training programs for teachers, an analysis of Section Two showed that 81 percent of the sample of teachers (Appendix L) felt that they had not received adequate training on OBE. Results from Section Three revealed that 87 percent of teachers (Appendix O) felt that an inadequate number of training courses on OBE has been provided. According to 91 percent of the sample of teachers (Appendix O), the quality of OBE training is inadequate. Table Eight summarises teachers' attitudes and perceptions towards training programmes on OBE, obtained from the open-ended questions of Section Six.

Table 8 **Teachers' Attitudes And Perceptions Towards OBE Training Programmes**

Training programmes on OBE are:	Frequency	%
Negative Responses	106	88
Inadequate (not achieving the objectives and aims)	62	58
Insufficient/not available for all	18	17
Poorly presented	10	9
Not properly co-ordinated/chaotic	5	5
Exaggerated	3	3
Boring	3	3
A joke	1	1
Do not prepare teachers for the problems faced in the classroom	1	1
Discouraging	1	1
Overwhelming	1	1
Patronising	1	1
Positive Responses	12	10
Vital/important	4	33
Good	4	33
Necessary to equip teachers with skills	3	25
Adequate	1	8
Neutral Responses	3	2
Focused on emphasising racial equality	1	33
Should be set on a regular basis	1	33
Still in the initial stages	1	33

Total number of responses given by teachers = 121

3.1.9 Teachers' Attitudes Towards Content Based Education

An analysis of the open ended questions of Section Six (Appendix P) revealed that the majority of teachers (57 percent) displayed positive attitudes towards content based education. Of the 57 percent, 28 percent of respondents felt that content based education was acceptable, 20 percent of respondents felt that content based education guaranteed higher educational standards and results and 19 percent of respondents felt that it was necessary to teach certain subjects. Teachers felt that content based education was valuable (nine percent), structured and orderly (seven percent). 34 percent of respondents displayed negative attitudes towards content based education. Of this 34 percent of respondents, approximately half agreed that content based education was inadequate while approximately a quarter agreed that it was outdated. Teachers felt that content based education was inhibiting (16 percent), unchallenging (three percent), lacking in discipline (three percent) and that it was encouraged by lazy teachers (three percent).

Results from Section Four (Appendix M) indicated that 51 percent of the sample of teachers felt that content based education promoted problem solving, sharing of information between learners (35 percent), critical thinking (32 percent) and co-operation between learners (29 percent). Only 27 percent of the sample of respondents believed that content based education did not promote critical thinking, problem solving, sharing and co-operation between learners.

3.1.10 Teachers' Knowledge Of OBE

An analysis of Section Three (Appendix O) showed that the majority of teachers (48 percent) did not know which theory OBE was based on. 36 percent of respondents thought that OBE was based on a particular cognitive learning theory, while 16 percent of teachers thought that OBE was based on a particular behavioural learning theory. Results (Appendix O) further suggested that teachers were unsure about their role in OBE. 53 percent of the sample of teachers believed that the role of the teacher is that of a mediator who needs to take responsibility for the learning of the student, illustrating ideas and applying teaching skills to aid understanding. 45 percent believed that the role of the teacher is that of a facilitator who sets up the learning situation and then leaves the child to explore the task for himself. The majority of teachers (75 percent), however, agreed that students could play an active role in developing part of their curriculum. Teachers believed that OBE will enhance student self-esteem (40

percent), achieve learning outcomes (37 percent), prepare learners for higher education and the world of work (31 percent), increase teacher autonomy (nine percent) and improve learner attendance at school (seven percent). A quarter of teachers believed that none of the above - mentioned factors would be achieved through OBE.

3.1.11 Factors Hindering A Successful Implementation Of OBE

Results from the principal component analysis (Section Two) indicated that 88 percent of the sample of teachers acknowledged the presence of implementation difficulties with regard to OBE. 92 percent of teachers felt that the large classes in the South African schools would hinder a successful implementation. 92 percent of teachers felt that the provision of resources was essential for OBE to be successful. 63 percent of respondents felt that a common cultural background between learners and teachers was important for OBE to be successful. 72 percent of teachers were unsure as to how they could transform learners from passive to active students. 60 percent of respondents indicated that it would be difficult to identify particular competencies of learners, as learners use a variety of different strategies in their performance.

Responses obtained from the open-ended questions of Section Six (Appendix Q) indicated that 16 percent of teachers felt that OBE would fail because of the lack of state funding. Ten percent of respondents believed that OBE was unrealistically enforced in a short time. Six percent of teachers felt that classes were far too big. Five percent believed that incompetent teachers would hinder a successful implementation of OBE and four percent felt that OBE's terminology was too confusing. A proportion of teachers (18 percent) questioned the rationale of implementing OBE in South Africa when it has failed in other countries.

3.1.12 Proposed Solutions

Results from Section Two suggested that the majority of respondents (87 percent) felt that cognitive or thinking skill programmes should be introduced to aid teachers in understanding and implementing OBE. Under "Further Comments" in Section Six the following solutions were proposed: 12 percent of teachers felt that regular, nation-wide workshops on OBE should be held that allowed for implementation periods and feedback sessions. 11 percent of teachers felt that trainers with more skills should host the OBE workshops. Seven percent of teachers

felt that the old education system should not be totally discarded, but that the good points should be taken from the old and the new systems to make education a success in South Africa. Six percent of teachers felt that OBE worked well in first world countries where facilities are adequate and where educators are well equipped and thoroughly trained. They proposed that South Africa should consider a gradual adoption of OBE in line with economic restraints. Five percent of teachers felt that departmental funding was essential for OBE to succeed. Three percent of teachers felt that a constant re-evaluation of OBE was necessary.

3.2. Hypothesis Two: The Acceptance Of OBE Will Vary Negatively With Age

The General Linear Models Procedure and the Bonferroni Critical Values Approach were used to determine whether there were any significant interaction effects across the seven different age levels. Results indicated that there were no significant differences in attitudes, perceptions ($F[6; 115] = 0.79$, not significant) and feelings of competence ($F[6; 101] = 0.93$, not significant) towards OBE across the different age groups.

3.3 Hypothesis Three: The Acceptance Of OBE Will Vary Negatively With Years Of Teaching Experience

The General Linear Models Procedure and the Bonferroni Critical Values Approach were used to determine whether the acceptance of OBE varied with years of teaching experience. Results indicated that teachers' attitudes, perceptions ($F[4; 117] = 0.4$, not significant) and feelings of competence ($F[4; 103] = 0.25$, not significant) towards OBE did not vary with years of teaching experience.

3.4 Hypothesis Four: The Acceptance Of OBE Will Vary Negatively With Exposure To OBE Training

The General Linear Models Procedure and the Bonferroni Critical Values Approach were used to determine whether the acceptance of OBE varied with exposure to OBE training. Results indicated that teachers' attitudes, perceptions ($F[4; 112] = 0.8$, not significant) and feelings of competence ($F[4, 102] = 1.4$, not significant) towards OBE did not vary with exposure to OBE training.

3.5 Hypothesis Five: The Acceptance Of OBE Will Vary According To The Type Of School

The General Linear Models Procedure and the Bonferroni Critical Values Approach was used to determine whether the acceptance of OBE varied according to the type of school at which teachers taught. Results indicated that teachers' attitudes, perceptions and feelings of competence towards OBE (F[5; 102] = 1.85, not significant) were not significant across the different types of schools. A comparison of teachers' responses to the open-ended questions of Section Six, across the different types of schools, however showed that the Private School, the Historically Black and the Historically White Afrikaans speaking school were more negative in their attitudes towards OBE than the other three schools (Table Nine). Results, however, are qualitative and must be treated with caution.

Table 9 Teachers' Attitudes Towards OBE Across The Six Different Types Of Schools

Teachers' attitudes towards OBE are:	Historically Afrikaans School n = 23	Historically White School n = 30	Private School n = 28	Historically Black School n = 4	Historically Coloured School n = 9	Historically Indian School n = 24
Negative	57 %	40 %	61 %	75 %	33 %	42 %
Ambivalent	17 %	33 %	29 %	-	-	8 %
Positive	22 %	13 %	-	25 %	33 %	8 %
Sceptical	4 %	10 %	7 %	-	11 %	17 %
Indifferent	-	-	4 %	-	11 %	%

3.6 Hypothesis Six: The Acceptance Of OBE Will Vary According To A Teacher's Political Orientation

The General Linear Models Procedure and the Bonferroni Critical Values Approach were used to determine whether the acceptance of OBE varied according to a teacher's political orientation. Results indicated that teachers' attitudes, perceptions (F[3; 34] = 1.96, not significant) and feelings of competence (F[3, 33] = 0.82, not significant) towards OBE did not vary according to their political orientation. Results must however be interpreted with caution as only 38 teachers of the total sample of 124 teachers revealed their political orientations. Results may be invalid as an insufficient number of responses were obtained.

4. DISCUSSION

4.1 Interpretation Of Findings

The investigation revealed that more than half of South African teachers hold negative perceptions and attitudes towards OBE. Hypothesis One, stating that the majority of South African school teachers will be negative about OBE, was thus confirmed.

It is noteworthy that no significant difference in attitudes and perceptions were found between teachers of different age groups, between teachers with different years of teaching experience, between teachers with different amounts of exposure to OBE training, between teachers working at different types of schools and between teachers' political orientations. Hypothesis Two, Three, Four, Five and Six, based on Manno's (1994), Moster and Reagan's (1997), Christie's (1998), Skuy and Vice's (1996) findings, were thus rejected.

4.2 General Discussion Of The Findings

The majority of teachers appeared to be concerned about education in South Africa. Teachers indicated that they were worried that the standard of education is rapidly deteriorating in South Africa. A large number of teachers felt that due to departmental subsidy cuts, staff reductions and lack of available resources, education in South Africa is facing a crisis. The implementation of OBE, under such circumstances, was viewed with much scepticism. Feelings expressed were that of confusion, apprehension, uncertainty and anxiety. These feelings mirrored the feelings obtained from Mostert and Reagan's (1997) informal studies on teachers' attitudes towards OBE. A minority of respondents indicated positive feelings, curiosity and excitement towards OBE.

Teachers were divided as to whether OBE would fail or succeed in South Africa. Respondents believed that a lack of resources, large classes, cultural differences between learners and teachers and incompetent teachers would stand in the way of OBE becoming a success. Teachers felt unsure as to how students could be transformed from passive to active learners. In general they felt that OBE was unrealistically enforced in a short time. Teachers questioned how OBE could succeed in South Africa when it had failed in so many other countries. These findings bear a strong resemblance to various concerns expressed respectively by Malcolm

(1997), Skuy (1997), Jansen (1997) and Hofmeyr (1997).

Teachers did not, however, dismiss the principles and methodology of OBE as being absurd. This concurs with Dellit (1993), Skuy, Fridjhon and O'Carroll's (1998) studies which suggested that teachers prefer an educational approach that is outcomes-based and cognitively oriented, despite previous emphasis on content and rote learning. In Skuy, Fridjhon and O'Carroll's (1998) study, stimulating students' desire to learn was ranked as the most important goal of education. Rote learning, conformity to a norm was ranked the least important goals in education. Similar results were obtained from this study. Furthermore, over half the teachers surveyed in this study felt that OBE would encourage independent, life long learners. Teachers felt that student self-esteem would be enhanced through OBE. This corresponds to Marock's (1997) and Foks' (1997) belief that OBE has an important role to play in society. The fact that the majority of teachers displayed positive attitudes towards content based education rather than OBE, suggests that teachers feel more comfortable and familiar with it.

Although the majority of teachers displayed negative attitudes towards and perceptions of OBE, somewhat less negative results on teachers' feelings of competence towards OBE were obtained. These were still unsatisfactory in that only approximately half the teachers surveyed indicated that they would be able to focus students on the learning outcomes of OBE, provide students with the opportunity to develop critical outcomes, teach the eight learning areas of OBE, employ OBE teaching methodology, successfully implement OBE and manage their classroom with OBE. The majority of teachers, despite indicating that they felt negative towards the assessment procedures of OBE, felt that the principals of OBE assessment (focusing on how well learners apply skills and understanding what pupils have learnt) were applicable to education in South Africa. A large proportion of teachers indicated that they felt that their knowledge of OBE's assessment procedures was poor. Questions, asking teachers to rate their feelings of competence with regard to portfolios, written assignments, pen and paper tests, oral presentations, peer assessment, projects, practical assignments and simulations, however, revealed that the majority of teachers felt relatively competent with regard to these assessment procedures. Results suggest that teachers feel comfortable implementing these assessment procedures and have probably made use of them for years. Results showed that teachers need to improve their feelings towards external assessors, computer assisted assessment and self-assessment by learners. This finding suggests that many teachers are still unfamiliar with these OBE assessment techniques.

Although the majority of teachers surveyed answered negatively when asked about OBE in general, their responses tended to be more positive when questioned about the specific aspects of this teaching approach. This suggests that teachers have not been fully briefed as to what OBE entails and that they do not associate these specific teaching aspects with OBE. It appears that teachers feel threatened by the broad notion of OBE. Teachers view the concept of OBE as being abstract and intangible. They do not know how it translates into practice. As in Dellit's (1993) findings teachers are sceptical about assessment and reporting procedures, are negative in their attitudes towards OBE and are concerned about OBE's impact on their workloads. Results from this study, however, show that when questions about OBE become more specific, teachers feel more competent towards OBE's educational approach.

Negative attitudes towards OBE may further stem from disorganised and poorly presented workshops that do not prepare teachers for problems faced in the classroom. Most respondents were very negative in their attitudes towards OBE training courses. The findings supported the findings of Hofmeyr (1997) and Jansen (1997) that in-service programmes for OBE were poor, insufficient and inadequate. Skuy, Young, Achmat, Ajam, Fridjhon and Lomofsky (1998) have elaborated this by stating that the cognitively-orientated OBE is not matched by the preparedness of the teachers for its implementation.

4.3 Proposed Solutions To Help With OBE Implementation Difficulties

A large proportion of teachers in this study proposed that regular, intensive OBE training programmes at schools be introduced to teachers. This finding reflects Jansen's (1997) belief that school-wide intervention programmes are of greater value than the provision of sporadic or periodic workshops that affect one or two teachers. Furthermore, teachers indicated that competent and skilled trainers should host OBE workshops and that an eclectic educational approach, combining content based education with OBE, should be adopted. Many teachers believed that it was necessary to monitor and re-evaluate OBE on a regular basis. This concurs with Jansen's (1997) notion that a monitoring and evaluating system is needed in order to trace the impact that the changes will have on the South African education system.

More than half of the teachers surveyed indicated that they were unsure as to how a paradigm shift from content based education to OBE could occur. Jansen (1997) attests that the following is needed for a paradigm shift in education to occur: in-service education for all teachers using the OBE curriculum as an entry point; political commitment; support from NGOs; the business community; the provincial education departments and teacher organisations; and quality improvements for the large community of disadvantaged schools in South Africa. This corresponds to Huberman's (cited in Skuy & Vice, 1996, p. 135) belief that all people in a society must be involved for change in education to be effective and long lasting.

Foks (1997) states that in order for OBE to be adopted successfully new mindsets regarding all aspects of learning, need to be adopted. These include ideas about its designs, its delivery, its management, its administration and the way in which resources to support it are allocated and managed. Results from this study, however, indicate that teachers feel that South Africa at present has problems in bringing about such radical and massive changes.

A large proportion of teachers in this study indicated that they did not know what theory OBE was based on. This finding reflects Porter, Rizvi, Knight, Lingard (1992) and Skuy's (1997) recognition of the existence of a gap between learning theory and implementation. The majority of respondents felt that cognitive programmes or thinking skill programmes should be introduced to teachers to aid in the understanding and implementation of OBE. Rather than "re-inventing the wheel and not taking cognisance of what already exists", Skuy (1997, p.1) proposes that cognitive programmes or thinking skill programmes, based on Feuerstein's theory of Structural Cognitive Modifiability (SCM) with its central and underlying construct of the Mediated Learning Experience (MLE), could be used to promote the implementation of a cognitively-oriented OBE curriculum.

According to Skuy (1997, p. 8) "the value of Feuerstein's theory and its various components is that it provides a specific analysis of the processes underlying OBE's critical cross-field outcomes and the methods and tools for achieving them". Feuerstein's Instrumental Enrichment (IE) thinking skills programme may, for example, be of great value to OBE. IE's cognitive and metacognitive programme (Feuerstein, 1979) provides a cognitive foundation for teachers and students who will be exposed to OBE, as it enables the bridging of concepts or cognitive operations from the Instruments into all subjects or learning areas (Skuy, Young,

Ajam, Fridjhon & Lomofsky, 1998, p. 6). Through Feuerstein's theory, OBE's holistic and cognitive approach to education (Preston & Walker, 1993), which is often ignored, may be incorporated.

Results from this study indicated that approximately half of the teachers surveyed believed that the role of the teacher is that of a facilitator who sets up the learning situation and then leaves the child to explore the tasks for himself. The other half believed that the role of the teacher is that of a mediator who needs to take responsibility for the learning of the student, illustrating ideas and applying teaching skills to aid understanding. These two types of teacher responses reflect Feuerstein's two modalities of learning: The Direct Learning Experience through direct exposure to stimuli and the MLE, which builds on Vygotsky's critical concept of mediation, where direct experience with environmental stimuli is transformed through the actions of an experienced intentioned and active human being (Feuerstein, Rand, Hoffman and Miller, 1980).

MLE does not only explain the conditions under which optimal learning occurs, it also provides the dimensions of teacher-student interaction necessary for optimal cognitive and socioemotional learning to occur (Feuerstein and Feuerstein, 1991). MLE provides teachers with the ability to develop a mediational, interactive style of teaching which enables students to become effective communicators, analytical and creative thinkers, who can gather and organise information and conduct research. MLE ensures that the teacher's role changes from being a transmitter of knowledge to a mediator and facilitator of learning, while the expectation for the student changes from a passive receiver of knowldege to an autonomous learner, reflective thinker and problem solver, who is actively involved in his or her own learning and construction of knowledge. The paradigm shift from passive to active learner, required for OBE to succeed, is made possible.

To summarise, teachers' attitudes towards and perceptions of OBE could become more positive with the provision of sufficient and high quality training courses on OBE, that are hosted by skilled professionals. The provision of cognitive training programmes, based on Feuerstein's theory of Structural Cognitive Modifiability, may also produce a shift in attitudes. A study by Skuy, Young, Ajam, Fridjhon & Lomofsky (1998) suggests the usefulness of an IE based programme in providing teachers with the appropriate attitudes and skills for implementing the OBE approach. Teachers may feel more positive towards OBE if they feel

that policy makers, NGOs, business communities, educators, teachers and students support it.

4.4 Shortcomings And Limitations Of The Research

This study examined teachers' attitudes, perceptions and feelings of competence towards OBE in South Africa. The sample, consisting of 124 teachers, was drawn from six different types of schools in and around Johannesburg. Although the sample was thus fairly heterogeneous, the external validity of the research may be questioned. The study did not consider the influence of geographic location on results, as teachers' attitudes and perceptions towards OBE may differ across South Africa's nine provinces. The results of the present study, which suggest that the majority of teachers are negatively disposed to OBE, may not be a true reflection of the feelings and perceptions of the total population of South African teachers.

A further bias is found in the cultural/ethnic composition of the study's sample. The sample of teachers was unequal across the six different types of schools. Only a small proportion of black and coloured teachers participated in the research. It is thus uncertain whether the attitudes and perceptions of black and coloured teachers towards OBE are adequately represented. Also, teachers' attitudes, perceptions and feelings of competence may vary among schools in the same category, such as, for example among historically (1) White English speaking schools, (2) Black schools, (3) Coloured schools, (4) Indian schools, (5) White Afrikaans speaking schools and (6) Private Schools. This is because each school has different school dynamics and is composed of different teachers with different personalities.

A bias in teachers' age groups and year teaching qualification was obtained was also evident. Results indicated that a large proportion of teachers was between 40 and 49 years old and that most teaching qualifications were obtained before 1989. The external validity of hypothesis two (the acceptance of OBE will vary negatively with age) and hypothesis three (the acceptance of OBE will vary negatively with years of teaching experience) may thus be questioned. Furthermore only a minority of teachers indicated that they were teaching Grade One. The majority of teachers were thus not directly affected by OBE. Interesting research results could have been achieved by comparing teachers' attitudes towards and perceptions of OBE across the different grades.

A further shortcoming may have been in the way in which the survey was conducted. The researcher could have handed out the questionnaires to the teachers during break and could have collected them immediately after break. By doing so, the researcher could have eliminated the risk of teachers discussing the questionnaire. This may also have improved the return rate of questionnaires.

A limitation of the questionnaire was that it was not translated into the teachers' home language. By doing so, clarity, meaning and understanding of the statements and questions on OBE may have been enhanced.

4.5 Suggestions For Further Research

The study was limited to assessing teachers' attitudes, perceptions and feelings of competence towards OBE in and around Johannesburg and should be conducted nation-wide to enhance the external validity of the research. Historically White English Speaking, White Afrikaans Speaking, Black, Coloured, Indian and Private Schools, as well as Rural Schools and Special Education Schools should be included to obtain a comprehensive view of teachers' attitudes and perceptions towards OBE across South Africa.

A large proportion of the teachers surveyed felt that cognitive programmes or thinking skill programmes should be introduced to teachers to aid in the understanding and implementation of OBE. Using a workshop based on Feuerstein's theory of Structural Cognitive Modifiability as the experimental variable, a nonrandomized control group pretest-posttest design could be utilized, to determine the impact of cognitive thinking skill programmes on attitudes and perceptions of teachers towards OBE. The two teacher groups should be matched as closely as possible.

To determine the impact of OBE training on teachers' attitudes towards OBE, a pretest-posttest control group design, using intensive OBE training (incorporating Feuerstein's thinking skills programmes) as the experimental variable, could be conducted. By matching the two teacher groups in terms of exposure to OBE training, age, years of teaching experience, gender, home language and grades taught, it could be determined whether intensive training courses on OBE have a positive impact on teachers' attitudes and perceptions towards OBE.

4.6 Summary And Conclusion

Education in South Africa is undergoing fundamental change. The change involves a paradigm shift from content based education to OBE. OBE, strongly influenced by the Australian and New Zealand curriculum framework, is designed to promote lifelong learning, integrate education and training, recognise learning gained outside of formal institutions and allow for flexible, portable credits and qualifications (French, 1997).

The attitudes, perceptions and feelings of competence of teachers in South Africa will either aid or hinder a successful implementation of OBE in South African schools. Research has shown that the majority of teachers in the present study are negatively disposed towards OBE. This finding correlates with informal studies on teachers' attitudes towards OBE in South Africa (Mostert & Reagan, 1997). Factors hindering a successful implementation are the country's lack of available funds and resources, the large pupil : teacher ratio, the inadequate and insufficient number of training courses on OBE, and high stress levels among teachers (Fox, 1997; Jansen, 1997; Malcolm, 1997). Monyokolo and Potenza (1997) have further voiced their concern that educational models, imported from contexts that are different from South Africa's, are short-sighted. A large proportion of teachers in this study echoed this finding.

In OBE, teachers need to be competent in focusing students on learning outcomes, provide students with the opportunity to develop critical outcomes, teach the eight learning areas of OBE, employ OBE teaching methodology, assess students using OBE assessment criteria and successfully manage a classroom with OBE. Research has shown that approximately half of the teachers surveyed in this study felt competent enough to apply OBE, thus demonstrating that OBE may succeed. Promising as this may sound, much more work on OBE still needs to be done to increase the comfort levels of those teachers who still feel less than competent towards OBE.

Cognitive thinking skill programmes and intensive OBE training programmes, hosted by skilled trainers need to be implemented in order to enhance teachers' attitudes, perceptions and feelings of competence towards OBE. The impact that OBE has on South African education should be monitored, with regular nation-wide studies assessing these attitudes, perceptions and feelings of competence.

The voices of teachers are often ignored in South African education. It is hoped this research has provided some useful information to educational policy makers regarding teachers' attitudes towards and perceptions of OBE and ideas to enhance its success.

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APPENDICES

Appendix A:

Comparison Of Key Competencies, Core Skills, Workplace Know-How And Essential Skills

(Borthwick, 1993, P.32)

AUSTRALIA Key Competencies	UK (NCVQ) Core Skills	USA (SCANS) Workplace Know-How	NZ Essential Skills
Collecting, Analysing and Organising Information	Communication	Information Foundation Skills (Basic skills)	Information Skills
Communicating Ideas and Information	Communication Personal Skills (Improving own learning and performance)	Information Foundation Skills (Basic skills)	Communication Skills
Planning and Organising Activities	Personal Skills (Improving own learning and performance)	Resources Foundation Skills (Personal qualities)	Self-management Skills Work and Study Skills
Working with Others and in Teams	Personal Skills (Working with others)	Interpersonal Skills	Social Skills Work and Study Skills
Using Mathematical Ideas and Techniques	Numeracy: Application of number	Foundation Skills (Basic skills)	Numeracy Skills
Solving Problems	Problem Solving	Foundation Skills (Thinking Skills)	Numeracy Skills Decision-making Skills
Using Technology	Information Technology	Technology Systems	Information Skills Communication Skills

Appendix B:

The National Qualifications Framework

QF Levels — Qualification / Certificate Categories and Providers

Levels 5 - 8

Higher Education				
Research	Higher Degrees	Initial Degrees	Profess. Employmt	National Diploma

Levels 2 - 4

Further Education Certificate					
Senior Secondary Schools	Technical Colleges Commercial Colleges	Private providers	Industry education & training	Labour market schemes	NGOs

Level 1

General Education Certificate *			
Grade 9 - Grade 7 - Grade 5 - Grade 3 - Educare	(Current Std 7) (Current Std 5) (Current Std 3) (Current Std 1)	ABET 4 ABET 3 ABET 2 ABET 1	(Adult Basic Education and Training)

Appendix C:

Content Based Education Compared To OBE

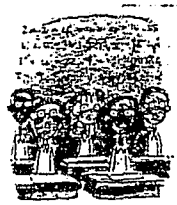
(OBE, 1997, P. 2, 3)

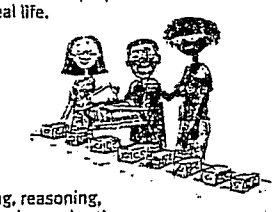
Contents Based Education	→	Outcomes Based Education

PRINCIPLES

- teachers transmit information;
- teacher-centred;
- knowledge of syllabus contents;
- syllabus and content is independent of the pupil/student's experience;
- focus on facts and information;
- does not give credit for knowledge or skills acquired outside of the formal education situation;
- rigid, compartmentalised subjects with an expected corpus of knowledge in each.

- educators are facilitators of learning;
- learner-centred;
- a wide variety of expected outcomes ensure acquisition of *knowledge, understanding, skills,* attitudes and values;
- learning is relevant to real life situations and experience of the learner;
- focus on application of knowledge;
- builds on skills and knowledge already acquired;
- cross-curricular integration of knowledge and skills to prepare learners for real life.





METHODOLOGY

Teaching Style

- rote learning (parrot fashion) without necessarily understanding;
- teachers often lecture to impart *information;*
- pupils/students are passive learners with teachers responsible for delivering information and knowledge;
- students/pupils all work at the same pace dictated by the teacher without taking into account different levels of ability;

- critical thinking, reasoning, research, reflection and action;
- learners engage in group/team/pairwork, debate, role play, experiments;
- learners are active and take responsibility for their learning by being actively involved in research, debate and experiments;

Contents Based Education → Outcomes Based Education

METHODOLOGY

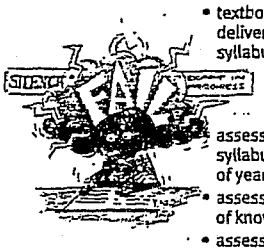
- students/pupils do not have learning expectations explained to them;
- a single style of teaching is used which does not take into account different styles of learning;

- learners are able to work at their own pace;
- learners know what outcomes they are expected to achieve;
- a variety of approaches are used in the learning process giving opportunity for all learning styles to be accommodated.

Use of Learning Materials

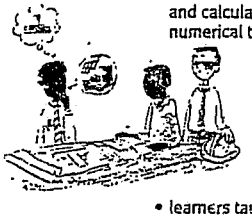
- textbooks concentrate on delivering the content of the syllabus;

- new learning materials encourage an eclectic approach, taking into account a wide range of resources.

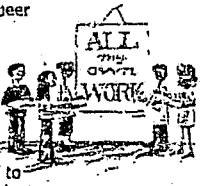


Assessment

- assessment of knowledge of syllabus content via tests and end of year exams;
- assessment focuses on retention of knowledge;
- assessment is by teachers and external examiners who mark work and calculate a final result in numerical terms.



- continuous assessment throughout a phase to give an overall picture of an individual learner's progress;
- assessment is broad, covering a number of assessment criteria which include skills, knowledge, understanding, attitudes and values;
- assessment includes teacher's assessment, self-assessment, peer assessment, resulting in a descriptive statement of what a learner has achieved.



RESULT

- learners taught not to question anything they learn which prevents them from thinking for themselves;
- because they have been reliant on a teacher to conduct their learning, students stop learning once they leave formal education;
- unable to apply knowledge and understanding, on leaving formal education, the student lacks the ability to take his/her place in society effectively at the outset.

- learners learn to question and to have a personal response to what they learn – this encourages critical thinking;
- because learners have acquired the skills for learning, they will be encouraged to continue to learn for life;
- ability to understand and apply skills enables learners to take their place in society and workplace as a well rounded citizen.

Appendix D:

Specific Outcomes Of OBE

(OBE, 1997, P.5)

LANGUAGES, LITERATURE AND COMMUNICATION

- make and negotiate meaning and *understanding;*
- show critical awareness of language usage;
- respond to the aesthetic, affective, cultural and social values in texts;
- access, process and use information from a *variety of sources and situations;*
- understand, know and apply language structures and conventions in context;
- use language for learning;
- use appropriate communication strategies *for specific purposes and situations.*

HUMAN AND SOCIAL SCIENCES

- *demonstrate a critical understanding of* how South African society has changed and developed;
- demonstrate a critical understanding of patterns of social development;
- participate actively in promoting a just, democratic and equitable society;
- make sound judgements about the *development, utilisation and management* of resources;
- critically understand the role of technology in social development;
- demonstrate an understanding of interrelationships between society and natural development;
- address social and environmental issues *in order to promote development and social* justice;
- analyse forms and processes of organisations;
- use a range of skills and techniques in the Human and Social Sciences context.

TECHNOLOGY

- understand and apply the Technological Process to solve problems and satisfy needs and wants;
- apply a range of technological knowledge and skills ethically and responsibly;
- access, process and use data for technological purposes;
- select and evaluate products and systems;
- demonstrate an understanding of how different societies create and adapt technological solutions to particular problems;
- demonstrate an understanding of the impact of technology;
- demonstrate an understanding of how technology might reflect different biases, *and create responsible and ethical* strategies to address them.

MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

- demonstrate understanding about ways of working with numbers;
- manipulate number patterns in different ways;
- demonstrate understanding of the historical development of mathematics in various social and cultural contexts;
- critically analyse how mathematical relationships are used in social, political *and economic relations;*
- measure with competence and confidence in a variety of contexts
- use data from various contexts to make informed judgements;
- *describe and represent experiences with* shape, space, time and motion, using all available senses;
- analyse natural forms, cultural products and processes as representations of shape, space, and time;
- use mathematical language to communicate mathematical ideas, concepts generalisations and thought processes;
- use various logical processes to formulate, test and justify conjectures.

NATURAL SCIENCES

- use process skills to investigate phenomena *related to the Natural Sciences;*
- demonstrate an understanding of concepts and principles, and acquired knowledge in the Natural Sciences;
- apply scientific knowledge and skills to problems in innovative ways;
- demonstrate an understanding of how scientific knowledge and skills contribute *to the management, development and* utilisation of natural and other resources;
- use scientific knowledge and skills to support responsible decision-making;
- demonstrate knowledge and understanding of the relationship between science and culture;
- demonstrate an understanding of the changing and contested nature of knowledge in the Natural Sciences;
- demonstrate knowledge and understanding of ethical issues, bias and inequities related to the Natural Sciences;
- demonstrate an understanding of the interaction between the Natural Sciences and socio-economic development.

ARTS AND CULTURE

- apply knowledge, techniques and skills to create and be critically involved in arts and culture processes and products;
- use the creative processes of arts and culture to develop and apply social and interactive skills;
- reflect on and engage critically with arts experience and works;
- demonstrate an understanding of the origins, functions and dynamic nature of culture;
- experience and analyse the role of the mass media in popular culture and its impact on multiple forms of communication and expression in the arts;
- use art skills and cultural expressions to make an economic contribution to self and society;
- demonstrate an ability to access creative arts and cultural processes to develop self esteem *and promote healing;*
- acknowledge, understand and promote historically marginalised arts and cultural forms and practices.

ECONOMIC AND MANAGEMENT SCIENCES

- engage in entrepreneurial activities;
- demonstrate personal role in economic environment;
- demonstrate the principles of supply and demand and the practices of production;
- *demonstrate managerial expertise and* administrative proficiency;
- critically analyse economic and financial data to make decisions;
- evaluate different economic systems from various perspectives;
- demonstrate actions which advance sustained economic growth, reconstruction and *development in South Africa;*
- evaluate the interrelationships between economic and other environments.

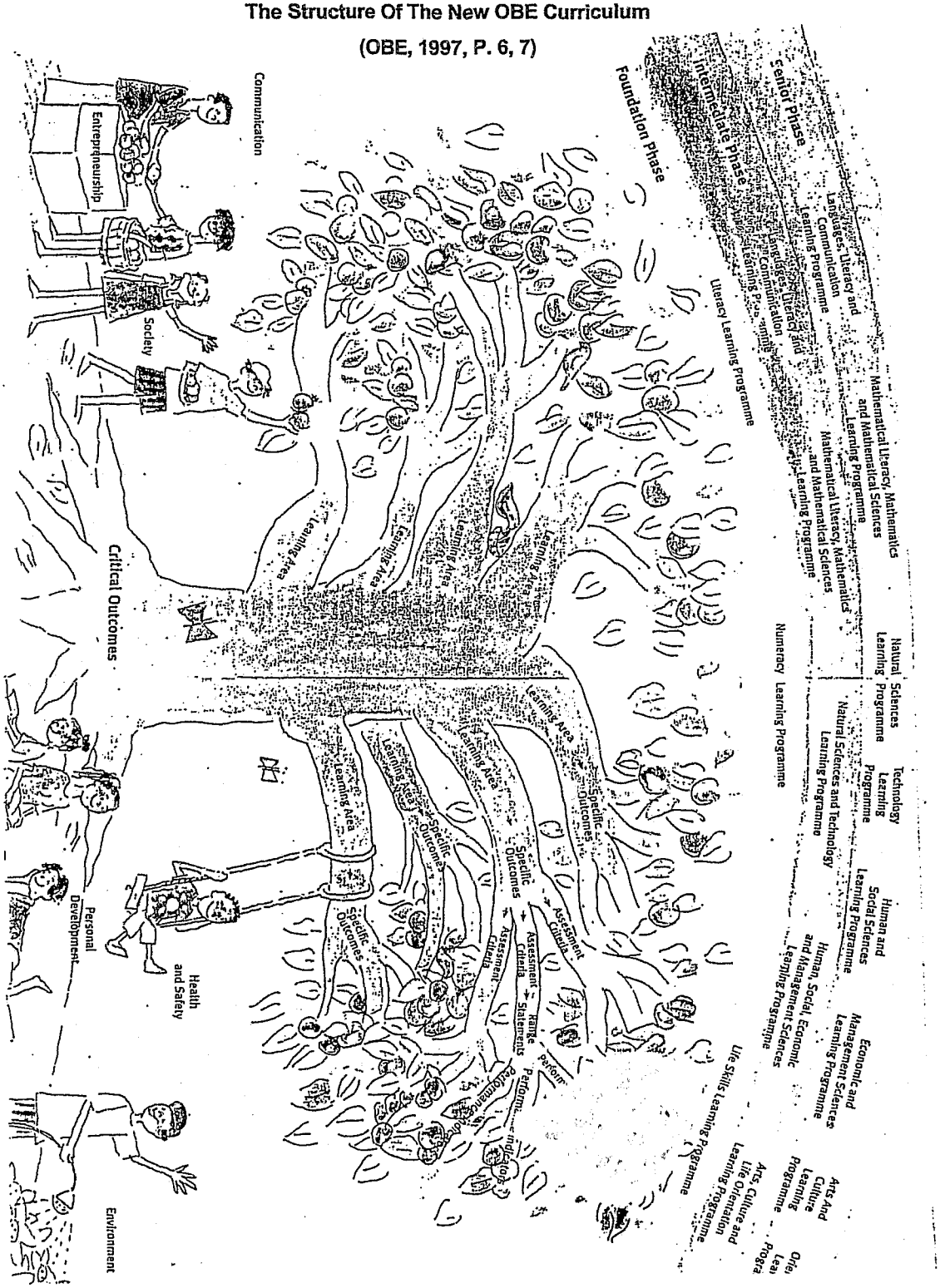
LIFE ORIENTATION

- understand and accept themselves as unique and worthwhile human beings;
- use skills and display attitudes and values that improve relationships in family, group and community;
- respect the rights of people to hold personal beliefs and values
- demonstrate value and respect for human rights as reflected in *Ubuntu* and other similar philosophies;
- practise acquired life and decision making skills;
- assess career and other opportunities and set goals that will enable them to make the best use of their potential and talents;
- demonstrate the values and attitudes necessary for a healthy and balanced lifestyle;
- evaluate and participate in activities that demonstrate effective human movement and development.

Appendix E:

The Structure Of The New OBE Curriculum

(OBE, 1997, P. 6, 7)



Appendix F:

Number Of Respondents For Each Of The Six Schools

Type of School	Number of Questionnaires handed out	Number of respondents	Percentage of respondents	Percentage of Questionnaires returned
Historically Indian School	30	23	19	77
Historically Coloured School	18	11	9	61
Historically White School - Afrikaans Speaking	28	24	19	86
Historically White School - English Speaking	32	32	26	100
Private School	38	29	23	77
Historically Black School	21	6	4	29

Appendix G:

Questionnaire On OBE

Division of Specialised Education

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Private Bag 3, WITS 2050, South Africa • Telegrams 'Uniwits' • Fax (011) 716-8030 • Telephone (011) 716-1111

19 May 1998

Dear Teacher

As you know, education and training in South Africa is presently undergoing rapid transformation and change. The goal of the new Curriculum 2005, to be phased in from 1998, is to create a shift from a content based education curriculum to an Outcomes Based Education curriculum.

The following Questionnaire asks for your opinion on a number of issues relating to Outcomes Based Education (OBE). By completing this Questionnaire, you can help us researchers gain an understanding of your attitudes, perceptions and feelings of competence towards OBE. Your answers will also be helpful indicators of what is still needed to successfully implement OBE.

The Questionnaire is anonymous - your name must not be given. Please answer questions frankly and please don't discuss the Questionnaire with other teachers whilst completing it. We value your *individual* opinion.

Thank you very much for your assistance

Yours faithfully,

CB Giessen-Hood (Mrs.)
BA Honours (Applied Psychology)
M.Ed Educational Psychology Intern

M Skuy PhD
Clinical and Educational Psychologist
Professor of Specialised Education and
Head of the Division

Questionnaire on Outcomes Based Education (OBE)

Section 1 : Biographical Information

In the following questions, please mark the appropriate box with an X.

1. Please indicate whether you are :

Male	
Female	

2. How old are you :

20 -25	
26 - 29	
30 - 34	
35 - 39	

40 - 49	
50 - 59	
60 +	

3. What is your home language :

Afrikaans	
English	
IsiNdebele	
IsiXhosa	

IsiZulu	
Sepedi	
Sesotho	
Seswati	

Setswana	
TshiVenda	
Xitsonga	

Other (please specify) : _____

4. What is your political orientation : THIS QUESTION DOES NOT HAVE TO BE FILLED IN - YOU ARE FREE TO LEAVE IT UNANSWERED

ACDP	
ANC	
DP	

Freedom Front	
IFP	
NP	

PAC	
UDM	

Other (please specify) : _____

5. What is the name of your school : _____

6. Please indicate your level of qualification:

Teaching Diploma	
Teaching Diploma plus Further Studies	
Teaching Degree	
Teaching Degree plus Postgraduate Studies	

Other (please specify) : _____

7. Please indicate the year your teaching qualification was obtained :

1997	
1995 - 1996	
1992 - 1994	
1989 - 1991	
Before 1989	

8. Please indicate the length of time taught at your present school ;

0 - 6 months	
7 months - 1 year	
2 - 3 years	
4 - 6 years	

7 - 9 years	
10 - 15 years	
16 years +	

Section 1 : Biographical Information (Continued)

9. How many years teaching experience do you have : _____

10. How many classes do you teach : _____

11. What is the maximum number of pupils in your classes : _____

12. What is the minimum number of pupils in your classes : _____

13. Please indicate the Grade(s) you are currently teaching

Nursery School		Grade 2		Grade 5	
Grade 0		Grade 3		Grade 6	
Grade 1		Grade 4		Grade 7	

14. Please indicate if you are:

A full - time staff member	
A part - time staff member	

15. Does your school follow the state school syllabus:

Yes	
No	

Section 2 : Statements on Outcomes Based Education (OBE)

A number of statements on OBE are given. You are expected, for each statement, to give the answer which applies to you the most. There are no right or wrong answers.

Please indicate whether you :

Strongly disagree	Disagree	Agree	Strongly agree
1	2	3	4

Example: South African T.V. is good

1	2	X	4

This means that you agree that South African T.V. is good. However, you are not extremely excited about it, or you would have placed your X in the "Strongly Agree" box.

1.	My knowledge of OBE is good	1	2	3	4
2.	I have received adequate training on OBE	1	2	3	4
3.	I am confused by the new terminology of OBE	1	2	3	4
4.	More research on OBE is needed before it can be implemented successfully	1	2	3	4
5.	The transition from content based education to OBE will be easy for me to achieve	1	2	3	4
6.	I find it difficult to adapt my teaching style to a child's individual learning style	1	2	3	4
7.	I will be able to judge if students have achieved the learning outcomes of OBE	1	2	3	4
8.	Learners use a variety of different strategies in their performance so that it becomes difficult in determining the particular competencies used in such performance	1	2	3	4
9.	There is no need to transform South Africa's education system from content based education to OBE	1	2	3	4
10.	OBE will help to improve the economic performance of South Africa	1	2	3	4
11.	OBE will provide all students with equal educational opportunities	1	2	3	4
12.	OBE will encourage independent learners	1	2	3	4
13.	OBE will encourage life long learners	1	2	3	4
14.	OBE will mean more work for teachers as they will have to design programs which are appropriate to the individual learning needs of their students	1	2	3	4
15.	My knowledge of the assessment techniques for OBE is good	1	2	3	4
16.	I do not understand the principle of continuous assessment	1	2	3	4
17.	In the OBE teacher training I have received, clear guidelines were given as to how students can be transformed from passive to active learners	1	2	3	4
18.	The large classes in the South African schools will hinder a successful implementation of OBE	1	2	3	4
19.	The provision of resources is essential if OBE is to succeed	1	2	3	4
20.	A common cultural background between learners and teachers is important for OBE to be successful	1	2	3	4
21.	Highly competent teachers are needed in order to make a change from content based to OBE possible	1	2	3	4
22.	I feel well prepared for OBE	1	2	3	4
23.	Cognitive programmes or thinking skill programmes should be introduced to teachers to aid in the understanding and implementation of OBE	1	2	3	4
24.	It is necessary to monitor the impact that OBE will have on South African education	1	2	3	4
25.	OBE will lower the standards of academic achievement in our education system	1	2	3	4
26.	OBE is more likely than the former education system to develop fulfilled human beings	1	2	3	4

Section 3 : Questions on Outcomes Based Education (OBE)

The following questions are in Multiple Choice format. Please mark with an X the ONE box which is more / most true :

1.	The field of education has a national vision and purpose	
	The field of education has no unitary policy	
2.	Schools operate together in sharing ideas	
	Schools operate in isolation from each other	
3.	OBE is based on a particular cognitive learning theory	
	OBE is based on a particular behavioural learning theory	
	I do not know which theory OBE is based on	
4.	The role of the teacher is a transmitter of information, passing on facts and rules to students	
	The role of the teacher is a mediator who needs to take responsibility for the learning of the student, illustrating ideas and teaching skills to aid understanding	
	The role of the teacher is a facilitator who sets up the learning situation and then leaves the child to explore the task for himself	
5.	Students can play an active role in developing part of their curriculum	
	Students cannot play an active role in developing part of their curriculum	
6.	In-service training programs for OBE are provided for teachers	
	In-service training programs for OBE are not available for teachers	
7.	An adequate number of training courses on OBE has been provided for teachers	
	An inadequate number of training courses on OBE has been provided for teachers	
8.	The quality of OBE training is adequate	
	The quality of OBE training is inadequate	

Please give answers to the following questions :

9. I have received _____ hours of teacher training on OBE.
(number)

10. My training in OBE has been in the form of : _____
(eg. Lecture(s), Workshop(s), Series of Workshops, No Training)

Section 4 : Further Questions on Outcomes Based Education (OBE)

The following questions are in Multiple Choice format. Please mark with an X the boxes which apply to you the most (you may mark MORE THAN ONE box) :

1.	When I hear of OBE I feel :	
	anxious	
	excited	
	confused	
	positive	
	negative	
	curious	
	skeptical	

2.	Assessment is integral to learning and teaching	
	Assessment is separate from learning and teaching	
	Assessment should happen only at the end of the year	
	Assessment should focus on how well learners apply skills	
	Assessment should happen all year through	
	Assessment should only involve examinations	
	Assessment should not only be in form of examinations	
	Assessment is about understanding what pupils have learnt	
	Assessment is about comparing students' performances	

3.	OBE will:	
	Increase teacher autonomy	
	Improve learners attendance at school	
	Enhance student self-esteem	
	Achieve learning outcomes	
	Prepare learners for higher education and the world of work	
	None of the above	

4.	The education system that South Africa followed before OBE was introduced promoted :	
	Critical thinking	
	Problem solving	
	Sharing of information between learners	
	Co-operation between learners	
	None of the above	

Section 5 : Questions relating to feelings of competence

In the following questions, please mark the appropriate box with an X

How would you rate your feelings of competence with regard to :

1.	Focusing students on the learning outcomes of OBE	poor	less than adequate	adequate	good
2.	The principle of continuous assessment in OBE	poor	less than adequate	adequate	good
3.	Providing students with the opportunity to develop critical outcomes	poor	less than adequate	adequate	good
4.	Teaching the eight learning areas of OBE	poor	less than adequate	adequate	good
5.	Ability to assess students using OBE assessment criteria	poor	less than adequate	adequate	good
6.	Employing OBE teaching methodology	poor	less than adequate	adequate	good
7.	Ability to successfully implement OBE	poor	less than adequate	adequate	good
8.	Classroom management with OBE	poor	less than adequate	adequate	good

A variety of different assessment procedures have been identified in OBE. Please rate your feelings of competence with regard to:

1.	Self-assessment by learners	poor	less than adequate	adequate	good
2.	Portfolios	poor	less than adequate	adequate	good
3.	Written assignments	poor	less than adequate	adequate	good
4.	Pen and paper tests	poor	less than adequate	adequate	good
5.	Oral presentations	poor	less than adequate	adequate	good
6.	Peer assessment	poor	less than adequate	adequate	good
7.	Projects	poor	less than adequate	adequate	good
8.	Practical assignments	poor	less than adequate	adequate	good
9.	Simulations	poor	less than adequate	adequate	good
10.	External assessors	poor	less than adequate	adequate	good
11.	Computer assisted assessment	poor	less than adequate	adequate	good

Section 6 : Sentence Completion on Outcomes Based Education (OBE)

Please complete the sentences by writing what first comes to mind:

1. When I hear of OBE I feel _____
2. OBE will succeed because _____
3. OBE will fail because _____
4. In South Africa education is _____
5. Teachers' attitudes towards OBE are _____
6. Content based education is _____
7. OBE is _____
8. I am concerned _____
9. When I hear of outcomes based education's assessment techniques I feel _____

_____

10. Training programmes on outcomes based education are _____

_____

Any further comments regarding Outcomes Based Education:

_____

_____

_____

_____

_____

_____

_____

_____

Thank you for the time that you have spent completing this questionnaire!

Appendix B:

Table Of Eigenvalues

	1	2	3	4	5	6	7	8
Eigenvalue	5.3001	2.5292	2.3804	1.8900	1.4051	1.3786	1.1635	1.0172
Proportion	0.2038	0.0973	0.0916	0.0727	0.0540	0.0530	0.0448	0.0391
Cumulative	0.2038	0.3011	0.3927	0.4654	0.5194	0.5724	0.6172	0.6563

	9
Eigenvalue	0.9318
Proportion	0.0358
Cumulative	0.6922

Appendix I:

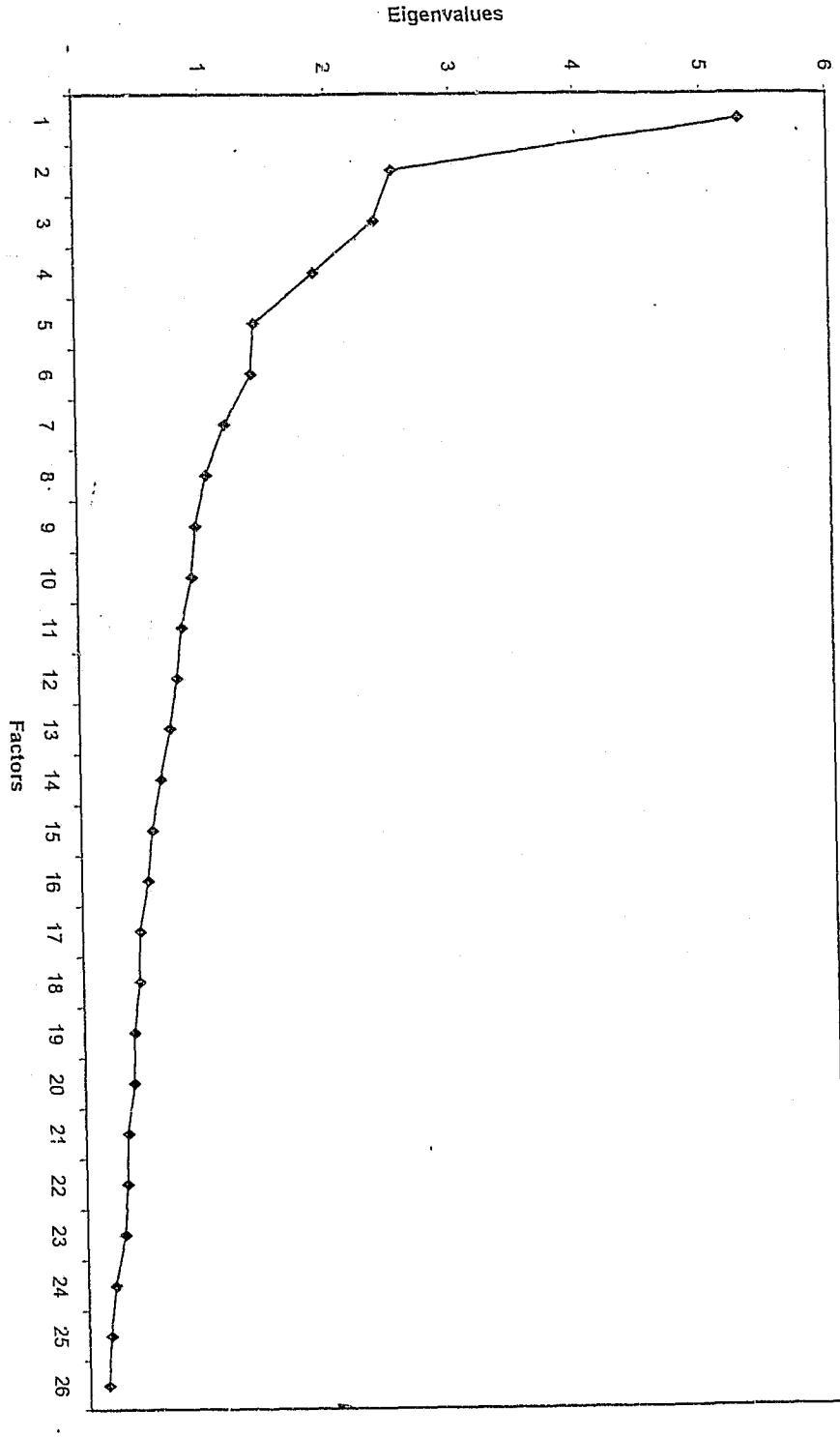
Factor Pattern Of The Principal Components

(* = items loading onto factors)

Question	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
1	0.38718	*0.46414	-0.32232	-0.14880	0.24671	-0.32755	0.04813	0.13877
2	*0.41952	*0.45671	-0.23204	0.17182	0.22505	*0.41402	0.05321	0.09584
3	0.10741	-0.00741	0.06252	-0.37396	*0.62656	0.02301	-0.20736	-0.16035
4	0.15704	-0.30615	0.27590	-0.10820	0.30954	-0.43123	-0.20756	0.22556
5	*0.56560	0.08957	-0.29863	-0.19421	-0.27162	0.14739	0.06695	0.06028
6	*0.48232	0.29278	0.02711	-0.35768	-0.38165	-0.06937	-0.03189	-0.28288
7	*0.57709	0.10538	-0.28281	-0.10010	*-0.44802	-0.09727	0.16456	0.02681
8	*0.40785	0.28774	0.30259	-0.51141	-0.13681	-0.01919	-0.17278	0.34062
9	*0.55053	-0.29887	0.20700	-0.24807	0.29161	0.00430	0.15476	-0.33547
10	*0.77312	-0.28264	0.03292	-0.00390	0.10732	0.01120	-0.12278	-0.03775
11	*0.57651	-0.28039	0.09580	0.21015	-0.05103	0.18056	-0.15362	*0.57234
12	*0.61126	-0.32707	-0.15513	0.20365	0.00491	0.41218	0.17518	-0.12633
13	*0.70992	-0.31329	-0.02458	0.14444	0.11293	0.10585	0.14833	0.07187
14	0.16045	*0.44065	0.29473	0.32683	-0.10341	-0.00832	-0.34114	-0.32580
15	0.38805	*0.48174	-0.35883	0.03776	0.18418	0.12672	-0.13122	-0.17256
16	-0.02485	0.37867	-0.19089	-0.23524	0.21098	0.25712	*0.53750	0.14974
17	0.27140	-0.05774	-0.33126	*0.48064	0.09463	0.19282	-0.30293	-0.09091
18	0.21791	0.19377	0.37701	*0.60782	-0.00842	-0.19638	0.29892	0.03251
19	0.10234	0.38963	0.34901	*0.45520	0.22082	0.03095	0.31146	0.01597
20	0.32756	0.19745	0.30528	-0.08675	0.08508	*0.50934	-0.24930	0.21509
21	0.19174	0.06230	*0.61919	0.13509	-0.26531	-0.17241	0.11974	-0.05844
22	*0.53211	*0.40970	-0.33518	0.17545	0.02059	0.01211	-0.28904	0.04970
23	-0.18873	*0.56290	*0.42233	-0.06657	0.11394	0.33160	0.04918	0.18640
24	0.12336	0.29548	*0.55636	-0.20273	-0.02129	0.16648	0.04190	-0.29985
25	*0.76881	-0.14333	0.23359	-0.08890	-0.08818	-0.27809	0.12642	-0.07128
26	*0.63033	-0.27508	0.21513	-0.01581	0.09039	-0.00090	0.16555	-0.06114

Appendix J:

Scree Plot Of Eigenvalues



Appendix K:

Percentages And Frequencies Of Teachers' Concerns

I am concerned:	Frequency	%
About education in general/the standard of education in South Africa	25	23
Implementation difficulties of OBE	18	17
That teachers are not trained for OBE	16	15
About the success of OBE	14	13
That pupils will not progress as they did before	7	6
About financial issues	7	6
About the assessment procedures of OBE	3	3
That South Africa will land up with illiterate pupils	2	3
That children will not be able to fail in OBE	2	3
About the inability of facilitators to train teachers adequately on OBE	2	3
That anything that previously worked is abolished	2	3
About OBE for the undisciplined learners	1	1
About ideas that are forced down on teachers	1	1
That not all educators will do justice to OBE	1	1
About OBE training for educators in rural areas	1	1
About the confusion in our education system	1	1
That we have gone from one extreme to the next	1	1
About South Africa's first OBE matric	1	1
That there are too many confusing and complicated terms used in OBE	1	1
About the lack of research into OBE	1	1
About the lack of awareness of OBE	1	1
About the lack of enthusiasm shown by teachers	1	1

Total number of responses given by teachers = 109

Appendix L:

Percentages Of Teachers' Responses To Statements On OBE

Statements on OBE	Strongly disagree %	Disagree %	Agree %	Strongly Agree %
My knowledge of OBE is good	7	35	52	6
I have received adequate training on OBE	24	56	17	3
I am confused by the new terminology of OBE	13	37	39	12
More research on OBE is needed before it can be implemented successfully	2	6	29	62
The transition from content based education to OBE will be easy for me to achieve	9	26	51	14
I find it difficult to adapt my teaching style to a child's individual learning style	26	46	22	6
I will be able to judge if students have achieved the learning outcomes of OBE	9	27	50	14
Learners use a variety of different strategies in their performance so that it becomes difficult in determining the particular competencies used in such performance	6	34	48	12
There is no need to transform South Africa's education system from content based education to OBE	14	33	30	23
OBE will help to improve the economic performance of South Africa	30	40	23	7
OBE will provide all students with equal educational opportunities	26	46	24	4
OBE will encourage independent learners	14	21	52	13
OBE will encourage life long learners	15	33	43	9
OBE will mean more work for teachers as they will have to design programs which are appropriate to the individual learning needs of their students	5	13	45	37
My knowledge of the assessment techniques for OBE is good	15	50	30	5
I do not understand the principle of continuous assessment	35	47	13	5
In the OBE training I have received, clear guidelines were given as to how students can be transformed from passive to active learners	25	47	20	8
The large classes in the South African schools will hinder a successful implementation of OBE	5	3	28	64
The provision of resources is essential if OBE is to succeed	5	3	30	62

A common cultural background between learners and teachers is important for OBE to be successful	4	33	37	26
Highly competent teachers are needed in order to make a change from content based to OBE possible	6	15	32	47
I feel well prepared for OBE	27	48	17	8
Cognitive programmes or thinking skill programmes should be introduced to teachers to aid in the understanding and implementation of OBE	3	10	53	34
It is necessary to monitor the impact that OBE will have on South African education	3	0	25	72
OBE will lower the standards of academic achievement in our education system	5	25	41	29
Obe is more likely than the former education system to develop fulfilled human beings	18	35	40	7

Appendix M:

Percentages Of Teachers' Responses To Section Four

When I hear of OBE I feel:	Frequency	%
Anxious	22	18
Excited	18	15
Confused	33	27
Positive	31	25
Negative	20	16
Curious	26	21
Sceptical	70	56

Teachers' perception of assessment:	Frequency	%
Assessment is integral to learning and teaching	83	67
Assessment is separate from learning and teaching	1	1
Assessment should happen only at the end of the year	0	0
Assessment should focus on how well learners apply	72	58
Assessment should happen all year through	98	79
Assessment should only involve examinations	0	0
Assessment should not only be in form of	53	43
Assessment is about understanding what pupils have	68	55
Assessment is about comparing students' performance	8	6

OBE will:	Frequency	%
Increase teacher autonomy	11	9
Improve learners attendance at school	8	6
Enhance student self-esteem	50	40
Achieve learning outcomes	46	37
Prepare learners for higher education and the world of	38	31
None of the above	32	26

Content based education promoted:	Frequency	%
Critical thinking	40	32
Problem solving	63	51
Sharing of information between learners	43	35
Co-operation between learners	36	29
None of the above	34	27

Appendix N:

Reasons Given For Why It Is Felt That OBE Will Fail

	Frequency	%
OBE is going to fail	42	42
OBE will fail because it is:		
A waste of time and money	15	36
Good in theory but not in practice	12	29
Too broad and unstructured	4	10
A dubious system	3	7
Unpractical	2	5
Not a clear reflection of a child's performance	2	5
Geared to produce lower standards	1	2
Difficult because pupils' knowledge is limited	1	2
Causing further confusion	1	2
Farfetched/unrealistic	1	2

Reasons Given For Why It Is Felt That OBE Will Succeed

	Frequency	%
OBE is going to succeed:	40	40
OBE will succeed because it is:		
Based on good principals	13	33
Pupil oriented and flexible	9	23
Necessary in South Africa but should be used in conjunction with other methods	7	18
More effective	7	18
Viable in small class units	2	5
A challenge	2	5

Appendix O:

Percentages Of Teachers' Responses To Section Three

	Frequency	%
The field of education has a national vision and purpose	56	52
The field of education has no unitary policy	52	48

	Frequency	%
Schools operate together in sharing ideas	53	46
Schools operate in isolation from each other	63	54

	Frequency	%
OBE is based on a particular cognitive learning theory	39	36
OBE is based on a particular behavioural learning theory	18	16
I do not know which theory OBE is based on	53	48

	Frequency	%
The role of the teacher is a transmitter of information	2	2
The role of the teacher is a mediator	62	53
The role of the teacher is a facilitator	53	45

	Frequency	%
Students can play an active role in developing part of their curriculum	85	75
Students cannot play an active role in developing part of their curriculum	29	25

	Frequency	%
In-service training programs for OBE are provided for teachers	62	55
In-service training programs for OBE are not available for teachers	50	45

	Frequency	%
An adequate number of training courses on OBE has been provided	14	13
An inadequate number of training courses on OBE has been provided	97	87

	Frequency	%
The quality of OBE training is adequate	10	9
The quality of OBE training is inadequate	99	91

OBE training received	Frequency	%
One workshop	7	6
Multiple workshops	33	28
Lectures	18	15
Workshops and lectures	30	26
No training	29	25

Mean number hours of teacher training on OBE	Frequency	%
8.17	110	14.53

Appendix P:

Teachers' Perceptions Of Content Based Education

Content based education is:	Frequency	%
Negative Responses	32	34
Inadequate	16	34
Outdated	7	50
Inhibiting/limiting/rigid	5	22
Not based on skills	1	16
Unchallenging	1	3
Lacking discipline	1	3
Encouraged by lazy learners	1	3
Positive Responses	54	57
Acceptable to a certain extent	15	28
A successful education/of a good standard	11	20
Guaranteed to produce higher standards and results	10	19
Necessary for many types of learners/certain subjects	5	9
Valuable	4	7
Disciplined/structured/orderly	3	6
A safer way in a very uncertain South Africa	2	4
Adequate	2	4
Practical	1	2
Based on the progress of the individual	1	2
Neutral Responses	8	9

Total number of responses given by teachers = 94

Appendix Q:

Teachers' Perceptions Of Why OBE Will Fail

OBE will fail because:	Frequency	%
Of inadequate teacher training	41	33.1
Resources are inadequate/lack of funding	22	17.7
It is unrealistically enforced in a short time	13	10.5
Of the high pupil numbers	8	6.5
Teachers are incompetent	7	5.6
Its terminology is too confusing	6	4.8
South Africa is not ready for OBE	4	3.3
Children cannot think for themselves	4	3.3
Of the lack of good facilitators	3	2.4
Learners are not allowed to fail when necessary	3	2.4
Of lack of discipline	2	1.6
Of multi lingualism in the classroom	2	1.6
Of its lack of structure	2	1.6
Very few practising educators are excited about it	1	0.8
Cultural differences	1	0.8
Teachers are not given enough support	1	0.8
It has failed in other countries	1	0.8
Teachers are disillusioned	1	0.8
Of mismanagement	1	0.8
The administrative aspects will take too much time	1	0.8

Total number of responses given by teachers = 124

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