



Enhanced classroom interaction and the quality of teaching in practice

by

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Declaration of authorship

Declare that this submission is my own work and that it has been written in my own words. All citation from published or unpublished works have been acknowledged in text and referenced in full.

Signature of student: _____

Date: _____

Abstract

This study is essentially a representation of my lived experience of my professional development as a teacher from the moment of my enrollment in a teacher education programme through my initial appointment as a professional teacher and my continued post graduate studies in education while being a teacher.

However, I was faced with the challenge that I had no prior experience of the newly adopted Outcomes Based Education system which I will need to operate in when qualified. This drawback made me even more determined to make a success of my career. I therefore decided to engage in a qualitative participatory action research study to ensure that I will continually improve my OBE practices in a scholarly way. The study conveys the challenges I faced as a student teacher in a career path of initial teacher education aggravated by an unfamiliar education dispensation, my subsequent initiation into my career as a professional teacher, and my quest to remain a scholarly practitioner by enrolling for post graduate teacher education studies.

I may have found a way in which effective continual professional development in a scholarly way may be available to every teacher besides that of formal post graduate studies.

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CHAPTER 1

Reflection

Reflective practice

Stating the problem

1.1 Introduction

As I approached the end of my studies I had to consider various options for a career. I was studying towards a BA General degree, with Education, Information Science, Criminology and Accounting and Business Science as my majors, which was completed in 2001. After careful consideration, I realised I wanted to specialise in a more focused specific field and therefore continued with postgraduate studies.

My objective was to enter education and teaching and to conduct research in this specific field. Education was one of the subjects for my BA degree and it intrigued me. I was very interested to specialise in this field, especially aspects of education and the various theories. I would like to conduct research in these fields and it is my desire to work with people and their interests. After completing my final year, I knew that teaching is my forte and had selected the field in which to specialise.

Having decided that I wanted to make education and teaching my career, I decided to enter a teacher education programme. I had already obtained my Bachelor's degree and enrolled for a Postgraduate Certificate in Education (PGCE) during 2003. The postgraduate course also consisted of a practical component and I taught for two terms at two different schools. This was my first experience of teaching and it was vital for my preparation for a teaching career after completing my PGCE.

Having been exposed to twelve years of schooling and another three years of studies at university for my bachelor's degree, I was excited to engage in a career that I had ample exposure to and was convinced that it could not be very difficult to qualify for the teaching career I committed to. I was however mistaken, and my expectations proved to be consistently wrong. This served as the impetus to engage in this study.

1.2 What a surprise

Our first assignment for the PGCE programme was to plan the best possible lesson in our school subject, on the level of the learners we would be teaching. We would then present this lesson to our peers in the class. I was really excited about the assignment, as this was exactly what I wanted to do. When I started working on the lesson, I discovered that it was not as easy as I thought it would be. My goal was to ensure that I knew the content well and that I was able to convey this to the "learners" successfully. This is exactly what I did and what followed was the first lesson that I was proud of.



Lesson 1

Accounting grade 10

In this lesson I will teach the learners on how to compile an income statement and to calculate the profit. I will explain to them how what expenses and incomes are and also what type of expenses and incomes can be found in a business enterprise. Thereafter they will need to answer the questions that follow.

Question 1	What is the purpose of an income statement?
Question 2	Name 2 incomes that you can find in a business enterprise.
Question 3	Name 6 expenses that can be find in a business enterprise.
Question 4	How do you calculate profit?
Question 5	Do a Income statement using the incomes and expenses that was identified in question 2 and 3

LESSON 1

ACCOUNTING GRADE 10

In this lesson I will teach the learners how to compile an income statement and calculate the profit. They will learn what expenses and income are also what type of expenses and income can be found in a business enterprise. Thereafter they will need to answer the following questions:

Question 1	What is the purpose of an income statement?
Question 2	Name 2 types of income that you can find in a business enterprise.
Question 3	Name 6 expenses that can be found in a business enterprise.
Question 4	How do you calculate profit?
Question 5	Draw up an Income Statement using the income and expenses that were identified in questions 2 and 3.

Although we were a little anxious to present the lesson to – or rather in front of – our peers, we were all proud of our accomplishments. However, afterwards we were bombarded with a range of questions which we were unable to answer or answer

satisfactorily, neither between ourselves nor the lecturers, and we became a little discouraged. We quickly became aware of educational aspects previously not experienced and we were exposed to questions pertaining to the outcome of what the learners had achieved.

My enrolment in the PGCE, therefore, confronted me with something unexpected. I was introduced to Outcomes Based Education or OBE. I was unaware that education can adopt any one of a number of systems and that South Africa had chosen OBE as its preferred system. OBE was a surprise to me and it caught me off guard. I thought I knew what education was all about, and that I only needed to refine a few things and then I will be a qualified teacher. I could not have been more wrong.

I value and cherish the career I have chosen, and have set myself the goal of making a success of it. I engaged in the PGCE program with vigour and I committed myself to the objectives of OBE.

1.3 Why Outcomes Based Education?

Although this question may be unnecessary, it had to be addressed when I was confronted with the new education dispensation South Africa has adopted. The main reason is, without a detailed academic substantiation, that the previous South African educational system as well as many other systems around the world employed, was based on a

particular concept of knowledge. This concept was grounded on particular assumptions and corresponding consequences, as indicated in table 1.

TABLE 1 Assumptions and its consequences regarding a perception of knowledge
(Knowles 1990:57)

ASSUMPTION	CONSEQUENCE
Knowledge is the primary object of education.	The learner needs to obtain the knowledge.
The teacher transmits the knowledge.	The learner receives the knowledge.
Knowledge that learners should obtain must be packaged and transmitted in the best possible way.	The learners receive knowledge in that pre-packaged format which they have to retain (store) and reproduce when asked in tests and exams.
Knowledge educates.	Learners are primarily passive recipients, observation educates.
If the learners need to learn to do something (like solving a maths problem) the teacher has to demonstrate/illustrate/show the learners what to do and how to do it because the learners do not know.	The learners can and should preferably imitate what the teacher does as accurately as possible.
The teacher is the source of knowledge and possesses all the knowledge necessary.	The learners obtain the necessary knowledge from the teacher and stay dependent on the teacher for their knowledge.

This table shows that education has become knowledge, or content which is driven by learners reproducing the content that the teacher transmitted, or imitating what the teacher demonstrated. The result is that the outcome of education is at its lowest possible level of quality. It also means that the content dictates and mandates what is learned and known, and therefore limits the learner's access to more knowledge.

Outcomes Based Education also acknowledges that knowledge is of little value in itself. It is rather what learners can do with this knowledge that is important. That is why the

formulation of an outcome has adopted the now familiar format of: “At the end of this period the learners should be able to do something tangible or observable in order to demonstrate that learning had taken place and whether the learning was at an appropriate level”.

Outcomes based learning is therefore focused primarily and directly on the outcome of learners’ learning experience. It indicates a task or outcome that learners must be able to execute as evidence and demonstration of their learning.

I had to become accustomed to the fact that, in my perception of education, the content that I thought was primary is replaced with outcomes and that these outcomes are what the learners need to achieve. The content, though, is not of primary importance. Any content that compels the learners to achieve the outcomes can be selected. It should, therefore, be obvious that the focus of education has moved from the teacher to the learner. This experience had undermined the safety I found in the knowledge I acquired in my Bachelor’s degree.

1.4 From teacher centeredness to learner centeredness – Is this shift enough to improve learning quality?

Looking for content in the National Curriculum Statement was obviously futile, but there was an indication of core knowledge and concepts. The focus of my teaching had to be

the outcomes that the learners need to achieve and not my teaching ability, although this is still important. I had to approach the matter from the learners' point of view. The outcomes are what the learners need to achieve – and very specifically ***not*** what they needed to know, but what they must be enabled to do.

I immediately faced a dilemma, especially with regards to categories of outcomes, such as knowledge, skills and values. These are the same categories that learners were expected to have to learn in the previous education dispensation. The reasoning was that if knowledge, skills and values were to be learnt – or achieved as outcomes - then the teaching thereof might not necessarily differ in any way from transmitting the knowledge, demonstrating the skill and moralising the value. In the example that follows, using the right terminology and procedures, etc will aid this. I can only convey the knowledge of what a balance sheet or an income statement is, (knowledge), how it is compiled, (skill) and tell them that it must be balanced by considering only actual income and expenditure, that evidence should be provided for all entries and that any discrepancies have to be fully accounted for, (values of integrity and honesty). This would result in the same low level of quality education – there is in fact no reason or incentive to do it differently because the learners would have achieved the outcomes. They would be able to tell me what a balance sheet or income statement is, they would be able to draw up a balance sheet and an income statement and they would be able to tell me that they have to provide all the relevant evidence and be accountable for all the discrepancies. The outcomes would have been achieved. Through repetition of similar exercises, the learners can even become quite competent in imitating me.

Besides ensuring that the appropriate knowledge, skills and values have been achieved, what would the difference be between traditional education and Outcomes Based Education? Or to put it differently: How do I teach in order to enable learners to achieve the outcomes on a higher level of quality than simply a replica of what I transmitted and what they were able to accurately reproduce? In a balance sheet and income statement, the most important aspect is to understand these statements and to interpret all the aspects that these statements consist of and not to only replicate these statements without a proper understanding thereof.

Therefore the real question is what differentiates the teacher in traditional education from the one in Outcomes Based Education?

1.5 What is the distinguishing characteristics of the Outcomes Based Education teacher?

The first question I had to answer was: What is a teacher? Or perhaps even more accurately, who is a teacher? It was not long before that question was answered in the

form of the seven roles of an educator. Although some might think: “Who does not know that?”, this is quite a daunting question the student teacher faces when confronted for the first time with the realisation that you have to fulfil all of the roles discussed in the next section.

1.5.1 Roles of the facilitator of learning

According to Du Toit (B) (2007, p. 1) the roles of a learning facilitator can be identified as:

- a. A learning area specialist;
- b. Leader, administrator and manager;
- c. Learning mediator;
- d. Interpreter and designer of learning programmes and materials;
- e. Assessor;
- f. Scholar, researcher and life-long learner;
- g. Community, citizenship and pastoral role.

Each of these roles consists of practical, foundational and reflective categories (totalling 134) and up to 10 competences in each of these categories must be achieved.

Even as early as 1990, research conducted by Harley, Bertram and Mattson (1990) on the teacher fulfilling all these educator roles and exercising the associated foundational, practical and reflexive competences for each role in policy and practice, indicated that

this is a highly questionable possibility. At the time of this research, the educator's role as assessor was not yet included as a separate role, but was incorporated in the role of learning mediator. Therefore it was possible to make significant deductions regarding the assessor's role as a separate role.

Here is a short summary of this research and its findings:

1.6 Policy documents

Policy documents as guidelines to education and training plays an important role in the planning and actions that teachers and trainers should follow in their practices.

“Since 1997, four key policy documents on teacher education, training and development were produced:

- COTEP Norms and Standards for Educators;
- SACE Code of Conduct;
- ELRC Manual for Developmental Appraisal;
- NDOE Duties and Responsibilities of Educators.”

Collectively these documents define employer requirements, provide frameworks for professional development and appraisal, define professional conduct and specify educators' duties and responsibilities.

In South Africa there is a shortage of knowledge on the details and context texture of daily activity in schools and classrooms. There is thus a danger of policy development

that takes place without a firm grounding in empirical school-based research. I accordingly posed three questions:

- What does policy say that educators should be doing?
- What are teachers actually doing?
- What is the ‘fit’ between policy and practice?”

1.7 Research design

The research design was of a qualitative nature utilising the major educator roles as indicators. The roles were categorised as mainly visible and invisible. Data was obtained mainly through observation to determine the visible roles and interviews to determine the invisible roles.

The study was conducted in schools and with teachers who had been identified as effective. This constitutes being recognised by the school community as “good”, having above average examination results, and making a contribution to the school being resilient (influential, responsible, flexible, learning and teaching, consistent disciplinary practices and culture of concern).

1.8 Findings

As already mentioned, educators have certain roles in the classroom Du Toit (B) (2007, p. 1). These roles are fulfilled consciously and sub-consciously by educators. Educators

play an integral part in the development and the forming of the learners to prepare them for the working world after their schooling career. To understand teaching in Outcomes Based Education and also how to teach in an Outcomes Based Education's classroom, one should thoroughly understand each one of these roles.

a. Findings on the individual roles of educators

▪ Learning mediator

The majority of teachers possessed and utilized most of the competences required, but this has to be qualified: Teachers tend to equate subject familiarity with thorough or effective preparation. In such a scenario, teachers will focus on the transmission of content, with little regard to the individual needs of learners. The teacher's sensitivity to the diverse needs of learners, as well as the consideration and utilisation of the learner's own experiences as a valuable and fundamental resource, were among the least frequently observed competences, together with encouraging the development of life-skills and frequent and appropriate feedback.

▪ Interpreter and designer of learning programme and materials

Most teachers are engaged in the implementation of the programmes that were provided, but not in the design of original ones. Generally, there is a lack of integration between theoretical knowledge of what

ought to be, the understanding of the role of certain programmes, resources to effective learning and the practical application of that knowledge in the design and innovation of programmes or resources to facilitate the achievement of educational goals.

- **Leader, administrator and manager**

There is a great deal of confusion between the roles of leadership, management, and administration and the clarity and consistency as to what constitutes appropriate forms of control. There is a continued existence of robust disciplinary measures, and notwithstanding its illegality, corporal punishment is alive and well. This puts the manager and leader role into a battle of conflict. Co-ordination and control of academic activities are determined by attitude and is viewed as an inconvenient necessity.

- **Community, citizen and pastoral role**

The teachers' perception of their role as community developers is as diverse as it is contested, reflecting both initiative and indifference, conformity to end contestation of values and optimistic and pessimistic views of policy initiatives towards educational transformation and change. Most teachers do not live in their school communities and they

will have perpetual value and custom conflict, which result in ritualistic compliance to employer requirements.

In terms of the pastoral role, it is seen as a preserve for teachers who are specifically appointed or allocated that duty. There is therefore a tendency towards role specialisation.

- **Scholar, researcher and lifelong learner**

This role is largely introspective and self-interactive, focusing on personal and professional development. Participation in appraisal as part of personal and professional development was not only a largely absent phenomenon, but was viewed with much suspicion.

Research did not feature as a possessed and practiced competence by most teachers, as were attempts to access and apply existing research findings in solving educational problems. This was due to lacking skills, workload and attitude.

- **Assessor**

Teachers lack the knowledge and use of various assessment instruments for formative and summative assessment. Teachers use tests, examinations and/or projects for summative assessment to gauge learners' ability rather than serve diagnostic purposes with a view to improving practice.

- **Learning area/subject/discipline/phase specialist**

No findings were reported in this research under this role.

b. General findings

The policy documents also acknowledge these roles of the educator and what fulfilment educators should have towards these roles.

i. Policy

Analysis of policy documents suggests that policy:

- Is underpinned by liberal values, which include a belief in the natural goodness and rationality in all people and their right to autonomy and freedom. According to liberal values, everyone should have equal opportunities to develop their full potential;
- Adopts a consensus view of society, which means that everyone in a society has the same beliefs, values and attitudes;
- Views the teacher as an extended professional, which means that education is seen in the broader and deeper context of the personal development of the learner and a dynamic professional development through research and interaction with others. (Restricted

professionalism saw education narrowed down to classroom based thinking and practice and responsibilities restricted to the academic program);

- Presents a democratic developmental model of teacher accountability and policy implementation to improve practice by educators taking ownership of appraisal;
- Assumes that contexts in which policy will be implemented are homogenous (the same).

ii. The policy/practice fit

- The fit with regard to the learning mediator role was good. Educators displayed most of the roles and related competencies in relation to the foundational and practical competencies, but they were very weak (hardly noticeable) in reflexive competencies in all roles. This means that while educators know what to do or how to do it, they largely do not translate it into action, and when they do, they do not reflect on their action for improving practice. This displays mirrored ‘restrictive’ professionals and a major concern for transmission of content and its consequent teaching/lecturing mode.

- “Educator roles, as outlined in policy are neat, contractual, defined and orderly. In practice they are social, negotiated and dynamic. Policy suggests uniformity, but in practice where teachers were performing the same roles, there were marked qualitative differences. In practice an effective educator is not one who fulfils each role or demonstrates all competencies in each of the roles, but one who weighs the roles appropriately and selects the competences in response to specific contexts”.

- The school context (ethos, resources, management styles, nature and level of community involvement) has a profound influence on the way in which different educator roles and competencies are made sense of, prioritized and practiced. Teachers in poorly resourced schools will battle to fulfil all roles.

- “The educator’s own value systems impacts on the effectiveness in which certain roles will be fulfilled. Also differing interpretations of policy concepts and definitions impact on the effectiveness with which teachers play certain roles. Some value systems are in accordance with policy and others are not. These differences were demonstrated most clearly in disciplinary practices (in which regard schooling appears to be in a state of near crisis) and in broader beliefs about human rights issues”.

- “Roles required of a teacher are clearest and most easily fulfilled in schools where there is a cohesive culture: a shared sense of purpose and community among learners and teachers, and where school values are not too different from the values of the home and the community”.

iii. At individual level

- “Teacher effectiveness cannot be broken down into discrete, separate roles”.

Even if a teacher fulfils all the roles and competences, he/she may still not be an effective teacher. Effective teachers deliver more than just what is prescribed by their predefined roles: a classroom presence embodied in an achieved (as opposed to ascribed) status that enables them to exercise interpersonal control without the necessity of robust, undignified (to both teacher and learner) and excessively overt disciplinary measures.

Even though this research has been conducted, policy has not since changed and teachers are still required to fulfil all these roles, which are, according to the research, an overwhelming requirement. In addition, the research has indicated that good teachers possess ‘something extra’, especially with regards to an appropriate relationship between teacher and learner that results in successful classroom practices.

What should, however, be learned from this research, is the emphasis that the central role of the teacher is that of a *learning mediator*, through which all the other roles are manifested within the context of the learning area/subject/discipline/phase specialist role.

1.9 What is the pivotal point of education?

One aspect regarding education that has been identified clearly in the roles of the educator, is that the teacher is a learning mediator Du Toit (B) (2007, p. 1). Although this might seem to be a simplistic remark, it has profound consequences. If the teacher has to mediate learning, is there clarity about what is meant by learning? If learning and what it entails are not clearly defined then I will not be able to mediate the necessary learning.

Until I entered the PGCE teacher training, my perception of teaching was to focus on how to teach and I assumed that the required learning will ensue. In fact I was conceptualising learning from a teaching perspective. Therefore I had no guarantee that my teaching will have the required learning as a result. However, in view of the previous paragraph, my perception of teaching for the learning required was that I must transmit the knowledge, demonstrate the skills and moralise the values in such an excellent way that the learners will be able to reproduce what they are taught. According to achieving the required learning outcomes, my perception of learning was not wrong. I experienced the same discomfort regarding quality as before, because I had difficulty in determining how the quality of the learning can be higher if the quality of the teaching

does not infuse it, even though the required learning outcomes could have been achieved. A revelation during the PGCE teacher education programme was that the kind of learning described above might result in achieving the learning outcomes, but that it has severe limitations. These limitations regard mainly to the transfer of learning – to other situations in the classroom, outside the classroom and especially in the real world. It was exciting to be exposed to other kinds of learning or learning theories that indeed addressed the quality of learning. However, it was the choice between the large variety of teaching methods that are available, to ensure the highest possible quality of learning, that intrigued me.

1.10 Teaching for higher learning quality – a new teacher - learner relationship

My PGCE teacher training programme was very unusual. This programme was totally different from the previous method of teaching that I was accustomed to during my schooling years as well as during the years studying for my BA degree. We were very seldom taught or told things. The training consisted mainly of assignments, which challenged me in every way: physically, mentally, emotionally, and spiritually. I had to explore all the areas of education in various ways. We had to resolve assignments that were challenging and this led to where we were exposed to another face of education that we had never encountered before.

In this way, through a myriad of different experiences, we had to construct our own way in which we would be the best possible teacher we can be, of course meaning that the learners must achieve the learning outcomes at the highest possible level.

This way of being educated was completely different to me and to all of the other students. Eventually we realised that we were being educated in a similar manner to which we are expected to educate our learners. This means that if education pivots around learning, then what the learners have to execute is a form of a learning task. Because, irrespective of my actions as educator, the learners must achieve the learning outcomes on the highest possible level of quality as possible. My perceived role as teacher has completely changed and I realized what it meant to be a learning mediator. I have to design a learning task in such a way that the learners are challenged to achieve the learning outcomes at the highest possible quality with only the most efficient and appropriate intervention from my side. It is the requirement of “with only the most efficient and appropriate intervention from my side” that identifies the crux of Outcomes Based Education. And this basis is located in the central role of the educator as mediator of learning, which represents a completely new manner of interaction between teacher and learner in Outcomes Based Education.

1.11 My teaching practice during the PGCE teacher training programme

During the PGCE programme a pre-requisite was that we have to go to schools during the second school term to actually teach, gain experience and to apply the knowledge that we have gathered during the first part of the programme. I was convinced that I have all the necessary skills to be the best teacher I possibly can and I started my teaching practice in anxious anticipation: I was going to see the real teachers, the real experts doing it and learn from them how I should do it. It had been a while since leaving school and the OBE system had since been introduced on the FET level that I was teaching. Therefore I expected to experience the real OBE.

With regards to my observations and experiences at the school by observing other teachers and how they are teaching, I was disappointed. I could not see a major change in the teaching methods, although there were some exceptions. The teachers seemed to be tentative with regards to Outcomes Based Education. I was confused and a little disillusioned about this state of affairs as I did not see what I expected to see in Outcomes Based Education in schools. I was convinced that my second teaching practice at another school will be different, but I was once again disappointed.

On my return to the university I heard that the other student teachers had the same experience. I have to emphasise that there were exceptions, where individual teachers and even singular schools did exhibit change, some to a lesser or larger extent, but in general, most of us did not benefit from the teaching practice periods as expected. This caused me a major concern. I had no doubt that my PGCE teacher education programme was not only valuable, but that it was also ahead of its time and that I was not

only well prepared for my career, but that I had an incredible responsibility not to relinquish what I have learned. My challenge was how to, amidst the discrepancy between my excellent PGCE teacher education programme and the education practices that did not reflect the new OBE education dispensation, ensure my continued professional development.

Although I did not realise it at the time, the unexpressed concern caused a discomfort throughout my initial experiences as a teacher and resulted in this research.

1.12 Formalized statement of the problem

My PGCE teacher education convinced me that there is a new world of education out there that I did not know of. The programme was conducted and facilitated in such a way that it was excellent in preparing us as teachers. I became even more committed to become a teacher who would be a change agent for an education that could change the world for the better. However, my initial experiences with education in practice revealed an unconvincing commitment to fully engage in the changes that should have taken place already. This discrepancy between my teacher education that resulted in my commitment to be a change agent for the new education dispensation and the unconvincing commitment of practice to change became my concern. How can I sustain my continued professional development despite a current unsupportive education practice?

1.13 Research question

From the preceding statement of the problem, I formulated my research question.

1.13.1 Main research question

How can I improve my education practice to ensure that the learners will achieve the learning outcomes of Grade 10 Accounting?

1.13.2 Sub-questions in order to find the solution to the main research question

I will endeavour to find answers to the following sub-questions:

- What is the effect of the currently required education practices of OBE to achieve the learning outcomes of Grade 10 Accounting?
- How can I improve the quality of my education practices to achieve the learning outcomes of Grade 10 Accounting through facilitation of learning?
- How can I ensure sustained improvement of the quality of my education to achieve the learning outcomes of Grade 10 Accounting by using the questionnaire on teacher interaction (QTI)?

1.14 Conclusion

My experience of transferring from the receiving end of education to my education of becoming a teacher and entering the profession – the delivering end – were exciting and most valuable. However, at the same time it was full of surprises and subsequent uncertainties, as I was confronted with current education practices. These concerns regarding the teaching practices that were taking place in schools have prompted this research. With the formulation of the research problem, an appropriate research question was formulated and sub-questions constructed. What is now at hand is to design the research that will be executed.

CHAPTER 2

Research Design

2.1 Introduction

In order to execute the research successfully and to obtain the answers to the research question and its sub-questions, posed in the previous chapter, it is important that the nature of this research is designed in such a way that access is gained to the area of the research in the most appropriate and efficient way. This is the purpose of this chapter.

2.2 Research premises

All research is conducted from certain premises that delineate the paradigmatic assumptions and perspectives from which the research will be taken as a point of departure.

In this sense, Cohen, Manion and Morrison state the following:

“Research is about understanding the world, and your understanding is informed by how you view the world, what you view understanding to be and what you see as the purpose of understanding” (Cohen, Manion and Morrison, 2001, p. 31).

To ascertain my position regarding my understanding of the world, (Maree & Van der Westhuizen, 2009, p. 31) I refer to the work of Hitchcock and Hughes who suggest the following significant lenses through which research in practice should be examined in order to reveal the assumptions that underpin the researcher’s understanding of the world:

- Ontological assumptions;
- Epistemological assumptions; and
- Methodological preferences.

These assumptions, as well as its accompanying assumptions about human nature, and the preferred mode of enquiry, will be addressed in more detail in the paragraphs that follow because it will allow me to reveal my particular assumptions as point of departure for this research.

2.2.1 The ontological assumptions

“Ontology refers to a theory of being, which influences how we perceive ourselves in relation to our environment, including other people” (Whitehead & Mcniff, 2006, p. 22). These assumptions are all about what we think of ourselves and of other people. It also indicates and compares our values and norms to those of other people who we observe. This also indicates the relationships that we have with other people. In education and the classroom this relationship is the relationship between the learners and the facilitator of learning. How the facilitator of learning experiences and thinks about the learners and how the learners think about the facilitator of learning. Every human being is unique and not one person has the exact same values and norms as another person. This is vital in understanding the way that people treat one another and also a person’s judgment of another. This also indicates that people’s views and their perceptions will influence the

environment around the people present in that particular environment. The environment that is applicable here is the classroom environment. With my research I also want to focus on the relationship between the learners themselves and their relationship with the facilitator of learning.

2.2.2 Epistemological assumptions

Epistemological assumptions mean the theory of knowledge. This theory of knowledge also includes the methods to obtain the knowledge, the validity of that knowledge as well as the scope of that knowledge. In the classroom it is important for the facilitator of learning to know and plan how the learners are going to learn. Will that learning be valid in terms of the content that the learners have to understand according to the requirements, as determined by the curriculum; and how will the obtaining of that knowledge empower the learners.

Burrel and Morgan make it clear that knowledge can be observed in the following ways (Maree & Van der Westhuizen, 2009, p. 20):

- A positivist view,
- An anti-positivist view,
- An interpretive view.

By a positivistic view it is meant that the person has an objective view regarding the knowledge that is learned. An anti-positivist view focuses more on the subjectivity of the

knowledge, while an interpretive view encompasses being able to interpret and think logically about the knowledge. It is very important to take all three views into account because, as stated previously, not all the learners think and interpret knowledge in the same manner and this must be acknowledged in the facilitation of learning. It is both important and relevant in this study because it will focus on the interaction and facilitation of learning.

2.2.3 Methodological preferences

According to Whitehead and Mcniff (2006, p. 22) “methodology is a theory on how we do things”. All the learners are from diverse backgrounds and this influences the way that they think and do things. Communication also plays a role with regards to preference. By communicating and interacting with others, new knowledge can be created. This implies that learners and the facilitator of learning in the classroom play a huge role in the creation of knowledge, thus learning. One must also acknowledge that not all people, specifically learners, communicate and interact in the same way and on the same level. Doing things in a different manner also means that learning amongst the learners will take place in various other ways. In this study it is important to be informed about the methodology preference and acknowledge the fact that learners will do and learn in different ways.

2.3 Research methodology

The study was conducted in the Pretoria region in a dual medium school because of the ease of access that the researcher had to the school to conduct the study.

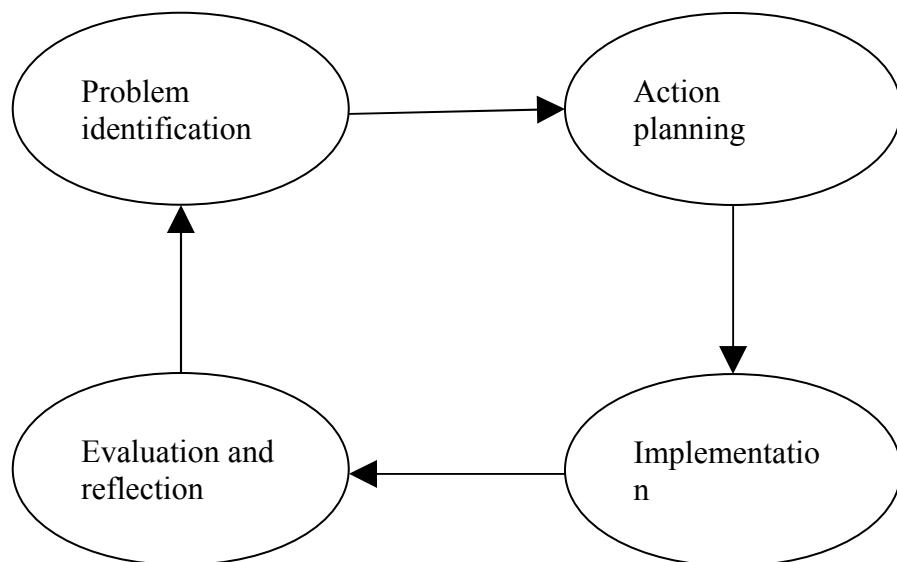
Because this is an action research study, the facilitator of learning has a pre-test or assessment of how the process of facilitation of Grade 10 Accounting is conducted. This will be compared to the findings or self-assessment by the facilitator of learning in practice. An interview with an outsider present in the classroom will also identify and substantiate factors that can be changed or improved. Insight can also be gained from an outsider's point of view on the interaction and facilitation process, in order to improve and to increase the quality of the facilitation and interaction process in the classroom. Factors were identified where changes or improvements had to be made and these changes will be implemented into the facilitation process. The post-test will then be executed to examine the changes and the improvement of the facilitation process and the effectiveness of the identified changes.

2.3.1 Action research

Action research will be used to execute this study. The reason therefore is that this will be a continuous improvement and process in my own development, with many cycles improving my own facilitation of learning. This study will involve continuous changing, testing and improving and therefore action research is the most appropriate research methodology. Action research is a process of testing and improving. O'Brien defines action research as the aim to contribute both to the practical concerns of people in an

immediate problematic situation and to further the goals of social science simultaneously (O'Brien, 1998, p. 1). Action research can also be seen as a form of social research, as stated by Greenwood & Levin (1998, p. 4). In a classroom this social factor is also part and parcel of the facilitation of learning. This consists of communication, general behaviour and also attitudes towards one other.

There are different forms of action research that have evolved, but the basic cycle of action research in general can be indicated by the figure below, according to Riding, Fowell & Levy (1995, p. 2).



The basic steps of the action research cycle are:

- Plan;

- Action;
- Observe;
- Reflect.

Action research in one's own teaching practice is an important source of learning in the classroom and can contribute positively to the teaching process. In this study the basic steps of action research fit perfectly into the process that I wish to follow.

One of my goals with this study is to improve my own teaching practice and my interaction with the learners. This will be a continuous process of plan, action, observation and reflection regarding my practices. The observation will be tested by the measuring instrument Questionnaire on Teacher Interaction (QTI), which will be explained Chapter 5 (5.2.1.1) of this study. O'Brien also states that action research is used in real life situations, rather than in contrived and experimental studies, since its primary focus is solving real problems (O'Brien, 1998, p. 1). My own interaction and teaching process is in real life situations, which I would like to test and improve in order to promote effective learning amongst the learners. Action research also combines theory and practice and is an interactive process. It is also used to develop knowledge and social interaction. Action research can be seen as a practical action.

The facilitation process is a continuous process about changing and improving your practice in order to stay on par with the latest trends and aspects involving facilitation. This includes changes that the curriculum may bring about, as well as adapting practices

around the needs of the specific group of learners that is currently involved in that particular process.

Action research focuses on your own practice and the constant improvement thereof. It is a continuous process that should be practised constantly in order to benefit from the evolution of circumstances or factors that may change. This will help to keep one up to date with these changes.

“Action research is not problem-solving in the sense of trying to find out what is wrong, but rather a quest for knowledge about how to improve. Action research is not about doing research on or about people, or finding all available information on a topic looking for the correct answers. It involves people working to improve their skills, techniques, and strategies. Action research is not about learning why we do certain things, but rather how we can do things better. It is about how we can change our instruction to impact students.” (Ferrance, 2000, p.3).

As Ferrance (2000) states, action research is about continuous improvement of my own practice and not resolving problems, especially in the field of education.

A facilitator of learning can identify a problem that might occur in the classroom. For instance, I would maximise effective facilitation of learning in the OBE curriculum. Action research can be used to solve problems regarding improvement of a certain practice, but primarily problem-solving is not one of action research’s main focuses. With

this in mind, the essentials of action research design and problem-solving, as explained by Hopkins (1985, p. 7) is:

“The essentials of action research design are considered by Hopkins as per the following characteristic cycle:

- Initially an exploratory stance is adopted, where an understanding of a problem is developed and plans are made for some form of intervention strategy;
- Then the intervention is carried out. (The action in action research);
- During and around the time of the intervention, pertinent observations are collected. (Monitoring the implementation by observation);
- The new interventional strategies are carried out, and the cyclic process repeats, continuing until a sufficient understanding of the problem is achieved (reflection and revision).” (Hopkins, 1985, p. 22)

Correlating and confirming what Hopkins stated, Denscombe, Ponte, Beijard and Ax stipulate the following characteristics of action research (Maree, 2007, p. 124):

“Action research is practical.”

“It is focused on change.”

“It is a cyclical process.”

“It involves participation.”

“This is an interactive form of knowledge development.”

According to Hopkins (1985, p. 7) and Maree (2007, p. 124), there are certain steps or procedures that should be followed in conducting and using action research. The

problem, or the improvement thereof, should be identified first. This shows that there must be an instance where the practice must be tested and improved by incorporating an intervention process.

After the results of this intervention have been obtained, changes and improvements must be made, where after the same test of that particular practice should be tested and reflected on in order to establish whether there is a change. The change will then be analysed to determine if it is a positive change and to which extent this change will benefit the practice. Thereafter the change can be implemented in practice, in order to improve the current practice, before the research has been conducted. This process must be reflected upon and repeated and re-tested until the required outcomes or improvement can be determined. In short, to establish the change that takes place. Every cycle of action research has a relationship with one another.

According to Winter & Badley action research can also be described as a mode of relationship (Winter & Badley; 2007, p. 254). This explains the fact that there is an active relationship between the facilitator of learning, and the learners in the classroom, who will be the subject of research during the study. Action research focuses on the relationship and consequences or outcomes that may occur from the actions or relationship, as well as implementing ways of improving them, and to do this continuously in education, which means that a facilitator of learning should not stagnate in his or her previous practices.

As indicated, after a couple of years of facilitation, facilitators of learning tend to stagnate in their own practices which they set for themselves in the beginning of their teaching

careers. Facilitators of learning should change or adopt their practice continuously to be on par with the latest trends and to ensure maximum efficiency as facilitators of learning in their field, as well as to adapt when there are other influences or changes taking place in the educational system or curriculum. This can be done on a regular basis, with the help of basic self-reflection. It is sometimes necessary to reflect on what is happening in the classroom and how the facilitation process can, or must change, to meet the learners' needs with regards to learning and also how to motivate them.

Research provides the basic motivation and conformation for these changes to take place and, in particular, action research involved in these instances. Research can also be seen as a learning process and this process consists of collection of data, analysing the collected data and improving it with the main aim of improving the practice that is being tested. This type of research measures the performance of the educator involved before and after changes of the process has taken place, to establish the change or improvement thereof and the relevance of the process that should be improved.

Action research is commonly used to test certain facilitation procedures and to establish whether changes are applicable and to determine improvements. These improvements are usually determined by means of observation and self-reflection and in this study this measuring instrument will be used to collect the data. Usually when a certain problem occurs in these processes, action research is applicable to identify the problem, to find a possible solution and to test this solution to establish if there is a difference and also if the difference is positive in the sense of improvement.

Action research also enhances and contributes to the professional development of educators (Stark, 2006, p. 25). It is also an important process in the learning and development process of educators.

As previously mentioned, educators should not stagnate in a set way of facilitation and by continuous improvement and adapting through action research, educators can maximise their own potential, which will contribute to their professional development.

Stark (2006, p. 37) also mentions that action research can be used to bridge the gap between theory and practice. In facilitation a lot of theory is involved in the learning process. Theory must be known in such a way that it can be applied in practice and this is where the correlation between theory and practice comes in. Theory does not only consist of memorising facts and formulas, but must be actively used and applied in real life situations. This enhances the quality of learning and equips the learners better for further learning as well as enabling them to learn independently.

The facilitation process should make optimum provision for action research in the practice. This process needs continuous improvement in order to be kept in line with the learner's diverse needs and also diverse factors that may occur. Action research eases this process and has a huge effect on its efficiency and on implementing the necessary changes.

Change and improvement is a part of daily life and in every sector change needs to take place in order for procedures and systems to improve and to keep track with general trends. In the real world there are continuous changes and improvements and this is the same in education. Action research can test and improve these changes, as well as determine which factors are affected and to what extent the change needs to take place. Without continuous change and development in the learning process, these learning practices can be affected in such a way that improvement and constant evolution thereof cannot take place.

2.4 Data collection techniques

In addition to the literature study that I have conducted, I will also collect data by using observation, reflection, interviews and the measuring instrument (questionnaire on teacher interaction – QTI). This study will consist of four cycles and every cycle will consist of an observation, a reflection and interviews with an outsider, who is observing the facilitation of learning and by the measuring instrument (questionnaire on teacher interaction – QTI) which will be completed by myself as the facilitator of learning, as well as the learners.

The literature study is important because it indicates a lack in previous research conducted and also that a study for this specific research was not conducted by other researchers. It also indicates the basic framework of this study, which substantiates the factors that this study consists of.

In this literature study a comprehensive collection of literature, consisting of books, articles as well as the internet and journals, will be studied.

2.4.1 Observations

Observation will enable me to experience changes in behaviour amongst the learners and draw conclusions.

Maree (2007, p. 85) describes four types of observation that can be used in research:

- “Complete observer”;
- “Observer as a participant”;
- “Participant as a observer”;
- “Complete participant”.

For the purposes of this study, I will focus mainly on being an observer as a participant. The main reason for this is that I will still be facilitating and there will be changes in my own practices and therefore I am actively involved in the facilitation process, and I will be observing which changes I can identify in the classroom. I am thus a participant in the situation and part of the research process. I will be testing and observing how learners will react to the various approaches when I change my actions and way of facilitation.

These observed changes are necessary in order to establish what I need to do and to establish what changes I should apply to my facilitation of the learning process. With

what I have observed, I will write a reflection for every cycle of my experience for the specific facilitation of learning process.

2.4.2 Reflections

I will write a reflection of my observations during every cycle, indicating what I have experienced according to the behaviour of the learners and also how this contributes to effective learning. These reflections also include aspects such as how I experience the discipline in the classroom, what effect it might have on learning, which correlates to the learning atmosphere and also communication, from communication and interaction between the facilitator of learning and amongst the learners themselves.

Successful facilitation also consists of effective communication. Every aspect of the facilitation of learning and factors that contribute to the learning environment will be indicated in these reflections.

2.4.3 Interviews

Bless and Higson-Smith (1995 p. 106) states that interviewing is a data collection technique that can be used for obtaining information and it also involves direct, personal contact. These interviews will be semi-structured interviews. The reason for using semi-structured interviews is that it assures that the interviewee can express an open minded and realistic view of what was experienced in the facilitation of learning process. Other

than structured interviews, semi-structured interviews still allow the interviewee the opportunity to be in a position where he or she can elaborate on his or her experiences and views. Leedy & Ormrod (2001, p. 196) substantiate this by stating that the researcher has the freedom to adjust questions in order to obtain more clarity on the experiences and the information that is required.

Structured interviews are bound by the questions that are directed to that specific person and a lot of valuable feedback and information can be lost. Alternatively, open-ended interviews could also have been used, but the problem with this type of interview is that they can deviate from the information that is required. This can result in a loss of the required information and will prove this exercise irrelevant. I intend to ask questions that include experiences and opinions, which will correlate to facts of the facilitation of learning. Interviews are also important in this research because it ensures more in-depth information of the interviewee's experiences and offers a valuable contribution to the information that the researcher requires in order to make the required changes.

2.4.4 Data analysis strategies

After data is gathered, it must be analysed and constructed into useable information.

Mouton explains the analysis of data as the “break-up” of information into useable themes, patterns, tendencies and relationships (Mouton, 1996, p. 108).

This means that the data should be analyzed in such a way that it makes sense to the researcher and that it is useable for the purposes of the study. Aimers (2000) describe

data analysis as: “organising what you have, seen, heard and read so that you can make sense of what you have learned”.

This data collection and analysis is an ongoing process with every cycle in order to establish possible changes and improvements, and to indicate which factors can be tested for improvement. This is used to gain the meaning, understanding and experiences of the interviewee that was present in the facilitation of learning process and how he or she has constructed the process and the required aspects.

Collecting, observation and reflecting on the data that will be constructed into useful information will be an ongoing process with every cycle of this research. This will also indicate if it is necessary for extra data to be collected.

2.4.5 Data interpretation

Data interpretation is to make sense of the data that is formulated into information. This means that the data that is collected is analyzed and can then be interpreted as understandable information for the user. All the data that is gathered by the interviews, reflections and the measuring instrument must be combined and converted into a meaningful interpretation. According to Mouton (1996, p. 109) data interpretation is combining data in order to get a more conclusive result. This conclusive result can be seen as a theory that is concluded.

This theory is the interpretation of the data. In this study I will be able to identify any flaws in my own facilitation of learning process and as well as aspects that must be changed and improved.

2.4.6 Data verification and quality assurance

There is a range of different strategies that can be used to ensure that data can be verified and utilized to increase the validity of the results. In this study both a qualitative and a quantitative method of data collection will be used. Meriam identifies six strategies that can be used to guarantee the validity of data in qualitative research. These strategies, according to Meriam (Maree, 2007, p. 38), are:

- Crystallisation,
- Member checks,
- Long-term observation,
- Peer examination,
- Collaborative research,
- Clearing researcher bias.

For the qualitative data verification in this study, crystallisation and peer examination are used to ensure that the data will be verified and to enhance its quality.

Crystallisation is basically the comparison of concepts. In this study I will compare the literature study, reflections, interviews and the data that will be gathered with the measuring instrument with one another, in order to obtain a valid conclusion and to

enhance the trustworthiness of the research. Peer examination in this study is to gain information and opinions from an outsider who will be present in the facilitation of learning process, in order to ensure that this data is reliable. This outsider's opinion can substantiate the information that is gained from the other data collection techniques and will also allow for a better perspective of my own practices.

2.5 Possible contributions of the study

The possible contribution that I wish to achieve with this study, is to identify factors in a classroom which a facilitator of learning should focus on in Outcomes Based Education. This study will also attempt to highlight these factors and indicate the importance thereof and endeavour to build a structure on how facilitators of learning must conduct their classroom practices and execute facilitation of learning. With this study I will also try to enhance my own practices and to be able to positively increase the quality of my facilitation of learning and the quality of learning amongst the learners.

2.6 The role of the researcher

In this study the role of the researcher will be in partnership with the participants of the study. This partnership is between the researcher, the interviewee's, the learners and myself. I will act as an observer as well as a participant and these findings will be combined with the literature study. I will manage and reflect on all observations and will also compare this information gathered from the observations with the interviews to

enable me to compare the data and to make a valid conclusion. I will analyse and crystallise all the data that is gathered.

2.7 Ethical considerations

Whitehead and Mcniff (2006, p. 77) states that to demonstrate ethical behaviour is when people commit to respecting themselves and one another and not to do harm. This is important because in education knowledge that is gained by educational practices and theory can establish new developments in the field.

All involved will participate in this research on a voluntary basis and their identities and privacy will be respected. The information gained from the interviews will be treated as confidential. The rationale for doing this research will not be discussed with the participants and I will not impose the research problem upon them.

In this study, especially in a democratic environment, special care will be given to executing the study. The main focus will be to ensure that correct and valid data will be collected, but also to take human rights, which includes the values and norms, of the group of learners who will be used in the study, into account.

This study only focuses on data collection applicable to the main focus and the aim of the study. Data is collected by using standardised questionnaires (questionnaire on teacher

interaction – QTI), which will be thoroughly explained in Chapter 5.2.1.1 in this study.

All the questionnaires were completed anonymously by the group of grade 10 learners.

Permission from the Department of Education and the Principal of the school where the data required for this study was collected, requested and granted.

The entire group of grade 10 learners was used as respondents in this study and therefore no prejudices were given to a certain group of learners or respondents and there was no discrimination against any individual. No learner gained any specific related benefit from the study. No learner was excluded from the study in the grade 10 group, however, learners had the choice not to participate in the study.

No diversity, including gender, culture, religion or race or any form of discrimination was present regarding any individual in this study.

This study focused only on factors that are related to the study and opinions and feedbacks from interviewees included in this study, as data collection are only applicable to the required analysis for the purposes of the study.

2.8 Delimitation of the research

There are certain delimitations to the study, as indicated by the general framework as provided by Patto, Swanson and Holton (Maree & van der Westhuizen, 2009, p. 38).

As a Naturalistic inquiry, all the grade 10 learners with Accounting as a subject will be included in this study. Only one person will perform data collection and the analysis of that data during the Inductive analysis of the data. Both Qualitative and Quantitative data collection techniques will be used in this study. Detailed descriptions, with the use of Qualitative data collection techniques, will ensure that more authentic explanations can be given. Standardised questionnaires will be used as a measuring instrument for Quantitative data collection. This data will be interpreted with the explanatory qualitative data that will be collected. Personal contact and insight may cause some findings to be criticised because of personal bias and viewpoints.

Regarding the aspect of empathetic neutrality which can lead to that the learners may experience observations from other perspectives and this may have an influence on their behaviour. In the design of this study there can be some structural requirements that could influence the flexibility of this study.

2.9 Possible limitations and challenges of the study

- Students may not take the questionnaires seriously;

- Research is only done on one occasion and with one group of learners and at one school only. Although this is an action research project, it only tests the interaction between learners and one facilitator of learning. The ideal interaction process is only applicable when the facilitator of learning is studied in the environment where the research is conducted;

- The study was limited to the amount of time available for its execution. The various factors, according to the data collection and formation of conclusions, as will be discussed later in this study, were executed in a specific time frame and the conclusions could deviate in certain instances if this action research is done over a longer period of time;
- Validity and reliability of the evidence gathered.

2.10 Conclusion

In addition to the requirement of trustworthiness and reliability, research should appropriately utilise the possible resources in order to be regarded as significant research, namely:

- Literature research or research of/in/from the past;
- Empirical research or research of/in the present practice; and
- Anticipative research or research of/for the future.

My research will therefore start off in the next chapter with the necessary literature review.

CHAPTER 3

Literature review

3.1 Introduction

In chapter 1, where the problem for this research was posed and formulated, a number of aspects were mentioned in various intersecting fields of education that has bearing on it. These aspects, and others related to it, form a framework that gives the research direction and access to the existing research (theories) already constructed. The purpose of this chapter is to construct a framework that substantiates the subsequent significance of this research.

3.2 Outcomes Based Education (OBE)

My objective here is not to provide an elaborate account of Outcomes Based Education, but rather to emphasise the aspects that are central to this research and relates to my personal and practical experience.

3.2.1 Introduction to OBE

William Spady (1994) may be called the “father” of OBE and Roy Killen (1996) follows closely in his footsteps. In their respective original publications the foundations of OBE context and content were provided. OBE was first introduced in South Africa in 1997. It

was called Curriculum 2005 to indicate the year in which it would be fully implemented throughout the primary schools. After the introduction, certain problems arose in the system. These problems included the jargon, the accelerated ratio of introduction and the cascading model of the training, according to Jansen (1999). As a solution, a research committee was set up by the government in order to review and revise this curriculum. The curriculum that was proposed thereafter was called C21, but was turned down because if a new and revised curriculum were to be implemented so soon, it could only increase the problems that schools were facing at that time. After Curriculum 2005, they came up with the Revised National Curriculum Statement (RNCS), which is now referred to as the NCS. The NCS consists of four phases (NCS, 2005). The first phase is the foundation phase (grade 1 to grade 3), which was implemented in 2004. The second phase is the intermediate phase (grade 4 to grade 6), which was implemented in 2006. The third phase is the senior phase (grade 7 to grade 9) and the fourth phase is the further education and training phase (FET), which was implemented from 2008 onwards.

The main changes between the C2005 and the NCS are that the C2005 had too much jargon and caused confusion. As with the NCS the C2005 mainly focused on concepts such as programme organisers, phase organisers, critical outcomes, specific outcomes, assessment criteria, range statements and performance indicators. The NCS curriculum (NCS, 2005) learning is grade specific to create less confusion. The learners must show certain competencies in order to be promoted to the next grade. In the NCS, the teacher states the critical outcomes, the learning outcomes and the assessment standards. In the NCS assessment, assessment criteria, performance indicators and range statements are

now combined into assessment standards. In C2005, there were 66 different assessment criteria and there are now only 36 in the NCS. The 36 different assessment criteria are now applicable and remain the same for each phase.

3.2.2 OBE Purposes

According to Spady (1994, pp. 8-9), the OBE paradigm is a shift in focus that makes accomplishing results more important than simply providing services meaning that all learners should emerge from the system genuinely successful learners. He states the following two key purposes underlying the success for all students' philosophy:

- “Ensuring that all students are equipped with the knowledge, competence, and qualities needed to be successful after they exit the education system.
- Structuring and operating schools so that those outcomes can be achieved and maximised for all students.” (Spady, 1994, p. 9)

3.2.3 OBE Principles

Spady and Marshall (1991, p. 66) and Spady (1994, p. 11) identified four principles on which OBE is based which are explicated by Maree and Fraser (2004) as follows: “Educators should apply these principles consistently, systematically, creatively and simultaneously when constructing teaching and learning environments...”

In the NCS these principles must be applied in order to meet the requirements of this curriculum. When educating learners, the outcome of the specific learning content must be recognized in order to be able to plan accordingly as well as to determine the learning needs of the learners and to plan and educate with these factors in mind.

These four principles remained constant from the beginning and are quoted here from Maree and Fraser (2004, p. 5):

- Clarity of focus
- Design down from one's accumulated outcomes
- High expectations for all to succeed
- Expanded opportunity and support for learning success

A concise description of each of these principles will be portrayed in the following paragraphs as it is significant to this study.

3.2.3.1 Clarity of focus

The entire curriculum is directed towards a sharp focus. The learners must be able to demonstrate what they had focused on at the end of each learning period. However, the outcomes that they have to demonstrate have to be derived from what could be called life performance roles. Conversely, every outcome that is to be achieved “has to be contextualised and cumulatively contribute towards the fulfilment of real-life” (Maree

and Fraser, 2004, p. 26). Most importantly, therefore, is that each and every learning period is focused on the execution of very clearly defined outcomes which should be performed by the learners as a demonstration of how effectively they will function in real-life.

3.2.3.2 Design back or down

Designing back or down indicates the very important principle of recognising, again, that all learning has to be based on real-life, and all learning should have real-life as its context. Designing learning tasks should therefore start with the consideration of the outcomes to be achieved. This means that designing learning tasks to achieve the outcomes has to ensure that the learners will be compelled to demonstrate a performance in a real-life context.

3.2.3.3 High expectations

Regarding high expectations as a principle, Maree and Fraser (2004, p. 26) wrote:

“Learners must be exposed to challenges on a higher level that will raise the standard of the expected level of performance for successful learning.”

This means that learners should be continually challenged beyond their current ability.

There are three assumptions that substantiate learning in an OBE classroom, as

mentioned by Spady and Marshall (1991, p. 66), namely:

- All learners can learn and succeed, but not on the same day and in the same way;
 - Successful learning promotes even more successful learning;
 - Schools control the condition that directly affects successful school learning
- (Spady and Marshall, 1991, p. 66).

However, challenging the learners to achieve outcomes above their current ability has to be accompanied with the necessary emotional encouragement and support to achieve them. High expectations recognise the exceptional potential of each learner and that learning success is determined by how well each learner maximises (completely develops and fully utilises) his or her potential.

3.2.3.4 Expanded opportunity

Learning takes time and fulfilling one's potential needs time. This means that rigid time frames and schedules should not restrict learning. However, there should be very clear limits set for each learning opportunity. The limitations should not be artificial, but within the context of what real-life would require from a learner to achieve and execute the required outcome performance.

All learners are therefore exposed to a meaningful curriculum, quality learning experiences and appropriate resources. The point of departure is that each learner has to maximise his or her potential to create a safe, sustainable and prosperous future for all (Luke, Lingard, Ladwig, Mills, Hayes & Gore, 1998).

3.2.4 What are outcomes?

This is a crucial question to be answered because this was pivotal to the South African dispensation in education. Spady (1994, p. 18) defines an outcome as follows:

“Outcomes are high quality culminating demonstrations of significant learning in [a real-life] context”. When learners meet the outcomes, effective learning is taking place. The insertion included is essential because the context of learning in an OBE environment, according to its principles, has to be located in real-life context.

Now that we know what outcomes are, it is important to determine where they come from.

3.2.5 Real life performance roles

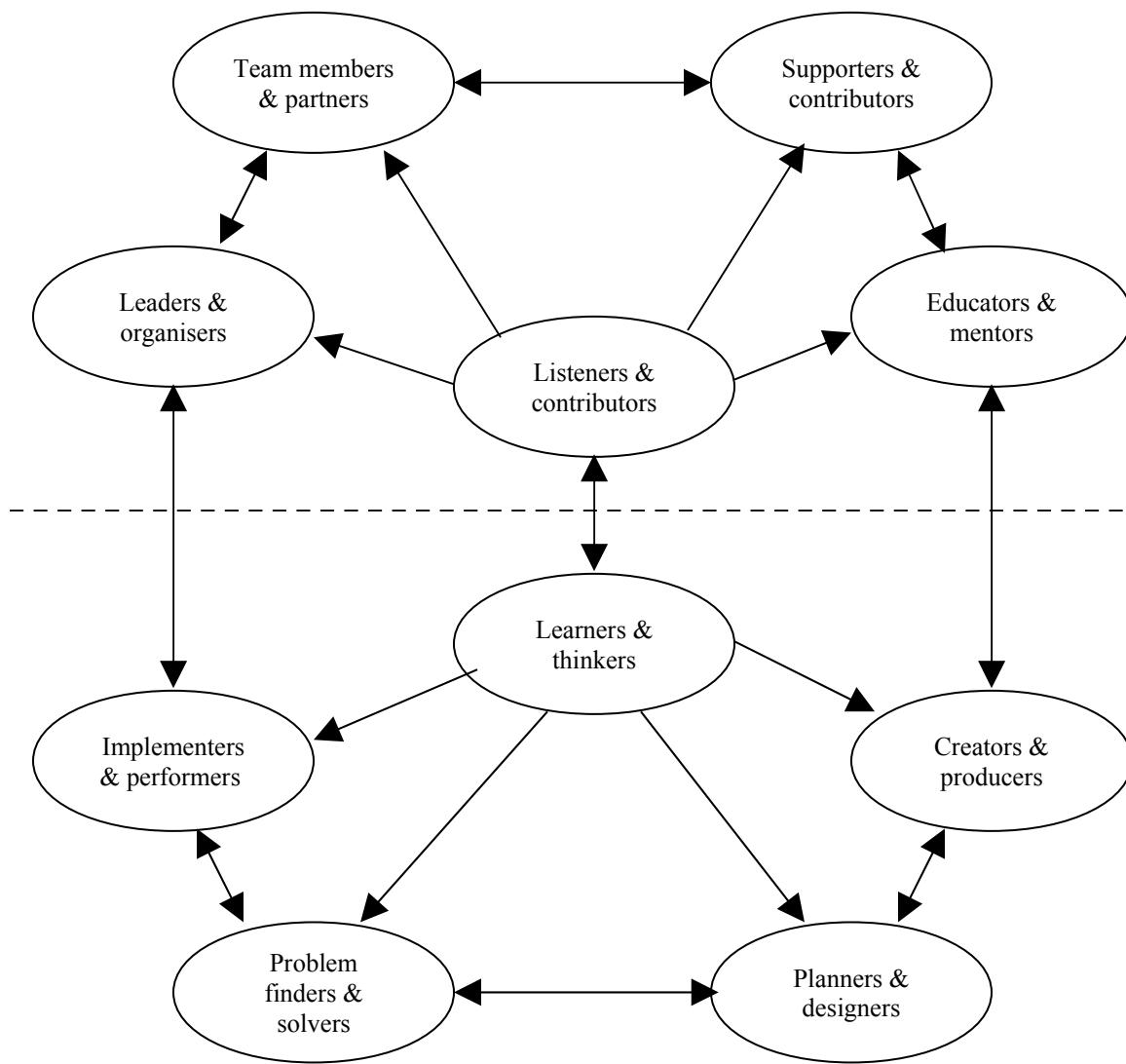
It becomes crucially important to find out what these “real-life roles” are when Maree and Fraser (2004, p. 26) indicate that demonstrating outcomes “must be contextualised and cumulatively contribute towards the fulfilment of real-life roles”. Spady (1994, p.

69), has identified these real-life roles and calls them fundamental life performance roles.

Figure 3.1 provided by Spady (1994, p. 69), highlights these fundamental life performance roles and also illustrates the relationship between these performance roles which are divided into:

- Underneath the dotted line are those that involve the individual.
- Above the dotted line are those that involve interactions with other people.

Figure 3.1 The interrelation of the fundamental life performance roles



The ***intrapersonal*** (individual) fundamental life performance roles – which may also involve others – are the following:

- **Learners and thinkers** who develop and use cognitive tools and strategies to translate new information and experiences into sound action. They may use their repertoire of knowledge and strategies to extend their capacities for successful action by assimilating, analysing, and synthesising new ideas and experiences.

- **Implementers and performers** who can apply basic and advanced ideas, information, skills, tools, and technologies as they carry out the responsibilities associated with their life roles.
- **Problem finders and solvers** who can anticipate, explore, analyse and resolve problems by examining their underlying causes from a variety of perspectives and then develop potential solutions to them.
- **Planners and designers** who can develop effective plans, methods and strategies for anticipating and resolving issues and problems and for charting new courses of action.
- **Creators and producers** who seek new possibilities for understanding or doing things and who translate those possibilities into original, workable products or processes that change the working or living environment for the better.

The *interpersonal* (with other individuals) fundamental life performance roles are the following:

- **Listeners and communicators** who can grasp and express ideas, information, intention, feeling and concern for others in ways that are clearly understood and comprehended.
- **Educators and mentors** who can enhance the thinking skills, performance orientations, and motivation of others through the explanations they provide, the council they give, and the example they set.
- **Supporters and contributors** who invest time, ideas and resources to improve the quality of life of those around them.

- **Team members and partners** who contribute their best efforts to collaborate endeavours and who seek agreement on goals, procedures, responsibilities and rewards, setting aside personal preferences in order to accomplish mutual aims.
- **Leaders and organisers** who initiate, coordinate and facilitate the accomplishment of collective tasks by perceiving and defining intended results, determining how they might be accomplished, anticipating obstacles and enlisting and supporting the participation of others to achieve the results.

These intricate, interrelated fundamental roles are those that each individual has to perform in his or her life. These life performance roles are therefore the point of departure for the identification and formulation of outcomes to be achieved in school learning. However, these fundamental life performance roles first have to be translated to another incredibly important set of outcomes. This should be an indication of what the outcomes are that school leavers, who want to enter a working environment, need to be able to demonstrate that they will evidently succeed.

3.2.6 Necessary skills for the workplace

The outcomes of learning is to empower oneself with knowledge which can be applied in real life and which is called skills. This is a significant statement, because knowledge cannot be an outcome (I cannot “do” or perform knowledge), only skills can. Although these outcomes or skills might not have directly been derived from Spady’s (1994, p. 69)

fundamental life performance roles, they are the most quoted outcomes when reference is made to the competence school leavers in order to succeed in the workplace.

The Secretary's Commission on Achieving Necessary Skills (SCANS) was appointed by the Secretary of Labour in the United States of America. Although this is a substantial list, I am including it here for two reasons: firstly, to compare it to the fundamental life performance roles of Spady (1994, p. 69), with an indication of how the latter is translated into the outcomes that are prerequisites for succeeding in the working environment. Secondly, I include them because comparing them with the actual competences of school leavers, it is shocking how poorly learners are prepared for the working environment – the rapid changes and correspondingly increasing demands which may have already exceeded the current requirements indicated in the SCANS list as indicated in the annexure table 3.1. Workplace competences as identified in the SCANS list show what a person must be able to do in order to have the ability to succeed in the workplace. This list in table 3.1 also indicates the foundation skills that are necessary for the learners to master in order for them to have the necessary competencies that are required for the workplace after their school career. The skills as described in table 3.1 include basic skills, thinking skills and the personal qualities derived from these skills. The foundation skills consist out of reading and writing skills, arithmetic skills, mathematical skills listening skills and communication skills. The rest of the skills and competencies are built upon in the education of the learners during their schooling career on these bases.

The skills built upon the foundational skills are creative thinking, decision-making, problem solving, the ability to see things in the minds eye, knowing how to learn and reasoning skills. These skills need to be developed by the proper application facilitation of learning by the facilitator. This all contributes to the personal qualities to be developed by the learners to their full potential in order for them to become successful citizens and be prepared for their next career. These skills and qualities give a clear indication of the outcomes to be achieved as set out by the NCS in order to prepare the learners for their working career.

Reflecting on this list of required competences for success in the workplace, Dreyden and Vos (1999, p. 30) confirm that “[M]ore than half of America’s young people leave school without the knowledge or foundation required to find and hold a good job”. Business leaders in South Africa also agree that the shocking increase in the functional illiteracy of school leavers renders most of them unemployable. In addition, employers complain that current education practices do not address basic generic skills and qualities such as integrity, reliability, responsibility, work ethics, communication, management of time, self and resources, interpersonal relationships, problem-solving and lifelong learning, which have become key requirements for employability (Griesel and Parker, 2009). These are aspects which are not addressed in the current education system and are conspicuously absent even in the most recent proposed review of the NCS in South Africa.

3.2.7 South African outcomes

When noting the South African outcomes in this paragraph, as contained in the National Curriculum Statements (2005), it is important to contextualize them within the background of the preceding paragraphs. The outcomes (National Curriculum Statement 2005) can be divided into three categories:

- Critical outcomes;
- Developmental outcomes;
- Learning outcomes.

Each category will be discussed in the following paragraphs.

3.2.7.1 Critical outcomes

The critical outcomes describe the outcomes required in all educational situations and on all levels of education:

- a. Collect, analyze, organize, and critically evaluate information (research skills).
- b. Identify and solve problems to make responsible decisions using critical and creative thinking (problem solving skills).
- c. Communicate effectively using visual, symbolic, and/or language skills in various modes (communication skills).
- d. Organize and manage yourself and your activities responsibly and effectively (self-responsibility skills).

- e. Work effectively with others as members of a team, group, organization and community (teamwork).
- f. Use science and technology effectively and critically showing responsibility towards the environment and health of others (technological and environmental literacy).
- g. Demonstrate an understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation (macro-visionary skills).

3.2.7.2 Developmental outcomes

In order to maximize the full potential of each learner in all educational situations and on all levels of education, and the social and economic potential at large, the developmental outcomes were formulated.

- a. Reflect on and explore a variety of strategies to learn more effectively (learning skills).
- b. Participate as a responsible citizen in the life of local, national and global communities (citizenship skills).
- c. Be culturally and aesthetically sensitive across a range of social contexts (cultural and relational skills).
- d. Explore education and career opportunities (employability skills).
- e. Develop entrepreneurial opportunities (entrepreneurial skills).

3.2.7.3 Learning outcomes

It is important to understand what the outcomes mean and the purpose thereof in teaching. An outcome can be described as the statement of a desired task, skill or set of behaviours, which a learner should be able to demonstrate at the end of a learning experience, as well as the ability to demonstrate at the end of a learning experience, a pre-determined task, skill or a set of behaviours in a manner that involves understanding and truthfulness (Jacobs, Gawe and Vakalisa, 2000, p. 29).

Outcomes can be defined as everything that has been learned, including social and personal skills and learning how to master concepts, gain knowledge and understanding, and grasp methodologies, values and attitudes (Maree and Fraser, 2004, p. 12).

According to Fraser and Maree's definition, it is important to acknowledge that outcomes are the product of any learning process and can be identified in short as all the knowledge that the learners must accumulate, but in such a way that they are also able to apply that knowledge in practice. The core of outcomes is to ensure that learners do not only learn and memorise facts, but that they are able to interpret, analyse and utilise that knowledge where applicable. Outcomes focus not only on knowing something, but on having the ability to apply the knowledge that has been gained as well.

Within the learning area of accounting in the FET phase, there are certain learning outcomes that the learners must achieve in order for them to pass the subject. For every educator the achievement of learning outcomes is the main concern. The process on how

to educate learning in order to achieve the learning outcomes, and what it entails, is not clear to all educators.

These learning outcomes in the learning area of accounting are indicated by the NCS:

- **Learning outcome 1:**

Skills in financial accounting: Collecting, reporting and evaluating financial information of a past financial period and assessing the financial performance of a person or organisation in making appropriate decisions.

- **Learning outcome 2:**

Managerial accounting: compiling, reporting and evaluating financial information largely geared towards future financial periods and to evaluate business options to make appropriate decisions.

- **Learning outcome 3:**

Managing resources: understanding strategies and tools to manage resources and make decisions in a responsible manner and using knowledge of internal control and ethical issues in administering a business to achieve the desired objectives. (National Curriculum Statement: Accounting, 2005, p. 7)

The problem I face is how to proceed in order to ensure that all the learners will achieve these outcomes. Interaction in the classroom must also be on par in order to fulfil these outcomes.

The NCS (National Curriculum Statement, 2005) also provides certain assessment guidelines that must be followed in teaching. These assessments must be conducted as required to test and assess all the learners and to determine if they have achieved the necessary outcomes and shown the necessary improvement. Assessment is crucial in successful teaching and should not be neglected. It must constantly be incorporated and included in teaching. Assessment measures and tests the achievement of outcomes and its grading. The crucial role of assessment is to establish if learning took place and to what extent.

3.2.8 Assessment

The Department of Education encourages educators to use these Assessment Guidelines as they prepare to educate Accounting according to the National Curriculum Statement (National Curriculum Statement, 2005). This statement provides guidelines for assessment in the National Curriculum Statement for the mentioned grades and applicable subjects. Assessment in the National Curriculum Statement:

Assessment in the NCS is an integral part of the teaching and learning process. For this reason, assessment should be part of every lesson and be incorporated with assessment

activities to complement the learning activities. Assessment must be a continuous process to establish whether the learners are reaching the outcomes, on which levels they are and how they are progressing. I struggle with assessments and its correct implementation, as required by OBE.

The NCS requires that continuous assessment must be present in the teaching process. There are also different types of assessments that test different knowledge or skills areas of the learners. Assessment in Accounting gathers valid information about the learners' knowledge, skills, values and attitudes as well as their ability to make meaningful and informed, personal, collaborative and financial decisions in the economic and social environment (National Curriculum Statement: Accounting, 2005: 7).

3.2.8.1 The NCS describes two types of assessment:

a Continuous or daily assessment.

The learner's progress must be monitored during learning activities and by using this type of assessment, it eases the identification of deviations or problems that might occur during the learning process. It is an informal type of assessment and involves short assessment tasks that must be completed during the lessons by individuals or groups. It can also consist of normal homework exercises and enables the learners to reflect on their own performance and development in that particular learning process.

The National Curriculum states that continuous assessment should be used to:

- Develop learners' knowledge, skills and values;
- Assess learners' strengths and weaknesses;
- Provide additional support to learners;
- Revisit or revise certain sections of the curriculum;
- Motivate and encourage learners (National Curriculum Statement: Accounting, 2005, p. 1).

As indicated by the NCS assessments play an integral role in the facilitation of learning and are fundamentally of huge importance to the facilitation processes.

b Program of assessment.

This is a formal type of assessment and the guidelines of the NSC determine exactly which assessment tasks and formal tests must be completed. The marks achieved in these assessment tasks will be used to evaluate the learning outcomes and the learner's performance (National Curriculum Statement: Accounting, 2005, p. 2).

The National Curriculum Statement also states that the learners must adopt an attitude of lifelong learning to cope with the evolving nature of the subject (National Curriculum Statement: Accounting, 2005, p. 7). This forms part of the whole purpose and aims of teaching. Learners must adopt this attitude towards the learning area in order to be able to deal with, and master, changes in the accounting practice and to always be on par with the Generally Accepted Accounting Practice (GAAP) (National Curriculum Statement: Accounting, 2005, p. 2).

It is the educator's responsibility to inform and motivate the learners to understand the benefits of the new curriculum and to conduct classroom practices in such a way that it will have a positive influence on the learners' attitudes.

Correlating with the outcomes, the learners must also acquire communication and decision making skills in Accounting. These skills must be learned and incorporated in the learner's daily practice and in assessments. Through experience, I have learned the problem of incorrect teaching persists, which also influences the assessment. The educator should empower the learners with in that particular learning area in such a manner that they can adopt the appropriate attitude and will be able to become lifelong learners in accounting. But, what exact procedures must be followed in order to achieve this?

The National Curriculum Statement also states that the educators must seek a way to integrate Learning Outcomes and Assessment Standards in teaching and assessment activities (National Curriculum Statement: Accounting, 2005, p. 9). It is the educator's duty to conduct a practice module that is applicable to the learners' progress in Accounting. The educator must monitor the progress of the learners and construct assessments for that purpose. These assessments are crucial to guide subsequent teaching and learning processes.

3.2.9 Educator roles to ensure the achievement of the outcomes

We have already referred to the seven educator roles when I discussed research that has been conducted regarding the virtual impossibility of fulfilling them all. I provide them here for reviewing purposes because they could be so easily become “out of sight – out of mind”. The seventh role in the meanwhile has been removed by the NSTE because it can be incorporated in the equivalent of quality.

The seven educator roles (DoE, 2000) are provided in table 3.2:

Table 3.2 THE SEVEN EDUCATOR ROLES

1. Learning mediator

The educator will mediate learning in a manner which is sensitive to the diverse needs of learners including those with a barrier to learning; construct learning environments that are appropriately contextualized and inspirational; communicate effectively, showing recognition of and respect for the differences of others. In addition, an educator will demonstrate sound knowledge of subject content and various principles, strategies and resources appropriate to teaching in a South African context.

2. Interpreter and designer of learning programmes and materials

The educator will understand and interpret learning programmes, design original learning programmes, identify the requirements for a specific context of learning and select and prepare suitable textual and visual resources for learning. The educator will also select sequence and pace the learning in a manner sensitive to the differing needs of the subject / learning area and learners.

3. Leader, administrator and manager

The educator will make decisions appropriate to the level, manage learning in the classroom, carry out classroom administrative duties efficiently and participate in school decision-making structures. These competences will be performed in ways that are democratic, which support learners and colleagues, and which demonstrate responsiveness to changing circumstances and needs.

4. Scholar, researcher and lifelong learner

The educator will achieve ongoing personal, academic, occupational and professional growth through pursuing reflective study and research in the learning area, in broader professional and educational matters, and in other related fields.

5. Community, citizenship and pastoral role

The educator will practice and promote a critical, committed and ethical attitude towards developing a sense of respect and responsibility towards others. The educator will uphold the constitution, and promote democratic values and practices in schools and society. Within the school, the educator will demonstrate an ability to develop a supportive and empowering environment for the learner and to respond to the educational and other needs of learners and fellow educators.

Furthermore, the educator will develop supportive relations with parents and other key persons and organizations based on a critical understanding of community development issues. One critical dimension of this role is HIV / AIDS education.

6. Assessor

The educator will understand that assessment is an essential feature of the teaching and learning process and know how to integrate it into this process. The educator will have an understanding of the purpose, methods and effects of assessment and be able to provide feedback to the learners. The educator will design and manage both formative and summative assessment in ways that are appropriate to the level and purpose of the learning and meet the requirements of the accrediting bodies. The educator will keep detailed and diagnostic records of assessment. The educator will understand how to interpret and use assessment results to feed into processes for the improvement of learning programmes.

7. Learning area/subject/discipline/phase specialist

The educator will be well grounded in the knowledge, skills, values, principles, methods and procedures relevant to the discipline, subject, learning area, phase of study or profession or occupation practice. The educator will know about different approaches to teaching and learning, (and where appropriate, research and management), how these may be used in ways which are appropriate to the learner and the context. The educator will have a well-developed understanding of the knowledge appropriate to the specialism.

What has been indicated in chapter one is that for each of these roles, up to 10 competences in each of the practical, foundational and reflexive categories have been identified. However, since the central role of the teacher is that of a *learning mediator* through which all the other roles are manifested within the context of the learning area/subject/discipline/phase specialist role, the competences of only these two roles are represented here.

3.2.10 Educator competences to ensure the achievement of the outcomes

The Norms and Standards for Educators (Department of Education, 2000) provide the following competences each teacher has to achieve:

3.2.10.1 Learning mediator competences

The learning mediator competences relate to the role an educator plays in a learning mediator role.

PRACTICAL COMPETENCES
(Where the learner demonstrates ability, in an authentic context, to consider a range of possibilities for action, makes considered decisions about which possibility to follow, and to perform the chosen action)
Using the language of instruction appropriately to explain, describe and discuss key concepts in the particular learning area/subject/discipline/phase.
Using a second official language to explain, describe and discuss key concepts in a conversational style.
Employing appropriate strategies for working with learner needs and disabilities, including sign language where appropriate.
Preparing thoroughly and thoughtfully for teaching by drawing on a variety of resources; the knowledge, skills and processes of relevant learning areas; learners' existing knowledge, skills and experience.
Using key teaching strategies such as higher level questioning, problem-based tasks and



projects; and appropriate use of group-work, whole class teaching and individual self-study.
Adjusting teaching strategies to: match the developmental stages of learners; meet the knowledge requirements of the particular learning area; cater for cultural, gender, ethnic, language and other differences among learners.
Adjusting teaching strategies to cater for different learning styles and preferences and to mainstream learners with barriers to learning.
Creating a learning environment in which: learners develop strong internal discipline; conflict is handled through debate and argument; and learners seek growth and achievement.
Creating a learning environment in which: critical and creative thinking is encouraged; learners challenge stereotypes about language, race, gender, ethnicity, geographic location and culture.
Using media and everyday resources appropriately in teaching, including judicious use of: common teaching resources like text-books, chalkboards, and charts; other useful media like overhead projectors, computers, video and audio (etc); and popular media and resources, like newspapers and magazines as well as other artifacts from everyday life.

FOUNDATIONAL COMPETENCES

(Where the learner demonstrates an understanding of the knowledge and thinking that influence the actions taken)

Understanding different explanations of how language mediates learning: the principles of language in learning; language across the curriculum; language and power; and a strong emphasis on language in a multi-lingual classroom.

Understanding different learning styles, preferences and motivations.

Understanding different explanations of how learners learn at different ages, and potential causes of success or failure in these learning processes.

Understanding the pedagogic content knowledge – the concepts, methods and disciplinary rules – of the particular learning area being taught.

Understanding the learning assumptions that influence key teaching strategies and that inform the use of media to support teaching.

Understanding the nature of barriers to learning and the principles underlying different strategies that can be used to address them.

Understanding sociological, philosophical, psychological, historical, political and economic explanations of key concepts in education, with particular reference to education in a diverse and developing country like South Africa.

Exploring, understanding, explaining, analyzing and utilizing knowledge, skills and values underpinning Education, Training and Development (ETD) practices.

REFLECTIVE COMPETENCES

(In which the learner demonstrates an ability to integrate or connect performances and decision making with understanding and with the ability to adapt to change and unforeseen circumstances and to explain the reasons behind these actions)

Reflecting on the extent to which the objectives of the learning experience have been achieved and deciding on adaptations where required.
Defending the choice of learning mediation undertaken and arguing why other learning mediation possibilities were rejected.
Analyzing the learning that occurs in observed classroom interactions and in case studies.
Making judgments on the effect that language has on learning in various situations and on how to make necessary adaptations.
Assessing the effects of existing practices of discipline and conflict management on learning.
Reflecting on how teaching in different contexts in South Africa affects teaching strategies and proposing adaptations.
Reflecting on the value of various learning experiences within an African and developing world context.
Reflecting on how race, class, gender, language, geographical and other differences impact on learning, and making appropriate adaptations to teaching strategies.
Critically evaluating the implications for schooling of political social events and processing and developing strategies for responding to these implications.
Critically reflecting on the ways barriers to learning can be overcome.
Critically reflecting on the degree to which issues around HIV/ AIDS have been integrated into learning.
Analyzing the strengths and weaknesses of the ways in which environmental, human rights and other critical cross-field issues have been addressed.

3.2.10.2 Learning programme/area/subject/discipline

The learning mediator competences relates to the educator in a learning programme/area/subject/discipline role.

PRACTICAL COMPETENCES
(Where the learner demonstrates the ability, in an authentic context, to consider a range of possibilities for action, make considered decisions about which possibility to follow, and to perform the chosen action)
Adapting general educational principles to the phase/subject/learning area.
Selecting, sequencing and pacing content in a manner appropriate to the phase/subject/learning area, the need of the learners and the context.
Selecting methodologies appropriate to learners and contexts.
Integrating subjects into broader learning areas, and learning areas into learning programmes.
Teaching of concepts in a manner that allows learners to transfer this knowledge and use it



in different contexts.

FOUNDATIONAL COMPETENCES

(Where the learner demonstrates an understanding of the knowledge and thinking which underpin the actions taken)

Understanding the assumptions underlying the descriptions of competence in a particular discipline/subject/learning area.

Understanding the ways of thinking and doing involved in a particular discipline/subject/learning area and how these may be taught.

Knowing and understanding the content knowledge of the discipline/subject/learning area.

Knowing and understanding the content and skills prescribed by the national curriculum.

Understanding the difficulties and benefits of integrating this subject into a broader learning area.

Understanding a range of assessment approaches appropriate to the learning area/subject/discipline/phase/subfield.

Understanding the role that a particular discipline/subject/learning area plays in the work and life of citizens in South African society – particularly with regard to human rights and the environment.

REFLECTIVE COMPETENCES

(Where the learner demonstrates the ability to integrate or connect performances and decision making with understanding and with the ability to adapt to change and unforeseen circumstances and to explain the reasons behind these actions)

Reflecting on and assessing own practice.

Analyzing learning task designs, learning programmes and assessment tasks and demonstrating an understanding of appropriate selection, sequencing and pacing of content.

Identifying and critically evaluating what counts as undisputed knowledge, necessary skills and important values.

Making educational judgments on educational issues arising from real practice or from authentic case study exercises.

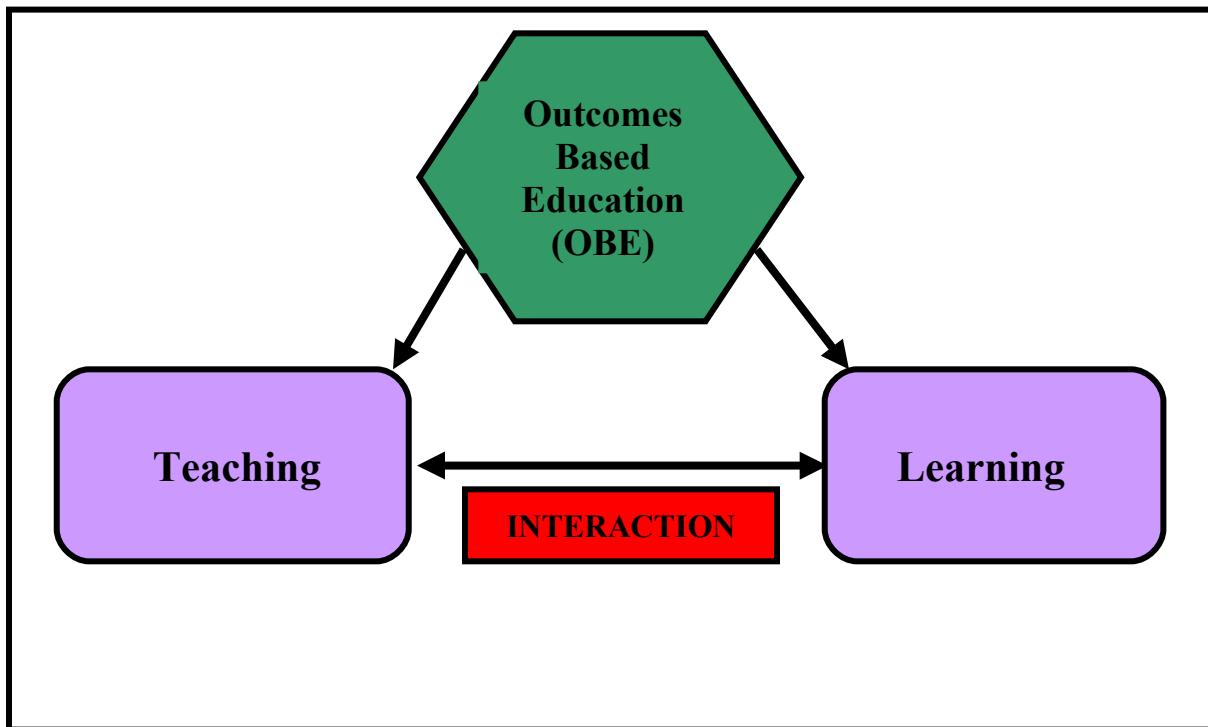
Researching real educational problems and demonstrating an understanding of the implications of this research.

Reflecting on the relations between subjects/disciplines and making judgments on the possibilities of integrating them.

Reflecting on this paragraph about Outcomes Based Education (the emphasis of this research) it is clear that all the outcomes that must be achieved in each lesson in a particular learning area or subject must, or should, be grounded in a set of exit level

outcomes. In this case, the exit level outcomes would be leaving school to enter the workplace and be successful. What is subsequently of utmost importance is that there must be a significant relationship between the learning outcomes to be achieved “in the classroom” and not only *that* it must be achieved, but also *how* it will be achieved. This emphasizes the *relationship* between learning and teaching that is determined by its *interaction*. As the learning outcomes are the point of departure for every educational intervention, and because it will require learning of a particular nature and structure to take place, it will, in turn, determine the nature and the structure of the teaching that must be implemented. This relationship is depicted in figure 3.2.

Figure 3.2 Schematic representation of achieving outcomes



As the nature and structure of the learning required by the learner determines the nature and structure of the teaching by the educator, I would have to construct a clear conceptualisation of what learning is and what it entails.

3.3 Learning and teaching in OBE

The purpose of this paragraph is not to explore the entire field of learning in education, but rather to find a way in which learning could be contextualized in Outcomes Based Education. Although I do therefore acknowledge that, there are many different learning theories and/or perspectives and I have my different learning methods, tools and techniques, my purpose here would be to explore the way in which learning is situated in OBE.

We have already established that OBE is focused on outcomes, which are nothing else than learning outcomes. However, when one considers the existing education practices world wide as well as the general perception of what learning is for, the answer is that we learn to acquire knowledge. Even though education literature globally would indicate that what should be learned is knowledge, skills and attitudes or values, the actual education practices reflect that the overwhelming focus is on attaining knowledge.

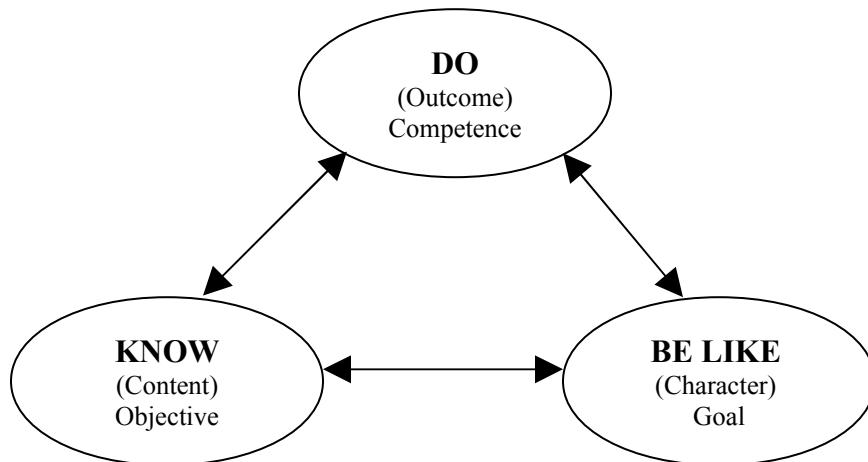
3.3.1 Learning to know

Education practices generally seem to regard knowledge (factual/content knowledge), skills (procedural knowledge) and values/attitudes (ethical/moral knowledge) as knowledge to be attained. It is therefore not surprising that the primary purpose of education is that learners should learn to know. They need to learn to know facts/content (knowledge), skills (procedural knowledge), and values/attitudes (moral/ethical knowledge). If this is the perception of knowledge, then learners will acquire this knowledge through memorization or imitation and reproduction.

Although there is certainly nothing wrong with having such knowledge, we know for instance, that only knowing facts or content has little value, if any, in itself. Knowing how to drive a car (having knowledge of the skill) does not mean that I can drive a car (“doing” the skill) and even more crucially, knowing what it means to be dishonest (having knowledge of the value/attitude), does not prevent me from being dishonest (living the value/attitude). Even the idea of knowing what to do (in theory) will enable one to do it in practice is effable. If this notion proves true, one would be ensured of a non-existent level of learning quality of which the superficiality will be characterized by a mechanistic or technicist approach to whatever is learned. (Slabbert, De Kock and Hattingh, 2009, p. 51-64.)

Spady (1994, p. 54) indicates how learning is contextualized in the learning performance pyramid depicted in figure 3.3

Figure 3.3 The Learning Performance Pyramid (Spady, 1994, p. 54):



When Spady (1994:54) discusses this pyramid, he informs one that if someone wants to perform (learn) successfully, one must have something to perform, be able to carry out the performance and be confident when carrying it out. Then he continues by saying:

“They have to KNOW something; be able to DO something with what they know; and BE LIKE a confident, successful performer ...” (Spady, 1994, p. 54).

Although this misconception about learning is so very obvious it seems as though education, in general, is not only oblivious to this reality, but such practices are even condoned. The question therefore is what kind of teaching is required for this kind of learning?

3.3.2 Teaching to know

When the chairperson of a ministerial committee was charged to investigate teaching and teacher education in South African institutions, he reported that the competence that defines a teacher is the following:

“The definite competence of a professional teacher is that they know how to organize ‘systematic learning’ ... The phrase ‘systematic learning’ refers not only to learning academic knowledge or traditional school knowledge, but also to learning anything that takes some time and is normally assisted by someone who knows. We might think of learning how to swim, or learning how to repair a motor car, in addition to learning to read or to do mathematics” (Morrow, 2007, p. 70).

This kind of teaching requires the transmission of knowledge from the teacher, who knows, to the learner, who does not know. I have also indicated earlier that this kind of teaching may render only the lowest level of quality learning that requires from the learner a superficial mechanistic, technisist reproduction of knowledge or imitation of a skill or perhaps even a value – whatever that might mean.

Although such teaching might be valuable for immediate, temporary school learning purposes or even for continual repetition of the same or similar things outside of school, they do not transfer appropriately to out of school contexts and especially the challenges

of real-life and the workplace (De Corte, Verschaffel, Entwistle and Van Merriënboer 2003; Barnett, 2007; Claxton, 2008; Korthagen, 2001; Ackoff and Greenberg, 2008).

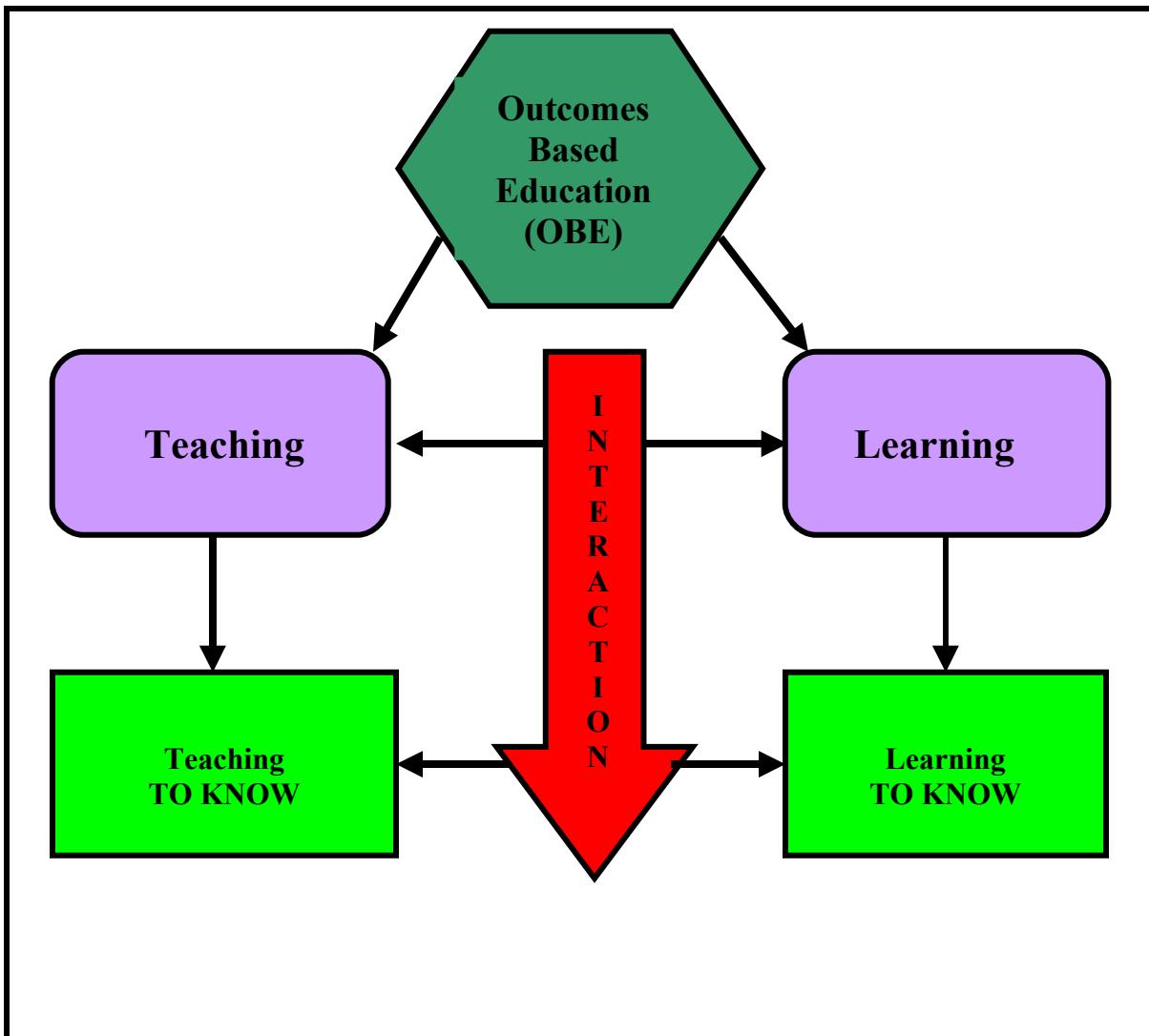
In fact, “the oddness of school means that transfer is especially unlikely to happen” (Claxton, 1999, p. 86). In addition, such existing knowledge and skills for its own sake has very little value because “even for graduates, knowledge gained in a degree course is often outdated even before graduation. (Dreyden and Vos, 1999, p. 30-31).

Nonetheless, we remain with a deeply ingrained problem in education as far as teachers and teaching goes: The problem is that teachers think that if they “teach”, students learn. (Sternberg, 2008, p. 143-144). Dryden and Vos (1999, p. 30) warn us of the devastating effects of this persistent dysfunctional idea when they say:

“More than half of America’s young people leave school without the knowledge or foundation required to find and hold a good job.”

Figure 3.4 depicts a schematic presentation to achieve outcomes in a learning to know paradigm.

Figure 3.4 Schematic representation of learning to know outcomes



There is some vagueness in the learning to know paradigm. There must be another reason to learn than learning to know.

3.3.3 A new conception of knowledge

The point of departure for this paragraph is that we are currently witnessing one of the most significant paradigm shifts in human history characterized by an unprecedented change in the human condition (Drucker, 2000, p. 8). We have entered a supercomplex

world with an unknown future, which is changing so rapidly that it becomes impossible to sufficiently know the world we are living in now and neither do we have the knowledge available that could describe our future (Barnett, 2007). Dreyden and Vos (1999, p. 21) describe the consequences of this predicament in the following way:

“The seismic scope of this change forces us to completely rethink everything we’ve ever understood about learning, education, schooling, business, economics and government.”

The idea of knowledge in a supercomplex world and what should be learned in the case of an unknown future poses challenges for us and our entire perception of education. Because this world presents us with challenges never experienced or imagined before, (existing) knowledge and skills “cannot begin to offer us a sufficient set of ideas for ... education for the twenty-first century” (Barnett, 2007, p. 7). This means that education for an unknown future is not primarily an epistemological task but an ontological challenge where “the student’s being and becoming is more significant than the student’s knowing efforts” (Barnett, 2007, p. 165). We are indeed entering a completely new conception of education and subsequently a new conception of knowledge:

“For what is in question in a situation of super complexity is neither knowledge nor skills but *being* ... that is authentic in character ... Construing the pedagogical task as the formation of authentic being turns us to neither knowledge nor skills as central categories but rather certain kinds of human qualities. They are qualities

that both make authentic being possible and are also, in part, generated by a drive towards authenticity (Barnett, 2004, p. 257; 259-260)”

It is therefore authenticity that “has to be fought for, won and sustained,” (Barnett, 2007, p. 41) through maximizing human potential that represents at least part of human authenticity (Slabbert, De Kock and Hattingh, 2009, p. 49).

One of the keys to destroy the stalemate of our educational perceptions is to acknowledge that “our educational philosophy is firmly based on the assumption that children have to be taught in order to know rather than being facilitated to develop their unique potential” (Holdstock, 1987, p. 49). Suddenly, we understand why our society is ailing and does not cope with the challenging demands we are facing:

“According to some of the most distinguished and thoughtful students of the mind, one of the most devastating and damaging things that can happen to anyone is to fail to fulfil his potential. A kind of gnawing emptiness, longing, frustration, and displaced anger takes over when this occurs. Whether the anger is turned inward on the self or outward toward others, dreadful destruction results” (Hall, 1976, p. 4).

It should be obvious from the discussion in the previous paragraph that a new conception of knowledge for an unknown future is emerging when Barnett (2007, p. 6) says that knowledge should be understood “as ways of active ‘knowing’ and as forms of action ...”

This new conception of knowledge for an unknown future has serious implications for education:

“That future poses radically different challenges to those faced at the foundation of educational systems and that is why we require a qualitatively different approach to teaching in the twenty-first century. There are three challenges in particular that need highlighting: First, the demands **on** young people and challenges facing them in the twenty first century are vastly different from what they were. Today, the demands of a modern productive economy and a modern inclusive society compel our schooling system to develop the special talent of every child ... Second the demands **of** young people are challenging. We need to be very worried by the recent survey that suggests that 70 per cent of kids at secondary level say they are bored ... Third, the challenge of **how** we teach is brought into graphic relief ... It is imperative that the standard of teaching in every school is raised ...” (Hargeaves, 2003 p. x-xi).

From the preceding paragraphs it is obvious that the focus of education is on a completely new conception of knowledge which is characterized by active knowing and forms of action that constitute human qualities or potential. What would be at the centre of these qualities or potential?

One of the most likely possibilities for an answer to the former question is that of intelligence. Gaining intelligence is the main outcome for learning and development of a

person. Gaining knowledge in the form of memorable facts that cannot be applied in real life cannot be seen as intelligence. This implies that intelligence is to obtain the ability to become a life long learner. In order to understand what knowledge and skills must be learned in the learner's schooling career, the definition and a thorough explanation of the different types of intelligences must be understood.

The following is a comprehensive definition of intelligence:

- Intelligence is a capability that involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. It is not merely learning of academic content and passing corresponding tests. It is a broader and deeper capability of comprehending our surroundings, catching on quickly, making sense of things and figuring out what to do (Gottfredson, 1997, p. 56).
- “Intelligence is the ability to solve problems or to fashion new products that are valued in one or more cultural or community settings” (Gardner, 1999, p. 7).
- There are three kinds of intelligence (Sternberg, 2007; Sternberg, 2008):
 - **Analytical intelligence** represents academic problem-solving skills and consists of three components:
 - *Knowledge acquisition components* is the ability to obtain and store knowledge.
 - *Performance components* represent the ability to perform basic cognitive operations like encoding stimuli, identifying and relating

all information bits, and to construct, reconstruct and deconstruct a cognitive framework.

- *Metacomponents (metalearning)* represents the ability to plan, execute, monitor and assess the performance components' operation.
- **Creative intelligence** represents the ability to act productively to novel stimuli or situations when they are *experienced* skilfully and appropriately relating the external and internal environment. It is also the ability to comprehend and appropriately entertain a novel situation through automating it as quickly as possible so that subsequent novel situations would be dealt with effectively.
- **Practical intelligence** is the 'purposive adaptation to, shaping of, and selection of real-world environments relevant to one's life'. It is the *real life* intelligence. It is the intelligence that requires physical, intellectual, emotional and spiritual integration. It is the ability to:
 - adapt to the environment in order to have goals met;
 - change the environment to have goals met;
 - create a new environment in which goals can be met.

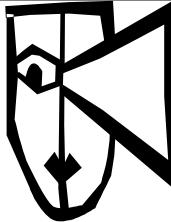
All of these intelligences are the aim to be achieved by the OBE curriculum amongst the learners at the end of their schooling career. The intelligences are also never ending learning experiences and as already stated, the acquisition of intelligences contribute to human beings becoming life long learners and also enabling them to grow and develop these intelligences on their own without any guidance.

We, as human beings, possess many ‘intelligences’. Ten such intelligences have already been described (Gardner, 1993; Goleman, 1995; Zohar and Marshal, 2000; Bar-On, Maree and Elias, 2006). Table 3.3 is a composite summary of the ten identified multiple intelligences and several associated aspects compiled by Slabbert, De Kock and Hattingh (2009:CD).

Table 3.3 MUTIPLE INTELLIGENCES

It is not how smart you are, but how are you smart?

Icon	Name	Loves	Educational prompts
	L-Brain A-Quadrant Verbal Linguistic Language Smart	Reading, writing, telling stories, playing word games, etc	Use storytelling to explain ... Conduct a debate on... Write a poem, myth, legend, short play, or news article about... Relate a short story or novel to... Give a presentation on... Lead a class discussion on ... Create a talk show radio program about... Write a newsletter, booklet, or dictionary about... Invent slogans for... Make an audiotape of ... Conduct an interview of... on... Write a letter to ... about ... Use technology to write... Others of your choice...
	L-Brain B-Quadrant Logical Mathematical Order Smart	Experimenting, questioning, figuring out logical puzzles, calculating etc	Create story problems for ... Translate ... into a mathematical formula... Create a timeline of... Design and conduct an experiment on ... Make a strategy game that... Use a Venn Diagram to explain... Make up syllogisms to demonstrate... Make up analogies to explain... Use...thinking skills to... Design a code for ... Categorize facts about... Describe patterns or symmetry in... Select and use technology to... Others of your choice...
	R-Brain C-Quadrant Bodily Kinesthetic Body Smart	Dancing, running, building, constructing, touching, gesturing etc	Role-play or simulate... Create a movement or sequence of movements to explain... Choreograph a dance of ... Invent a floor or board game of ... Make task or puzzle cards for ... Build or construct a ... Plan and attend a field trip that will... Use the qualities of a physically educated person to demonstrate... Devise a scavenger hunt to ... Make a model of... Use hands-on materials to demonstrate... Design a product for ... Select and use technology to... Others of your choice...
	R-Brain D-Quadrant		Chart, map, cluster or graph... Create a slide show, videotape or photo album of ... Design a poster, bulletin board or mural of... Use a memory system to learn ...

	Visual/Spatial Picture Smart	Designing, drawing, visualizing, doodling etc	Create artwork that ... Develop architectural drawings that ... Make advertisements for ... Vary the size and shape of ... Colour code the process of ... Invent a board or card game to demonstrate... Illustrate, draw, paint, sketch, sculpt or construct... Use the overhead projector to teach... Use technology to ... Others of your choice
	R-Brain C-Quadrant Musical Music Smart	Singing, whistling, humming, tapping feet and hands, listening etc	Give a presentation with appropriate musical accompaniment on... Write song lyrics for... Sing a rap or song that explains ... Indicate the rhythmical patterns in ... Explain how the lyrics of a song relate to ... Present a short class musical on ... Make an instrument and use it to demonstrate... Use music to enhance the learning of ... Collect and present songs about... Write a new ending to a song or musical composition so that it explains Create a musical collage to depict... Use musical technology to ... Others of your own...
	R-Brain C-Quadrant Interpersonal People Smart	Leading, organizing, relating, manipulating, mediating, partying etc	Conduct a meeting to address... With a partner, use "out loud problem solving" to... Role play multiple perspectives on... Organize or participate in group to ... Intentionally use ... social skills to learn about ... Participate in a service project to ... Teach someone else about ... With a small group, collaboratively plan rules or procedures to accomplish... Help resolve a local or global problem by ... Practice giving and receiving feed back on ... Using one of your strengths, assume a role in a group to accomplish ... Create a culture gram or systems wheel of... Us e telecommunication program to reach ... to ... Others of your choice
	R-Brain D-Quadrant Intrapersonal Me Smart	Setting goals, meditating, dreaming, being quiet, planning etc	Describe qualities you posses that will help you successfully complete... Create a personal analogy for... Set and pursue a goal to... Describe how you feel about... Explain your personal philosophy about... Describe one of your personal values about... Use self-directed learning to... Write a journal entry on ... Explain the purpose you perceive in studying... Conduct a project of your own choice on... Receive feedback from another person on your efforts to... /self-assess your work in... Use technology to ... Others of your choice...
	R-Brain D-Quadrant Naturalist Nature Smart	The great outdoors, hiking, camping, nature photography, observing natural phenomena, watch nature videos/films	With your visit at the zoo/farm/aquarium/forest/park/dam/etc identify all the (specify the natural phenomena).... List all the characteristics of the (specify the natural phenomena) you observed... Use your logbook or journal to record the changes/developmental stages of the (specify the natural phenomena) ... Record the colour, size form, function of the (specify the natural phenomena) ... Classify (specify the natural phenomena) ... Devise a classification system for (specify the natural phenomena) ... Collect (live) specimens of (specify the natural phenomena) and keep them under optimal conditions for a long term investigation ...

			Create a self sustainable garden/pond/ecosystem for ...
	R-Brain C-Quadrant Emotional Feeling Smart	Showing their feelings appropriately, sharing their feelings with others, easily senses other's feelings, can easily control their feelings	Identify all the feelings/emotions you experienced during... Describe all the sensations of the feeling(s)/emotion(s) you are experiencing as it is happening ad how you reacted upon them. Discuss your responsibility regarding expressing your feelings especially in public. Design strategies for getting rid of your inhibitions and becoming spontaneous. Share your best practices for handling your most extravagant emotions. How would you become more sensitive towards recognising emotions in others? How will you engage others to feel with you? How will you comfort someone comfort ...
	Whole Brain All Quadrants Spiritual Divine Smart	Create new things, being ultimately flexible, defeating circumstances, looking for wholeness and connectedness of everything, asking the most fundamental questions of life to give meaning to it, creating the future today	Create the ultimate vision for your life and an action plan to fulfill that vision. Formulate your own personal mission statement and design a strategy to achieve it. What would you do to people who have caused you ultimate harm? Make a collage of yourself that will portray all your deepest personal characteristics. How would you go on in life if you have lost all your possessions? If all hope for anything and everything has fallen away, what would you do? What are all the possibilities ...? What about you would you like to change, when and why? How far can you go ...? What ultimately motivates you to ...? Create the best possible... Right now, without anything available, create your

If we look back at the definition of intelligence, we see that it involves two things: Solving problems, and fashioning products. The crucial function of the brain is that of thinking. In that sense it is clear to see what is meant by knowledge being active knowing and forms of action.

Intelligence may also be regarded as a function of the brain. In that regard, it may be important to explore the Hermann whole brain model (Hermann, 1995) and its functions and how it relates to the multiple intelligences.

Brain function is primarily that of thinking. It is therefore of great importance to explore the appropriate functioning of the brain as it relates to the thinking it produces. This can best be done by referring to the experiments Roger Sperry conducted with epileptic patients in

which the two hemispheres of the brain were separated to relieve seizures. These successful experiments eventually showed the two hemispheres of the brain to be significantly different in the thinking they produce (De Bono, 1993; 2009). The differentiation of left and right brain thinking is shown in table 3.4 below.

Table 3.4 Left brain–right brain activity comparison

Left brain	Right brain
Logical	Emotional
Verbal (language)	Non-verbal (images)
Vertical	Lateral
Analytical	Holistic
Mathematical	Metaphorical
Sequential	Musical
Physical	Spiritual
Literary	Visual
Realistic	Imaginative
Linear	Spatial
Anticipative	Intuitive

De Bono (2009) popularised these findings with the concept of lateral thinking as opposed to vertical thinking. This is depicted in table 3.5 below:

Table 3.5 Linear/vertical–lateral thinking comparison

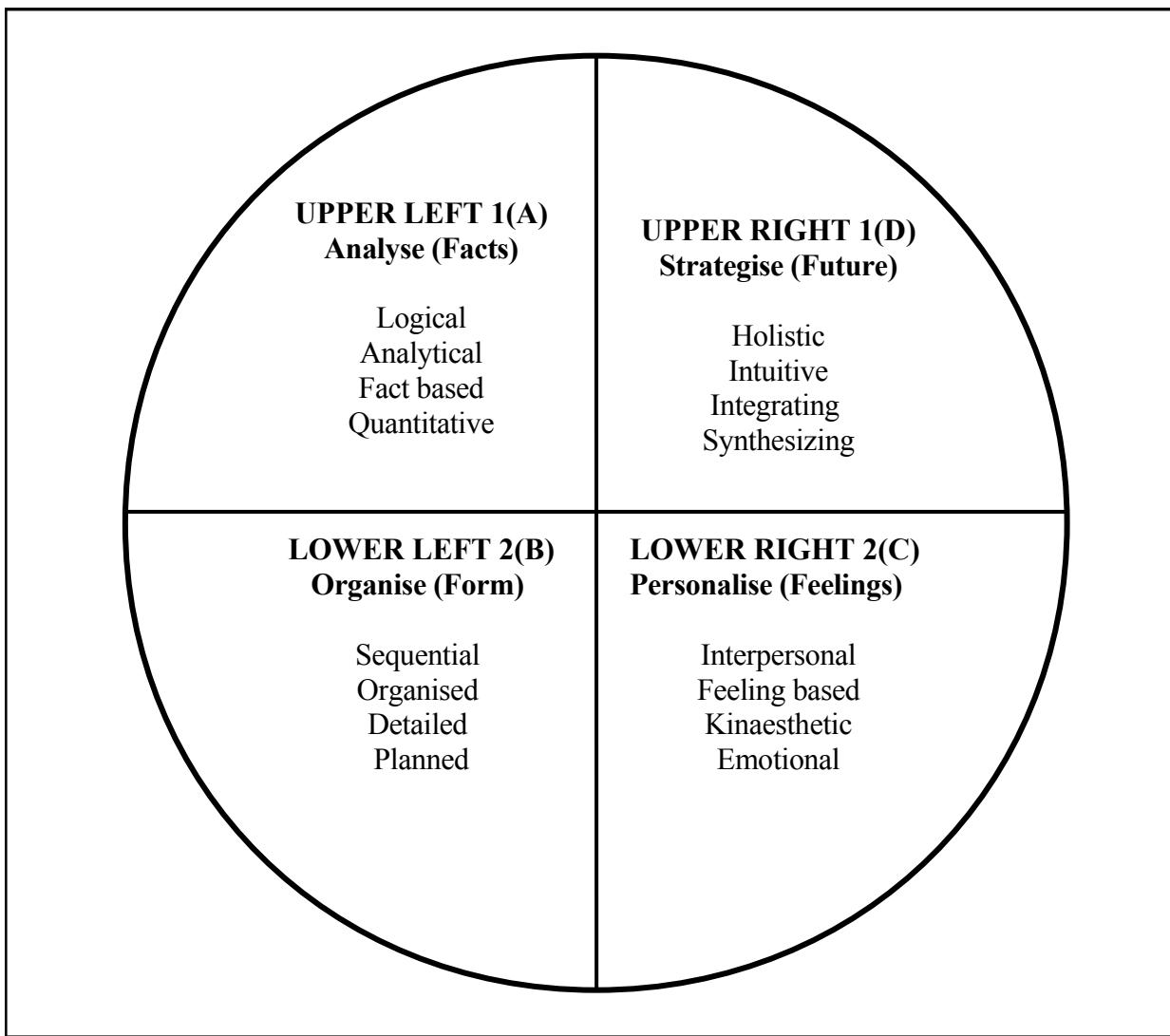
Linear or vertical thinking	Lateral thinking
Selective	Generative
Rightness	Richness
Linear – keep on highway	Lateral – explore turn-offs
Analytical	Provocative
Sequential	Make quantum leaps
Logical	Illogical
Exclusive	Inclusive
Rigidity	Flow
Most likely	Least likely

Finite process

Probabilistic process

However, the brain has been characterised not only by a right and left hemisphere, but each hemisphere, in turn, has revealed one mode of thinking in the more cerebral part (front) of the hemisphere and another mode of thinking influenced by the limbic part (back) of the brain (Neethling, 2001; Hermann, 1995; Knowles, 1990; Buzan, 1991; Ornstein, 1997; Lumsdaine and Lumsdaine, 1995; Ellis, 1997; Krol and Labskey, 1996; Fraser and Maree, 2004; Du Toit, 2007). The brain therefore operates in four quadrants and each identifies a dominance area or preference domain in which thinking takes place. Both the Herrmann Brain Dominance Instrument (HBDI) and the Neethling Brain Instrument (NBI) contain similarities that could be integrated into a whole brain model, as depicted in figure 3.5

Figure 3.5 The whole brain model



As is indicated by this brain model, there is an inherent wholeness present in the brain as in the multiple intelligences. This is no surprise since holism is a driving force in the universe (Smuts, 1987). Learners as human beings are indeed multidimensional in nature and this is represented, amongst others, by multiple intelligences (Sternberg, 2007, 2008; Gardner 1997, 2004; Goleman , 1995; De Beauport, 1996; Zohar and Marshal, 2000; Bar-On, Maree and Elias, 2006). But, much more importantly is that each of these intelligences could also be identified as belonging to one of four intelligence domains.

Each of the four domains represents one of the vital constituents of our nature as human beings. One should also acknowledge that different learners do not have the same type of intelligences, and for this reason, also do not learn in the same way, which increases the challenge of the facilitator of learning to be able to cover all the learning needs and styles. However, our experiences as humans emerge from the complex interplay between these constituents, while in constant dynamic interaction with the environment. Learning, and the subsequent growth of our consciousness of who we authentically are, is possible only:

“if the factors responsible for the integrity of all inseparable constituents of human individuality, i.e. **body** [physical intelligence PQ)] **mind** [mental intelligence (IQ)], **soul** [emotional intelligence (EQ)], and **spirit** [spiritual intelligence (SQ)] are simultaneously activated” (Dimitrov and Wilson, 2002, p. 48).

This illustrates the **holistic nature** of our being. By acknowledging and utilizing these different types of intelligences in the facilitation of learning, it can lead to more successful learning, as well as to increase the effectiveness and different learning styles of the diversity amongst the learners.

3.3.4 Learning to be

Learning is the pivotal constituent that qualifies education as education, especially the education we need for living in a supercomplex world with an unknown future. One of

the most simplistic but powerful definitions of learning is provided by Claxton (1999, p. 11): “Learning is what you do when you don’t know what to do and becoming increasingly competent at why, when, where, how and what to do when you don’t know what to do.” But certainly one of the most profound quotations that relates to learning as our search for meaning is that of Victor Frankl (1984, p. 121):

“Man’s search for meaning is the primary motivation in his life and not a ‘secondary rationalization’ of instinctual drives. This meaning is unique and specific in that it must and can be fulfilled by him alone; only then does it achieve a significance which will satisfy his own **will** to meaning.”

De Corte (1996, p. 35-39) defines learning as follows:

“Learning is a constructive, cumulative, self-regulated, goal-directed, situated, collaborative, and individually different process of meaning construction and knowledge building.”

Learning in a supercomplex world with an unknown future “is not about finding things, it is about finding ourselves” (Purpel and McClauren, 2004, p. 176; Ackoff & Greenberg, 2008:xvi). As I have indicated earlier, the pedagogical task today is not primarily an epistemological one, it is primarily an ontological challenge (Barnett, 2004, p. 257).

Referring back to the learning performance pyramid, learning is, according to Claxton (1999; 2008) what you do when you don't know what to do: Learning is not a "know-do-be" but rather "be-do-know" sequence. In fact learning is what you do when you don't know what to do and becoming increasingly competent at why, when, where, how and what to do when you don't know what to do (Claxton, 1999, p. 15).

Learning that reflects this required ontological challenge "is often hard and protracted, confusing and frustrating ... Much learning involves exhilarating spurts, frustrating plateaus and upsetting regressions ... Even when learning is going smoothly, there, there is always a possibility of surprise, confusion, frustration, disappointment or apprehension – as well as, of course, fascination, absorption, exhilaration, awe and relief" (Claxton, 1999, p. 15-16).

Despite the possible protraction of learning to be, it is the most important and exciting moment of one's life: "Any life, no matter how long and complex it may be, is made up of a single moment – the moment in which a man finds out, once and for all, who he is" (Jorge, Luis Borges). In fact, the purpose of life – as is the purpose of education – is to engage in the exciting adventure of finding out who we really are, what we are actually capable of and what our ultimate purpose is.

3.3.5 Facilitating learning to be

I have indicated in an earlier paragraph that neither knowledge, nor skills could be the object of education because “[K]nowledge can be forgotten and skills can atrophy without use; but dispositions and qualities are durable in their nature. They constitute the student’s pedagogical being. It is they that have to be the focus of ‘teaching’ ...” (Barnett, 2007, p. 102). If these qualities are in place, the learner will engage in any challenging situation without knowing how to resolve it and through utilizing those essential qualities, will persevere in his or her efforts in the most efficient way until the challenge has been resolved as best as he or she can. Along the way, he or she necessarily and inadvertently would have acquired an array of significant, meaningful knowledge even beyond the limiting and decontextualised required curriculum knowledge. Also, because the result of this learning process is the enhancement of the quality of life (resolving a real life challenge) it, in its entirety, is valued accordingly. And since the knowledge and skills as well, were constructed by the learner, he or she is in complete command of it. Therefore, because it is valued for its accomplishment (resolving a real life challenge) he or she has direct access to everything about it and is able to manipulate it in the most proficient way to resolve any future real life challenges he or she may encounter.

If qualities and dispositions are to be the focus of our facilitating learning, this frightening novel concept will obviously require a unique curriculum and pedagogy:

“The achievement of the qualities such as these calls for a transformatory curriculum and pedagogy which are themselves understood to be practiced as endeavors of high risk ... This is a curriculum that is aimed at the transformation of the human being; nothing less ... For that the actual learning processes themselves will also need to be high risk and transformatory in character".
(Barnett, 2004, p. 257)

Such a high risk and transformatory learning process will obviously require a different kind of teaching. Spady (1994, p. 72-73) indicates the required changes in teaching as follows:

- The traditional conception of curriculum will have to expand dramatically from a pre-occupation with short-term content learning, to continuously challenge students' abilities to do meaningful, life enhancing things.
- The nature of the teaching practice will have to involve active learning with learners continuously carrying out performance roles. Together with their learning and performance team members, learners must engage in increasingly complex content. Extensive co-operative learning projects will be necessary if learners are to develop interpersonal and communication abilities required in the knowledge age.
- The range in which learners learn will have to be expanded considerably because the four walls of the classroom and what the individual teachers can teach will be too limiting for what is required of them. Learners should at least engage with

experts and organizations in the larger community, leading to a redefinition of who the teacher is and what the most appropriate learning environment is.

- Quality teachers and teacher education taken to anything other than the highest possible level is non-negotiable. The challenge for both preservice and inservice teacher education programmes will have to expand far beyond current parameters because it is extremely unlikely that teachers will be able to facilitate learners with things they themselves cannot do effectively. This implies that the fundamental life performance roles and the SCANS report should serve as templates for teacher education programmes and subsequently the professional development of teachers.

From these required changes in teaching, the emphasis on the fundamental life performance roles, and that education has to be imbedded in living real life, is confirmed – not because it is a nice idea but because: “[T]he best learning happens in real life with real problems and real people and not in classrooms”, says the well known business philosopher Charles Handy in one of his famous quotes. To accomplish this challenge,

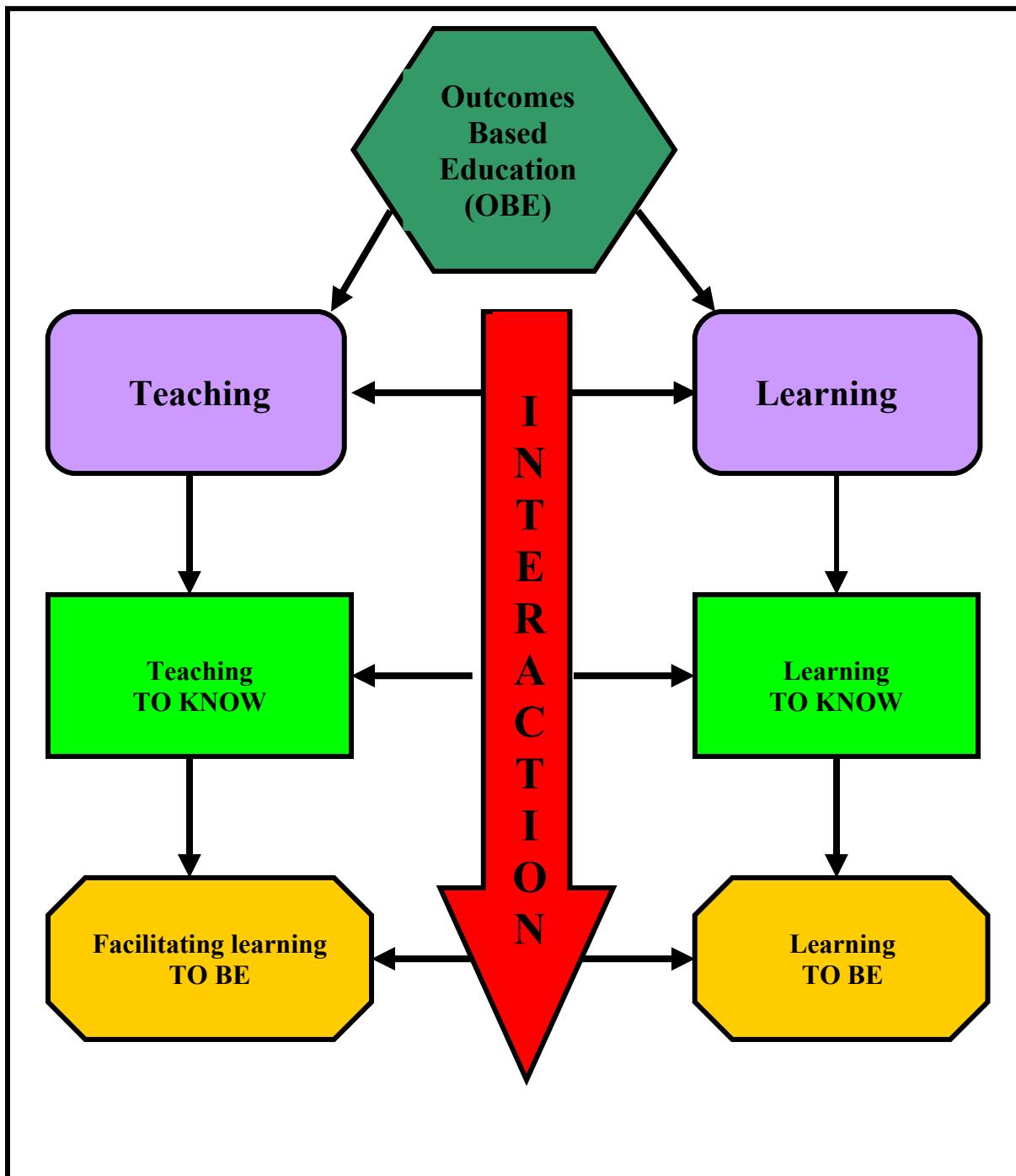
“Students should become ‘active learners’, capable of solving complex problems and constructing meaning that is grounded in real-world experience ... It emphasizes that all instructional activities must be rooted in a primary concern for high standards of intellectual quality. We refer to this conception as authentic pedagogy ... As to the effects of authentic pedagogy on students with different

backgrounds: We found that authentic pedagogy helps all students substantially” (Newman, Marks and Gamoran, 1995, p. 8).

In these preceding paragraphs, it has become clear that a new paradigm in education has emerged. This new paradigm represents a shift from learning to know to learning to be, in which authentic learning and authentic pedagogy is paramount.

Figure 3.6 depicts a schematic presentation to achieve outcomes in a learning to be paradigm.

Figure 3.6 Schematic representation of achieving learning to be outcomes



Since the educational requirement is for authentic pedagogy through which learners have to find their authenticity, the moral/ethical basis of this serious life endeavour demands the highest possible quality of learning.

3.3.6 Learning quality

The quality of education is determined, as we have already discovered, through the quality of facilitating of learning, however: “[D]iscussions about the quality of education focus ever more on the quality of students’ learning processes” (Vermunt, 2003, p. 110). In fact, if the highest possible learning quality is not the outcome that we demand from our educational endeavors, we are ignoring a very serious moral-ethical responsibility that is currently, as is the case in South Africa, approaching irreversible devastating consequences, which will impact on all of our lives.

The question is, however, how do we determine or define learning quality? The following are factors that determine learning quality:

- The level of complexity or difficulty of the learning challenge;
- The level of reality;
- The level of uncertainty as to whether the learner will be able to resolve the learning challenge;
- The level of dependence on someone else for the learning to take place;
- The level of commitment extended;

- The level of effort exerted;
- The amount of time spent;
- The level of resilience exhibited.

There are several ways in which these and other factors could be represented. Figure 3.6 depicts Bruner's (1996, p. 45) representation of learning quality. In figure 3.7 according to Engelström (2004, p. 17), is where the learning quality increases from transferable exploitation to adjustable exploitation, to incremental exploration to radical exploration. Table 3.6 contains the way in which learning quality could be indicated comparing the work of five educationists.

Traditional education may be characterized by three existing paradigms of education (also referred to as models, modes or perspectives) initiated by, amongst others, Dewey (1944), Piaget (1952, p. 1958) and Vygotsky (1978) and substantiated by Joyce, Weil and Showers (1992), Miller (1996) and others.

These paradigms are the transmission, transaction and transformation paradigms of education. However, some contemporary authors (Arons, 1997; Freiburg and Driscoll, 2000; Miller, 2003) have sensed that another paradigm may be immanent beyond the transformation paradigm. When Engelström (2004) identified a fourth dimension while describing the quality levels of learning within an equivalent context of the three existing paradigms, it opened the opportunity to add the transcendental paradigm to the existing trilogy.

The label ‘transcendental paradigm’ has been chosen because of the way in which it transcends several domains that may be detrimental limiting factors in learning quality. This paradigm transcends the confines and limitations of learning to know: the classroom, the school, the prescribed curriculum and fragmented reality, and the self – and promotes the integrated wholeness characteristic of learning to be.

Figure 3.7 Learning quality according to Brunner (1996, p. 45)

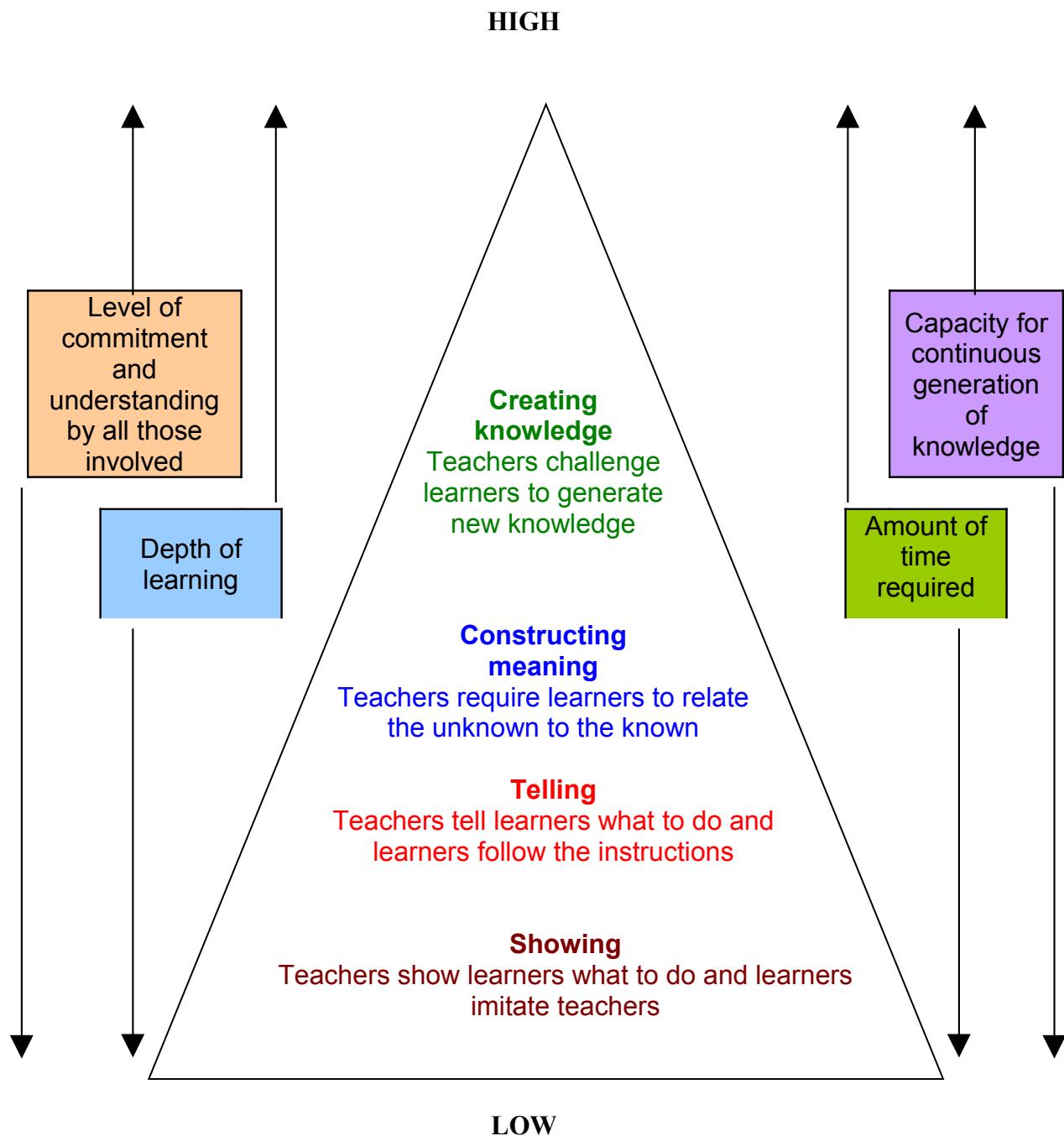


Figure 3.8 Learning quality according to Engelström (2004, p. 17)

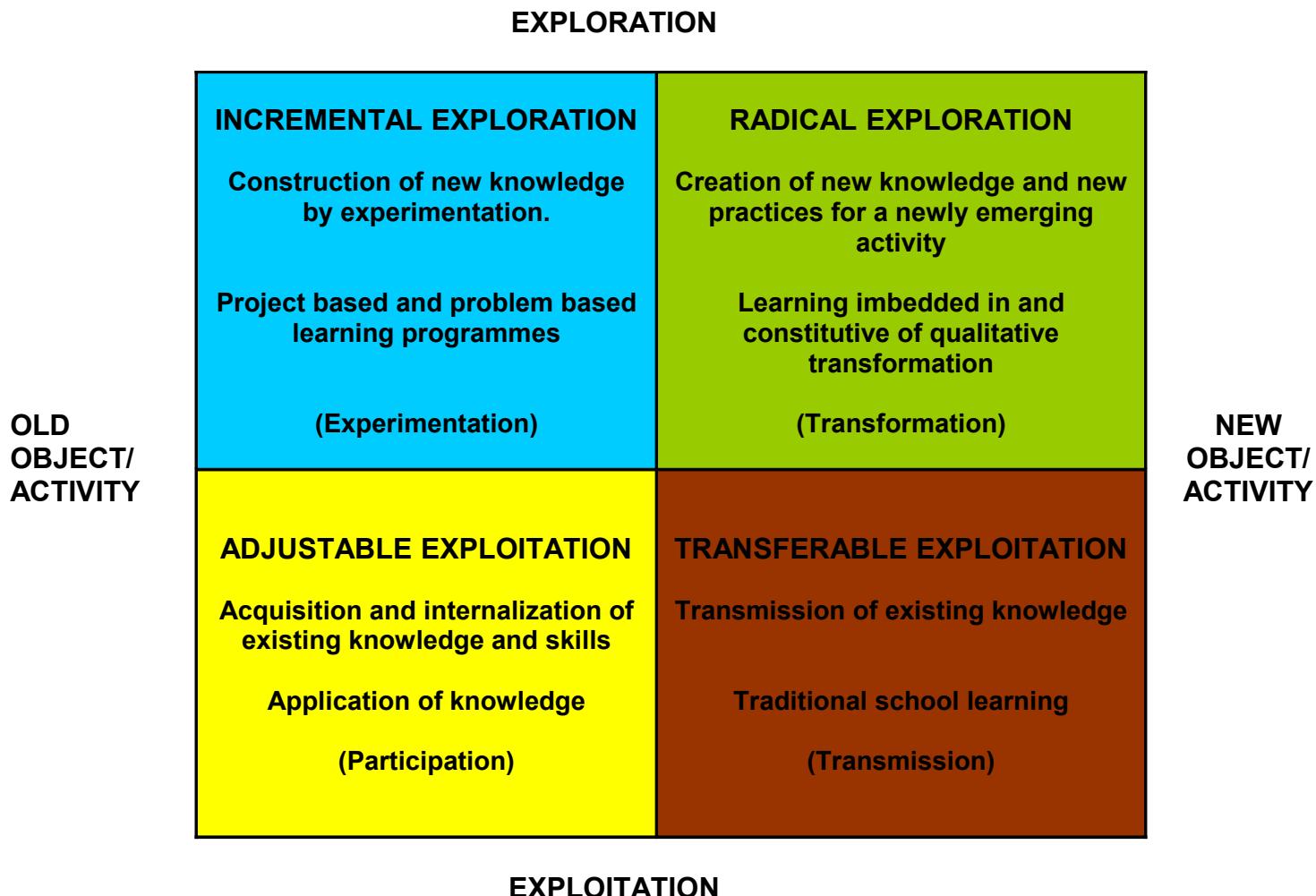


Table 3.6 LEARNING QUALITY

High	BLOOM'S TAXO-NOMY (1980)	BIGGS'S SOLO TAXONOMY (1991)	BRUNER'S LEVELS (1996)	CLAXTON DE CORTE POWERFUL LEARNING ENVIRONMENTS (2003)	MILLER'S HOLISTIC EDUCATION (2003)	ENGELSTROM'S TYPES OF LEARNING (2004)	High
L E A R N I N G Q U A L I T Y	Evaluation Synthesis Analysis Application Comprehension Knowledge	Extended abstract Relational Multistructural Unistructural Prestructural	Creating knowledge Constructing meaning Telling Showing	Real life in its uncompromising, holistic complexity Authentic context Personal meaning Project Clearly defined More than one focus Gather information More than one answer Application Clearly defined More than one focus All information given One answer Clearly defined One focus All information given One answer	Transcendence Creating knowledge Real life Transformation Participatory exploration Projects Transaction Participatory understanding Questioning Transmission Imparting Knowledge Lecturing	Radical Exploration Creating knowledge Qualitative transformation Real life Incremental Exploration Constructing meaning Project based learning Problem based learning Adjustable exploitation Internalisation of knowledge Application Transferable exploitation Transmission of knowledge Traditional school learning	H O L I S T I C
Low							

The essential characteristics of each of the education paradigms as they have been identified by the respective authors have been summarized in Figure 3.7. It should be obvious that the summary indicates distinctive characteristics and therefore portrays what would be dominant in its implementation in practice.

Reflecting on this paragraph where I have discussed learning quality, the transcendental paradigm seems to be the ultimate in learning quality and should be right at the centre of our education. Although this paradigm represents incredible challenges to learning and the learner for that matter, we need to remember that learning in this paradigm is not easy and will never be easy. Neither may it be fun because it may be accompanied with confusion, frustration, disappointment, regression and apprehension (Claxton, 1999, p. 15-16). However, although the learning process in authentic learning is often hard and protracted and a necessary pre-condition for learning quality, its outcome is always an exhilarating experience of accomplishment.

Although these conditions of authentic learning seem to be novel to education, they are essential to learning quality as Claxton (2008, p. 122) explains:

“I’ve argued again and again that what young people need is the temperament to cope confidently with difficulty and uncertainty: in other words, to be powerful real-life learners” (Claxton, (2008, p. 122).

Learning quality could therefore be determined by the level to which the learners have become powerful real life learners. The evident question to be answered after this exploration is what are

the challenges for facilitating learning quality in order to ensure that learners become powerful real life learners?

Figure 3.9 FOUR EDUCATION PARADIGMS

(Adapted from Dewey, 1944; Vygotsky, 1978; Joyce, Weil & Showers, 1992; Miller, 2003; Darling-Hammond & Bransford, 2005)

EDUCATION PARADIGM	Transmission	Transaction	Transformation	Transcendental
EDUCATION COMPONENT				
Aim	To impart knowledge	To understand knowledge	To apply knowledge	To maximise human potential
Foundation	Content	Content	Content	Process (for content)
Education mode	Direct teaching	Interactive teaching	Project education	Facilitating learning
Focus	Learning to know (facts)	Learning to “understand” (facts)	Learning to apply (facts)	Learning to be (authentically and holistically human)
Educator action	Tell, illustrate, demonstrate, explain	Questioning, discussing	Give assignments, projects, guidance, help	Confront the learners with a real life challenge they have to resolve themselves
Learner action required	Absorb, memorise, drill, practice	Answering questions, discussing	Exploration, discover, experimentation,	Creatively constructing new meaning
Learning mode	Receptive	Interactive	Self-active	Self-directive and collaborative
Learner autonomy	None	Some	Much	Total
Level of learning	Shallow	Insight	Deep	Transcendental
Learning outcome	Cognitive	Social	Multiple	Holistic
Outcome	Core concept reproduction	Core concept understanding	Enriched curriculum	Authentic: Living real life wisely
Learning quality	Low	Medium	High	Maximum

3.3.7 Facilitating learning quality

There should be no doubt that we are preparing our learners to live real life. My experience is that this is simply not happening and Claxton (2008, p. 184) confirms this when he says:

“Schools must change. The case is overwhelming. It is education’s core responsibility to prepare young people for the future, and it is failing in that duty.”

What is more serious, however, is that such failure to prepare learners for the demanding challenges of a complex world with an unknown future has detrimental consequences:

“One function of schooling should be to prepare students for the real world ...
The assumption is that, by and large, schooling as we know it meets those goals.
The reality is that it does not. On the contrary, it fosters illusions and obscures the real challenge.” (Dryden and Vos, 1999, p. 79).

Real-life today, in its uncompromising “supercomplexity”, is “qualitatively different from former worlds” (Barnett, 2007, p. 36-37), which subsequently presents us with challenges never experienced or imagined before that need to be resolved in such a way that it results in “creating a safe, sustainable and prosperous future for all” (Slabbert, De Kock and Hattingh, 2009, p. 49).

The world of work is currently dominating the field of instructional design. The common answer to the “what-to-teach” question lies in a description of real-life or professional tasks. This world is closely related to social-constructivist views on learning based on the idea that learners construct knowledge based on their own mental and social activity. Constructivism ideas suggest that in order to learn, learning needs to be situated in problem solving in real-life, authentic contexts ... [where] meaningful experiences enable the learner to learn the ways of knowing of the expert. (Van Merriënboer & Paas, 2003, p. 5).

Powerful learning environments foster the highest possible quality of learning and its transfer to novel future learning is “fostered by confronting students as much as possible with challenging, realistic problems and situations that have personal meaning for them, and are representative for the kinds of tasks they will encounter in future” (De Corte, Verschaffel, L., Entwistle, N & Van Merienboer, J. 2003, p. 25). Learning tasks have been mentioned as the way in which facilitating learning ensures the achievement of learning outcomes.

“Learning tasks nicely fit the ideas that are prevalent in the world of work. Learning tasks are concrete, authentic, and meaningful real-life experiences that are provided to learners” (Van Merriënboer & Paas, 2003, p. 9)

and thus represents powerful learning environments.

The “design for powerful learning environments must be aimed at integrated sets of learning goals or complex learning” (Van Merriënboer and Paas, 2003, p. 4) However, the real-life challenges of a supercomplex world, with an unknown future, determines not only what should be learned, but also how it should be learned. This means that learners should not only become competent in the existing ways of learning, but they would need to create the most appropriate ways of learning in situations where existing ways of learning is not appropriately suitable for the challenge at hand. The learner should therefore be able to plan execute, monitor and assess his or her own learning, thus becoming an active, effective, independent, lifelong learner through the process of metalearning (Slabbert, De Kock and Hattingh, 2009, p. 108-111), or as Heidegger says: “The real teacher lets nothing else be learned than – learning. His conduct, therefore, often produces the impression that we probably earn nothing from him”.

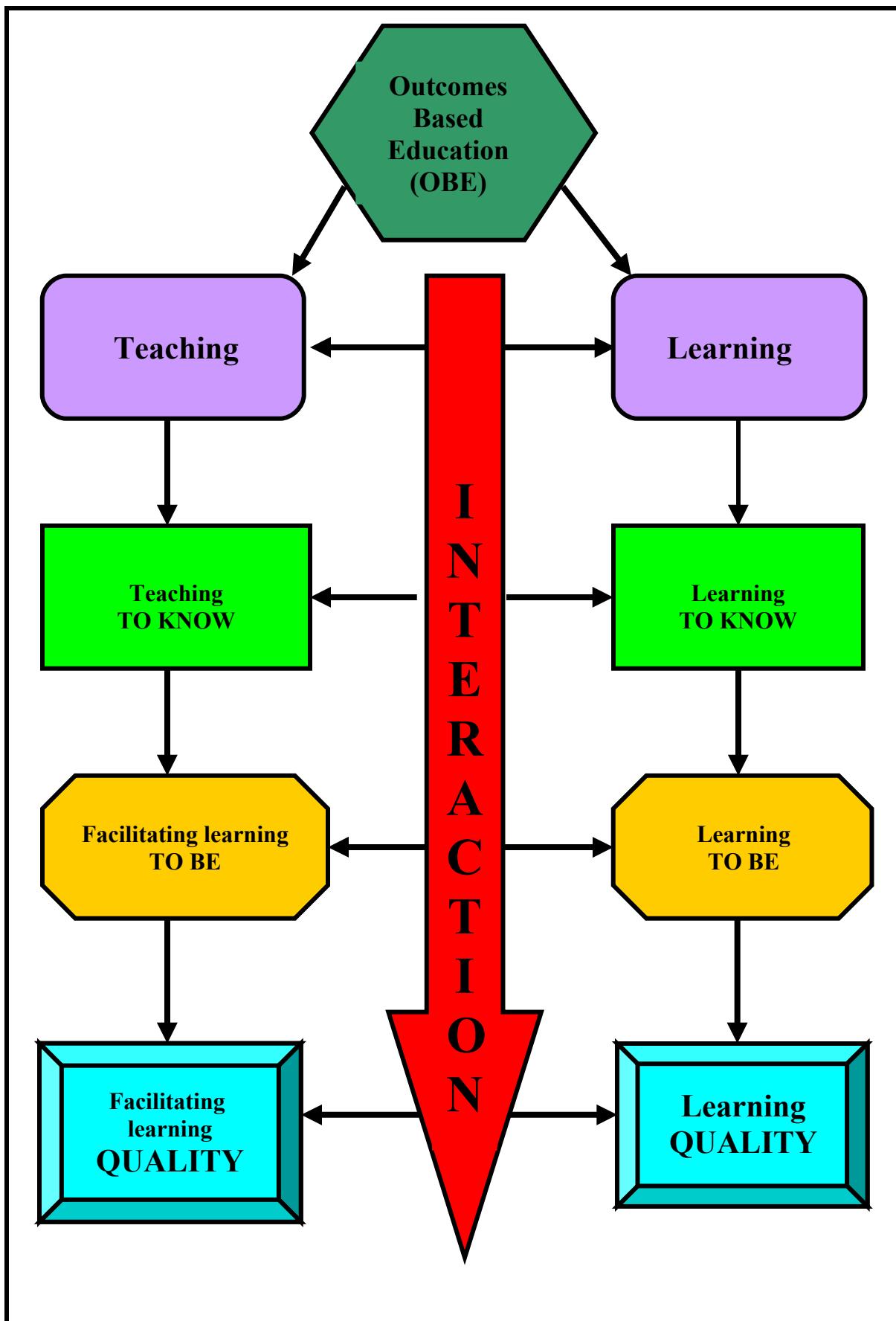
In the last decade, research has been conducted on the necessary characteristics of powerful learning environments. These include:

1. Use of complex, realistic and challenging problems that elicit in learners active and constructive processes of knowledge and skill acquisition;
2. The inclusion of small group, collaborative work and ample opportunities for interaction, communication and co-operation; and
3. The encouragement of learners to set their own goals and provision of guidance for students in taking more responsibility for their own learning activities and processes. (Van Merriënboer and Paas, 2003, p. 5).

It should be obvious that high quality facilitating learning is achieved through surprisingly different means than we are accustomed to. The highest possible quality of facilitating learning is achieved through the designing, operationising and maintaining the most powerful learning environments possible. This is achieved by learning tasks that requires the highest possible quality of learning. A learning task is a real-life challenge to be resolved in the form of an existing problem to be solved or the opportunity to improve the quality of life. In resolving these challenges the learners discover who they really are, what they are actually capable of and what their ultimate purpose is.

Figure 3.10 Slabbert, De Kock and Hattingh (2009: CD) depicts a schematic presentation to achieve outcomes in a quality learning paradigm.

Figure 3.10 Schematic representation of quality learning outcomes



3.4 Conclusion

Outcomes Based Education is an incredibly valuable education system. The reason should be obvious: Its origin is situated in real life in the form of the fundamental life performance roles. However, the inception of OBE in South Africa did not take heed of the paradigmatic changes needed to implement OBE: It required not only a policy change, but crucial space-time changes. But most of all, it requires a paradigm shift in our thinking about education as a whole, and especially the requirement of changing the way in which we educate: From teaching to facilitating learning – which is paradigmatically different and in a certain sense the direct opposite of teaching. Additionally, as it normally happens with paradigmatic changes, the human being who needs to implement the change has to undergo an own internal transformation, which has not yet taken place.

I was truly excited about Outcomes Based Education when I was introduced to it and was looking forward to engage in its practice. At the same time, however, I was initially anxious because of the unfamiliarity that awaited me in an actual school environment but I could not anticipate how different the challenges that I will have to contend with would be.

CHAPTER 4

Improving my Outcomes Based Education Practice

4.1 **Cycle 1: Improving my Outcomes Based Education during my initial Post Graduate Certificate in Education Teacher Education Programme**

As I have mentioned in chapter 1, after completion of my BA degree I decided to qualify as a teacher and immediately enrolled for a Post Graduate Certificate in Education (PGCE). When I decided to engage in an action research process to convey the way in which I have pursued a continual improvement of my education practice, I did not initially intend to include my Post Graduate Certificate in Education Teacher Education Programme as part of this study. However, on reflection of that initial part of my education as a teacher, I realized that it was in actual fact the true beginning of this very significant journey as a professional educator. This cycle, therefore, represents the extended time span of the entire duration of this one year, full time teacher education programme, and refers to OBE in general throughout the PGCE Teacher Education Programme as it is reflected in my PGCE professional development portfolio.

This cycle is therefore the first in the series of my action research and consists of the following steps:

- a. **Identify:** How could I best improve on my initial introduction to Outcomes Based Education?
- b. **Plan:** My enrolment in PGCE teacher education programme in order to become a professional educator in Outcomes Based Education.
- c. **Act:** My school based learning periods during the PGCE teacher education programme where I implement OBE in practice.
- d. **Observe:** Compiling a PGCE professional development portfolio as an instrument to collect data on the execution of my OBE practice
- e. **Reflect:** Reflecting on the data collected in my PGCE professional development portfolio in order to determine what still needs improvement.
- f. **Review:** How will I ensure continual improvement of my OBE practice when I enter the education profession?

4.1.1 Identify

During my schooling years, I had only experienced the then teacher centered, content based South African education system. My education during my BA degree at university did not differ essentially from the kind of education I experienced at school. However, the new Outcomes Based Education was introduced throughout the entire secondary school curriculum through to Grade 12 when I had completed my teacher education studies. Although my decision to enroll for the Post Graduate Certificate in Education did not include cognizance of this fact, it was on the first day of the PGCE programme that this fact was impressed on us.

Although I did not consciously consider this as a challenge at the very beginning of the PGCE programme, it became increasingly clear that my perception of education as I have experienced it throughout my schooling and university years, does not offer a basis for comprehending Outcomes Based Education. I therefore came to realize that simply implementing Outcomes Based Education would indeed be a challenge – without the additional burden of continual improvement thereof. Fortunately we very quickly became aware that the nature of the PGCE programme is a professional development one, which means that it is characteristically a programme of continual professional improvement of Outcomes Based Education practice.

I could therefore, on reflection, determine that my first challenge is how to effectively engage in, and improve on, my initial introduction to Outcomes Based Education.

4.1.2 Plan

Even though my decision to enroll for the PGCE programme resulted in a challenge worthy of research, I cannot take any credit for planning the active intervention I needed to engage in improving my OBE practice: The PGCE programme did it on my behalf. However, I have made a conscious decision to be a committed participant in the PGCE programme in order to ensure the success of improvement of my OBE practice.

The essential features of an Outcomes Based Education teacher education programme have already been presented in chapter 3. However, since this action research is directed

at improving the OBE practice I will only convey two additional essential features regarding the practice of OBE.

4.1.2.1 A new vocabulary emerged

Obviously an entirely new education system will be identified by its own unique vocabulary. The main concepts in this vocabulary are the following:

- Education as the *transfer of knowledge* is replaced by education as *maximising human potential*,
- *Aims and objectives* are replaced by *outcomes (critical, developmental and learning outcomes)*,
- The *teacher* as the *transmitter of knowledge* is replaced by the teacher as a *mediator of learning*,
- A *lesson plan* is replaced by a *learning task design*,
- A *lesson* is replaced by a *learning task*,
- *Teaching* is replaced by *mediating learning*,
- *Teacher and teaching centeredness* is replaced by *learner and learning centeredness*.

4.1.2.2 A learning task and its design

Since OBE focuses on learning outcomes it is reasoned that a learning task should produce corresponding learning outcomes and the learning task has become pivotal in OBE practice. To engage in OBE practice it is therefore essential to design the OBE practice through a learning task design. An example follows:



LEARNING TASK

1. Programme: Learning area: Subject:	EMS	4. Date: 5 March 2002	5. Length of period: 45 min X 2
2. Context (theme):	Marketing and Calculations		
3. Topic of this learning task:	Marketing		

6. Critical outcomes	&	7. Developmental outcomes		
<input checked="" type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

8. Learning outcomes for learning programme/area/subject NCS (circle applicable number/s) 1 2 3 4 5 6

9. Refined learning outcome(s) in your own words (incorporating skills, knowledge, values and attitudes):

Mathematical Skills / Accounting Calculations
Business / Entrepreneur Knowledge
Responsibility

10. Assessment standards NCS: Indicate number/s, e.g. Gr 8, p13, 5 b iii:

10.1 10.2 10.3

11. Assessment standard(s) in your own words

Assessing the learners on their calculations and creativity.

12. Assessment

12.1 Assessment tools Rubric	12.2 Recording	12.3 Assessor/s
	-	-

13. Integration with other learning programmes / learning areas / subjects

English, mathematical literacy

14. Resources

Text Books / Internet / References

15. Brief description of learning task (introduction, development and consolidation)

Learners will have to describe how they will go about selling extra t-shirts and caps that the school ordered and now have a surplus of them; at which costs and describe the marketing thereof as well.

16. Teaching strategies and techniques, e.g. problem-solving, discussion, etc.

Critical Thinking and problem solving

17. Special needs/learning barriers
(indicate how you will cater for learners with special needs)

-

18. Reflection / refinement / follow-up
(complete this section after teaching the learning task)

Let real life enough for the learners.

4.1.3 Action

A learning task that has been designed is executed. The generally accepted way in which a learning task should be executed and the way in which I subsequently carried it out, is as follows:

- a. Announcement of the curriculum content (theme or topic).
- b. The learning outcomes are provided to the learners.
- c. The assessment standards are provided to the learners in the form of an instrument of which a rubric is the most popular.
- d. A learning task is given to learners in the form of an assignment which requires learners to do something – also referred to as “research”.
- e. The execution of a learning task is done by the learners usually in the form of group work.
- f. During the entire duration of the execution of the learning task, the teacher acts as a learning mediator.
- g. If time is left, the teacher and/or some learners may give feedback on the completed assignment.

4.1.4 Observe

Data on my own OBE practice was collected through the following means:

- a. My own direct observation of what I am doing.

- b. My own assessment,
- c. Feedback from my head of department where possible.
- d. Feedback from learners where possible.
- e. Learning task assessment

Figure 4.1 is my assessment of the learning task that I conducted during this cycle:



Figure 4.1: Learning task assessment form – self assessment

<p>Punt (%): 60 %. Mark (%): 60 %.</p>			
<p>LT-ASSESSINGVORM / LT ASSESSMENT FORM A</p>			
<p>Transaksie-, transaksie- en transformasieparadigmas/Transmission, transaction and transformation paradigms</p>			
<p>Naam van student wat geassesseer word: <i>Diep, Iyka</i> Datum/Date: <i>5 Maart 2017</i></p>			
<p>Name of student being assessed: (Merk: Self/mentor/mentor/dosent) <i>Diep, Iyka</i> Date: (5 Maart 2017)</p>			
<p>Naam van assessor: (Merk: Self/peer/mentor/lecturer) <i>5 Maart 2017</i></p>			
<p>Name of assessor: (Indicate: Self/peer/mentor/lecturer) <i>5 Maart 2017</i></p>			
<p>LEERTAAKONTWERP (LTD)/LEARNING TASK DESIGN (LTD)</p>			
<p>Beskrywing van wat aangedui moet word <i>Description of what should be indicated</i></p>	<p>Teenwoordig <i>Present</i></p>		
<p>Volgnummer van LT en paradigma daarvan/ <i>Sequence number of LT and paradigm thereof</i></p>			
<p>Aantal LT's in elke paradigma geoprasioneer- hierdie een uitgesluit/ <i>Number of LT's operationalised in each paradigm – this one excluded</i></p>			
<p>Naam/Name</p>			
<p>Studentennummer/Student number</p>			
<p>Datum/Date</p>			
<p>Leerarea, program of vak/Learning area, programme or subject</p>			
<p>Graad/Grade</p>			
<p>Tyd wat benodig word vir die operasioneering van hierdie LT/ <i>Time needed to organise this LT</i></p>			
<p>Vereistes waарan die onderlinge verbandhoudendheid essensiell is <i>Requirements of which the mutual relatedness is essential</i></p>			
<p>Verbandhoudendheid met onderlinge vereistes <i>Relatedness with mutual requirements</i></p>			
<p>Onaanvaarbaar <i>Unacceptable</i></p>	<p>Ontoereikend <i>Inadequate</i></p>	<p>Goed <i>Good</i></p>	<p>Uitstekend <i>Excellent</i></p>
<p>0-2</p>	<p>3-4</p>	<p>5-7</p>	<p>8-10</p>
<p>Kritieke en ontwikkelingsuitkomste/Critical and developmental outcomes</p>			
<p>Leeruitkomste (LO)/Learning outcomes (LO)</p>			
<p>Assesseringstandaarde (AS)/Assessment standards (AS)</p>			
<p>LT-uitkomste (L-Tout)/LT outcomes (L-Tout)</p>			
<p>LT-assesseringstandaarde (LTass)/LT assessment standards(LTass)</p>			
<p>Lewenswerklike uitdaging/Real life challenge</p>			
<p>Ouentikele leerkonteks/Authentic learning context</p>			
<p>Die leerprodukt/The learning product</p>			
<p>Die leerproses/The learning process</p>			
<p>Die leerinhoud/The learning content</p>			
<p>Bronne/Resources</p>			



LT-ASSESSERINGSVORM / LT ASSESSMENT FORM							
Transmissie-, transaksie- en transformasieparadigmas/Transmission, transaction and transformation paradigms							
NAAM VAN PERSON WAT GEASSEER WORD: NAME OF PERSON BEING ASSESSED:			Dui aan watter assessering dit is Indicate which assessment it is				
			SELFASSESSERING SELF-ASSESSMENT				
LEERTAAKNOMMER / LEARNINGTASK NUMBER:			PORTUURASSESSERING PEER ASSESSMENT				
DATUM: DATE:	5 May 2009		PUNT: MARK:	30/40			
Omkring syfer van die mees gesikte kommentaar/Encircle number of most applicable comment							
Beplanning Planning	1. Een of meer vereistes (LU's, AS'e, leeraktiwiteit, materiaal, organisasie en assessering) is afwesig One or more requirements (LOs, ASs, learning activities, materials, organisation and assessment) is absent 2. LU's, AS'e, leeraktiwiteit, materiaal, organisasie en assesserung teenwoordig, maar nie ten volle in ooreenstemming met mekaar en volledig interafanklik nie LOs, ASs, learning activities, materials, organisation and assessment present but not fully aligned nor completely interrelated 3. LU's, AS'e, leeraktiwiteit, materiaal, organisasie en assesserung teenwoordig, ten volle in ooreenstemming met mekaar en volledig interafanklik LOs, ASs, learning activities, materials, organisation and assessment present, fully aligned and completely interrelated 4. LU's, AS'e, leeraktiwiteit, materiaal, organisasie en assesserung teenwoordig, ten volle in ooreenstemming met mekaar en volledig interafanklik en vorm 'n kreatiewe geheel LOs, ASs, learning activities, materials, organisation and assessment present, fully aligned and completely interrelated and forms a creative whole			1	2	3	4
Leer-klimaat Learning climate	1. Geen poging om 'n leerklimaat te skep nie / No attempt to setting a learning climate 2. Poging aangewend maar irrelevant tot LU's / Attempt made but irrelevant to learning outcome 3. Opeising van aandag relevant tot LU's / Demand of attention relevant to LOs 4. Onmiddellike kreatiewe opeising van volle aandag relevant tot die LU's / Immediate creative demand of complete attention relevant to LOs			1	2	3	4
Kommunikasie Communication	1. Oninspirerend, onduidelik, onseker, vervelig / Uninspiring, unclear, insecure, boring 2. Hoorbaar, en verstaanbaar / Audible and comprehensible 3. Entoesiasties, duidelik hoorbaar, en verstaanbaar / Enthusiastic, clearly audible and comprehensible 4. Uitsaande stem en taalgEBRUIK op hooEnergievlak, entoesiasties, duidelik hoorbaar, en verstaanbaar Exceptional voice and language usage on high energy level, enthusiastic, clearly audible and comprehensible			1	2	3	4
Vakkundigheid Subject expertise	1. Vertoon slegs basiese kennis van inhoud / Displays only basic knowledge of content 2. Vertoon kennis van verbande met ander inhoud / Displays knowledge of relationships within other content 3. Integrasie van inhoud met ander leerareas / Integration of content in other learning areas 4. Holistiese integrasie van die inhoud in lewenswerklike konteks Holistic integration of the content within reality/realistic context			1	2	3	4
Leermedia Learning media	1. Geen gebruik van leermedia of ander bronne nie / No use of learning and other resources 2. Min gebruik/beperkte gebruik van leermedia en ander bronne / Little use of learning and other resources 3. Relevante gebruik van leermedia en ander bronne / Relevant use of learning media and other resources 4. Opwindende, kreatiewe, relevante, geïntegreerde gebruik van leermedia & ander bronne / Exciting original, relevant, integrated use of learning media & other resources			1	2	3	4
Leerbestuur Learning Management	1. Min of geen organisasie met oneffektiewe aanprysing, korreksie en straf, of geen beplande leeraktiwiteit Little or no organisation with ineffective praise, correction and punishment, or no planned learner activities 2. Swak organisasie met min aanprysing en die nodigheid van bate korreksie en straf Poor organisation with little praise and the need for much correction and punishment 3. Goete organisasie met gespakte aanprysing en korreksie waar nodig Good organisation with appropriate and effective praise and correction when necessary 4. Hooge georganiseerd met die mees gespakte aanprysing vir ongehinderde uitvoering van die leeraktiwiteit Highly organised with the most appropriate praise for unhindered execution of learning activity			1	2	3	4
Betrokkenheid Involvement	1. Die meeste leerders passief en onbetrokke en sommige leerders raak betrokke by nie-leeraktiwiteit Most learners passive and distant and some learners become involved in non-learning activities 2. Die meeste leerders passief en onbetrokke / Most learners passive and distant 3. Die meeste leerders is die meeste van die tyd gemotiveerd, / Most learners are interested most of the time 4. Hele groep is hoogs geïnteresseerd, gemotiveerd, neem verantwoordelikheid vir eie leer Total group involved, highly interested, motivated; take responsibility for own learning			1	2	3	4
Leerkwaliteit Learning Quality	1. Denkt bly op laer die kennisvlakte / Thinking remains on the lower levels 2. Aktivering van die hoer vlakte van denke / Activating the higher levels of thinking 3. Hoogste vlak van denke somtys verwag / Highest level of thinking sometimes expected 4. Voordurende uitdaging tot die hoogste moontlike vlak van kreatiewe denke Continual challenge towards the highest possible level of creative thinking			1	2	3	4
Konsolidasie Consolidation	1. Geen konsolidasie / No consolidation 2. Konsolidasie deur onderwyser gedoen / Consolidation done by teacher 3. Konsolidasie deur leerders gedoen / Consolidation done by learners 4. Hoogste moontlike vlak van kwaliteit tydens konsolidasie van leerders vereis Highest possible level of quality demanded from learners during consolidation.			1	2	3	4
Bereik LU'e Achieve LOs	1. Bereiking van enkele LU's / Achievement of few LOs 2. Bereiking van meeste LU's / Achievement of most LOs 3. Bereiking van alle LU's / Achievement of all LOs 4. Hoogs kreatiewe bereiking van alle LU's / Highly creative achievement of all LOs			1	2	3	4

4.1.5 Reflection

My data analysis and interpretation provided me with valuable information regarding the challenges that exist to ensure the continued improvement of my OBE practice. The following is a summary of what has been recorded in my professional development portfolio.

4.1.5.1 Implementing OBE requires a paradigm shift

Outcomes Based Education is not simply another method or a new approach in education. It does require completely new thoughts regarding what education is and what learner centeredness and learning centeredness entail. Since the learners and their learning is governing education in practice in OBE, OBE is no less than a paradigm shift. It was therefore initially a major effort and challenge to mentally adjust to what OBE in practice entails.

4.1.5.2 The challenges within OBE practice

The following are the major challenges that I have to contend with in improving my OBE practice:

- a. Although starting with the end in mind (outcomes) is an obvious general principle if something is to be produced, education seemed to have been exempt from it. Instead of taking content as the point of departure, all of us in the PGCE

programme found it difficult to start our learning task design by considering the learning outcomes first.

- b. When formulating the learning outcomes (the broader curriculum outcomes) and particularly the learner task outcomes (the specific outcomes for the particular learning task), around an action verb, (indicating that the learners need to do something which refers to a skill or competence), it was a continual struggle to ensure that the learning task outcomes (including an action verb) do not require learners to reproduce existing content (knowledge) contained in the resources available (e.g. a textbook or notes) to a workbook or worksheet as a requested answer. This still remains the *reproduction* of knowledge and may at best represent understanding – only the second level of the possible six levels of Bloom's taxonomy of educational objectives – which is still a prerequisite for the subsequent four higher levels in that taxonomy which actually represent competences or skills.

- c. In close association with the previous challenge, we found it difficult to translate the outcomes and the associated content or knowledge that we selected as the context within which the outcomes should be achieved, into a problem to be solved. Problem solving is the only way in which the specific learning outcomes could be achieved that is formulated beyond the level of comprehension and subsequently requires the acquisition of new skills or competences.

- d. Even though we had to translate the outcomes and associated knowledge into a problem to be solved, we found it difficult to design a learning task that transcends the level of application (only the third level of Bloom's taxonomy of educational objectives and the lowest level of the four representing skills or competences).

4.1.5.3 The challenge of professional development

The entire PGCE programme was a very demanding challenge. I experienced many failures and equally many successes both of intensities that varied between superficially meager to highly intense. However, through all these experiences, good and bad, we were always facilitated in the most appropriate way through every step of the entire process, to pursue our own potential and to maximize it. In fact, we realized that what was expected of us was set out for us by our lecturers and it provided us with the courage to expect the same from our learners.

I realized what professional development means: First of all, it means that I have to engage in personal development of the highest kind because “we teach who we are” (Palmer, 1998, p. 2). Secondly professional development means taking full responsibility of my own development and challenging myself to continually pursue the highest possible quality of education in which I engage my learners. The sole purpose of this is challenging them to achieve the highest possible quality of learning and subsequently maximizing their potential.

In no way was my PGCE journey always nice and easy, but it was always good – even though I might not have realized it at the time. I learned to consider every situation and circumstance I found myself in - good and bad - and utilized it to my benefit to continually improve personally and professionally – and I eventually did.

4.1.5.4 The challenge of a new kind of interaction between my learners and I

My major challenge was the realization that OBE, as a paradigm shift from teacher and teaching centeredness to learner and learning centeredness, requires first of all much more interaction as well as a completely new interaction between my learners and I – especially because I am no longer in complete control (transmitting knowledge which the learners passively receive), but that that my interaction with the learners is now determined by the responses of learners as they execute a learning task. OBE is learner and learning centered and the learners are thus “in control” because their actions determine my response. This new ‘required interaction’ seems to determine the success of Outcomes Based Education. Although this questioning technique was suggested to resolve this challenge, I have not acquired the confidence to ensure that I am succeeding in engaging with this new kind of learner, and learning centeredness, in the most appropriate way to ensure the highest possible quality of learning.

4.1.6 Review

Although at the end of my PGCE teacher education programme, it seemed to me that I had developed professionally sufficiently enough to operate successfully in OBE practices. I experienced a deficiency in my repertoire of competences regarding the interaction between my learners and myself. It is this interaction that most likely would fundamentally determine the success of OBE.

4.2 Cycle 2: Improving my OBE practice as a qualified professional Teacher

After being awarded with my Post Graduate Certificate in Education, I prepared myself to start my career as a teacher. Even though this initial teacher education programme prepared me well for the career I wanted to pursue, I had a new challenge facing me, and that was how to engage in a process of continual professional development ensuring the improvement of my OBE practice as a qualified teacher. Of consideration was also the uncertainty of entering my career as a professional teacher and the challenges emanating from my initial teacher education.

This cycle is therefore the second in the series of my action research and consists of the following steps:

- a. **Identify:** How could I best improve my OBE practice as a qualified professional teacher?

- b. **Plan:** I expect that the introduction to my career will expose me to the practicing teachers from whom I will be able to learn how to improve the novel interaction frequency and quality to ensure the improvement of my OBE practice.
- c. **Act:** During the first few introductory months of my career as professional teacher, I will explore as many avenues as possible to expose myself to the best practices, design and corresponding execution of quality learning tasks.
- d. **Observe:** Ensuring that I record as much as possible of my experiences of what I can learn from colleagues and peers as well as my own OBE practices in the most appropriate way.
- e. **Reflect:** Reflecting on the data collected in my PGCE professional development portfolio in order to determine what still needs improvement.
- f. **Review:** How I will ensure continual improvement of my OBE practice within a prevailing non conducive education practice context.

4.2.1 Identify

I had been awarded the Post Graduate Certificate in Education and I was ready to start my career as a professional teacher. I realized, however, that my PGCE teacher education programme did not and could not produce a flawless teacher – especially because of the most recent adoption of the new Outcomes Based Education in South Africa. I discovered, after completing my initial teacher education in this new dispensation that I had developed professionally as a teacher in OBE, but that a deficiency in the repertoire

of competences, especially regarding the required interaction between my learners and I existed.

It was something that I needed to address, because this novel kind of interaction most likely determines the success of OBE. My quest in this cycle of my action research would therefore be how I could best improve my OBE practice as a qualified teacher, focusing on the interaction between my learners and I.

4.2.2 Plan

I expected that the introduction to my career would expose me to the practicing teachers, at least some of whom might have acquired a significant level of expertise, from whom I would be able to learn how to improve the novel interaction frequency and quality to ensure the improvement of my OBE practice.

I planned the following to ensure that I would benefit the most from the new role of professional teacher at a school with colleagues, as well as my peers at other schools who may also provide valuable information about their colleagues teaching at their schools:

- (i) I will speak to various colleagues about OBE and learning and learner centeredness and how best to engage in the novel required interaction between my learners and I.
- (ii) I will endeavour to visit my colleagues' classes when permitted.

- (iii) I will have informal conversations with my peers and colleagues from other schools and find out in which manner they are interacting with their learners.
- (iv) I will visit the schools of peers and colleagues to see their best practices where possible.
- (v) I will talk to my peers and colleagues from other schools to find out how their colleagues at their schools are interacting with their learners.
- (vi) I will design and execute as many learning tasks as possible in my OBE practice according to what I have learned from my colleagues and peers.

4.2.3 Act

With my ambitious plans, I started my career as a professional teacher. Although I thought I was well prepared, I could not imagine the actual reality as it dawned upon me when I started. Although I had the best of intentions to do what I have planned (learning from colleagues about how they are resolving similar challenges) the initial months of a beginner teacher is unimaginably overwhelming with new obstacles to cope with and although I really wanted to, I simply could not manage to do what I had planned. In addition, my head of department was exceptionally prescriptive with what I was expected to do. She provided me with everything I needed to execute precisely what was required. She also moderated everything that I did to ascertain if it had been done as expected. Although this was initially very comforting, because I knew exactly what was expected

of me and what I needed to do, I became increasingly uncomfortable with the rigorous prescriptive nature of her conduct. But much more seriously, I realized with increasing disillusionment that I was not really engaging in all the aspects of OBE that I had been exposed to in my initial teacher education programme.

However, I exerted all possible efforts to seize every possible opportunity to learn from colleagues about how they were resolving the challenges I faced, although my best efforts were mostly very unintentional, spur of the moment and informal.

As much as possible, though, I learned from colleagues and designed and executed learning tasks accordingly in my own OBE practice.

What follows is one of my best learning tasks executed during the time period of this cycle of my action research:



LEARNING TASK

1. Programme: Learning area: EMS Subject:	4. Date: 20 March 2004 5. Length of period: 45 minutes
2. Context (theme): Calculations / Problem solving	
3. Topic of this learning task: Problem solving	
6. Critical outcomes &	7. Developmental outcomes
1 <input checked="" type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6
8. Learning outcomes for learning programme/area/subject NCS (circle applicable number/s): 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6	
9. Refined learning outcome(s) in your own words (incorporating skills, knowledge, values and attitudes): <i>mathematical calculations / Accounting</i>	

10. Assessment standards NCS: Indicate number/s, e.g. Gr 8, p13, 5 b iii:

10.1

10.2

10.3

11. Assessment standard(s) in your own words

Leaves will be assessed by test

12. Assessment

12.1 Assessment tools	12.2 Recording	12.3 Assessor/s
<i>Memorandum</i>	-	-

13. Integration with other learning programmes / learning areas / subjects

Mathematical literacy

14. Resources

Text books

15. Brief description of learning task (introduction, development and consolidation)

Leavers will be given a scenario where they will have to do a proper explanation in the form of a memorandum on problems that the school truckshop have regarding their cash flow.

16. Teaching strategies and techniques, e.g. problem-solving, discussion, etc.

Problem solving and financial accounting knowledge

17. Special needs/learning barriers
(indicate how you will cater for learners with special needs)

18. Reflection / refinement / follow-up
(complete this section after teaching the learning task)

4.2.4 Observe

To join school for the first time as beginner professional teacher is incredibly overwhelming. Added to the fact that the experience which was expected, a well organized education practice operating in the OBE dispensation even in some cases expertly, did not come to fruition, research into improving my OBE practice was far removed from my consciousness. In addition, coping with all the novelties of education in practice, drained the rest of my available energy. However, I was very determined to do whatever I could, but amidst the hectic circumstances, recording of data was unfortunately correspondingly scarce and informal. Fortunately those aspects which really impacted on me and/or my OBE practice as well as those which were observed with enough repetition were mentally well absorbed and some were supported with additional physical recording in my teacher preparation file.

As I have entered my career as a professional teacher I expected to experience a profession which reflects the differences of the new OBE education dispensation supported by my own PGCE teacher education, as opposed to my experiences of the old education dispensation during my own schooling. However, the following paragraphs indicate my findings:

ii. The differences I could *observe* were the following:

- In some cases there seemed to be a little more interaction between teachers and learners;
- Learners seemed to be using notes and/or textbooks more often;

- It seemed as though the learners were working more in class (did that mean they might have less homework?);
- In some cases learners were working in groups, but it was disorganized;
- In some classes desks were permanently arranged in groups;
- It seemed that learners were aware of the outcomes they had to achieve through some kind of assessment instrument (rubric) that they were using to assess the work they were doing;
- In some cases learners were asked to share the work that they had done with the rest of the class.

iii. The perceptions of colleagues as it was conveyed to me:

- “I introduce the lesson (topic or theme);”
- “I give the learners the learning outcomes they need to achieve”;
- “I give them an example (of what they need to do)”;
- “The learners do research. This usually means that “they use their notes [or textbooks] to answer the questions [stated] in their workbooks [or on their work sheets/cards]”;
- “I help the learners to get the answers to the questions”;
- “The learners and I assess their work with a rubric”;
- “I let the learners show the class the work that they have been doing”;

- “OBE is a lot of hard work”;
- “I don’t get enough time to teach because of all the assessment I need to do”.

iv. My experience of my own OBE practice:

- I started off with great determination to continue where I left off at the end of my PGCE teacher education with the intention to improve on it;
- However, demands upon a novice initial teacher caught up with me and I could not manage to do what I intended;
- I actually found comfort in the prescriptiveness of my Head of Department, despite the fact that I realized that by following these prescriptions I was not engaging in resolving the challenges I sought to resolve, neither was I actually pursuing the improvement of my OBE practice;
- What was most disturbing to me was that my reflections clearly indicated that I found myself – initially slowly, but then more rapidly as time went by - reverting back to what most of the teachers were essentially doing: Applying the major principles of OBE technically, but, although “outcomes” were the focus, the learners knowing *content* remained the primary concern – especially because that is what was asked in tests. The outcomes that learners achieved were therefore not actually a skill or

competence – doing something – but requiring and expecting learners to do what I do – and accurately;

- I was very quickly doing what most of the other teachers were doing: Essentially, instead of transmitting the knowledge or content to the learners, the learners were copying the content or knowledge from resources into their workbooks or they would copy exactly what I provided – and even sometimes failing to do that correctly;
- I was disillusioned to say the least – most of all with myself.

Needless to say, these findings were quite disturbing.

Following in Figure 4.2 is my self assessment of the learning task that was used during this cycle:



Figure 4.2 Self Assessment for cycle 2

Punt (%):	80 ✓		
Mark (%):			
L-T ASSESSMENTSFORM / LT ASSESSMENT FORM A			
Transmissie-, transaksie- en transformasieparadigma's/Transmission, transaction and transformation paradigms			
Naam van student wat geassesseer word:	Rian (RJ)		
Name of student being assessed:			
Datum/Date:	26 August 2003		
Naam van assessor: (Merk: Self porteur-/mentor/dosent):			
Name of assessor: (Indicate: Self peer/mentor/lecturer):			
LEERTAAKONTWERP (LTD)/LEARNING TASK DESIGN (LTD)			
Beskywing van wat aangedui moet word	Tegenwoordig Present		
Description of what should be indicated	Konsepte in graal van lange termyn.		
Volgnummer van LT en paradigma daarvan!			
Sequence number of LT and paradigm thereof			
Aantal LT's in elke paradigma geoprasioneer- hierdie een uitgesluit/			
Number of LT's operationalised in each paradigm – this one excluded	2/2		
Naam/Name	Wim Gilié		
Studentenummer/Student number	97147423		
Datum/Date	26 August 2003		
Leeraar, program of vak/learning area, programme or subject	Afrikaans		
Graad/Grade	1e		
Tyd wat benodig word vir die operasioneering van hierdie LT/ Time needed to operationise this LT	1 week		
Verbandhouendheid met onderlynde vereistes			
Requirements of which the mutual relatedness is essential			
Vereistes waarvan die onderlynde verbandhouendheid essensieel is	Relatedness with mutual requirements		
Requirements of which the mutual relatedness is essential			
Onaanvaardbaar Unacceptable	Ontoereikend Inadequate	Goed Good	Uitstekend Excellent
0-2	3-4	5-7	8-10
Kritieke en ontwikkelingsuitkomste/Critical and developmental outcomes			
Leeruitkomste (LO)/Learning outcomes (LO)			
Asseseringstandaarde (AS)/Assessment standards (AS)			
LT-uitkomste (L-Tout)/LT outcomes (L-Tout)			
LT-assesseringstandaarde (L-Tass)/LT assessment standards(L-Tass)			
Lewenswerklike uitdaging/Real life challenge			
Outentieke leerkonteks/Authentic learning context			
Die leerproduk/The learning product			
Die leerproses/The learning process			
Die leefinhoud/The learning content			
Bronne/Resources			



LT-ASSESSERINGSVORM / LT ASSESSMENT FORM						
Transmissie-, transaksie- en transformasieparadigmas/Transmission, transaction and transformation paradigms						
NAAM VAN PERSOON WAT GEASSESSEER WORD: NAME OF PERSON BEING ASSESSED:				Dui aan watter assessering dit is Indicate which assessment it is		
<i>Dion Myc</i>				SELFASSESSERING SELF-ASSESSMENT		
LEERTAAKNOMMER / LEARNINGTASK NUMBER:				PORTUURASSESSERING PEER ASSESSMENT		
DATUM: DATE: <i>24 August 2016</i>				PUNT: MARK: <i>75/100</i>		
Omkring syfer van die mees gesikte kommentaar/Encircle number of most applicable comment						
Beplanning <i>Planning</i>	1. Een of meer vereistes (LU's, AS'e, leeraktiwiteite, materiaal, organisasie en assessering) is afwesig. <i>One or more requirements (LOs, ASs, learning activities, materials, organisation and assessment) is absent</i>				1 2 3 4	
	2. LU's, AS'e, leeraktiwiteite, materiaal, organisasie en assessering teenwoordig, maar nie ten volle in ooreenstemming met mekaar en volledig interafhanglik nie. <i>LOs, ASs, learning activities, materials, organisation and assessment present but not fully aligned nor completely interrelated</i>					
	3. LU's, AS'e, leeraktiwiteite, materiaal, organisasie en assessering teenwoordig, ten volle in ooreenstemming met mekaar en volledig interafhanglik <i>LOs, ASs, learning activities, materials, organisation and assessment present, fully aligned and completely interrelated</i>					
	4. LU's, AS'e, leeraktiwiteite, materiaal, organisasie en assessering teenwoordig, ten volle in ooreenstemming met mekaar en volledig interafhanglik en vorm 'n kreatiewe geheel. <i>LOs, ASs, learning activities, materials, organisation and assessment present, fully aligned and completely interrelated and forms a creative whole</i>					
Leer-Klimaat <i>Learning climate</i>	1. Geen poging om 'n leerklimaat te skep nie / No attempt to setting a learning climate			1 2 3 4		
	2. Poging aangewend maar irrelevant tot LU's / Attempt made but irrelevant to learning outcome					
	3. Opeisning van aandag relevant tot LU's / Demand of attention relevant to LOs					
	4. Onmiddellike kreatiewe opeisning van volle aandag relevant tot die LU's / Immediate creative demand of complete attention relevant to LOs					
Kommunikasie <i>Communication</i>	1. Oninspirerend, onduidelik, onseker, vervelig / Uninspiring, unclear, insecure, boring			1 2 3 4		
	2. Hooraar, en verstaanbaar / Audible and comprehensible					
	3. Entoesiasie, duidelik hooraar, en verstaanbaar / Enthusiastic, clearly audible and comprehensible					
	4. Uitstaande stem en taalgebruik op hoog energievlak, entoesiasie, duidelik hooraar, en verstaanbaar / Exceptional voice and language usage on high energy level, enthusiastic, clearly audible and comprehensible					
Vakkundigheid <i>Subject expertise</i>	1. Vertoon sleag basiese kennis van inhoud / Displays only basic knowledge of content			1 2 3 4		
	2. Vertoon kennis van verbande met ander inhoud / Displays knowledge of relationships within other content					
	3. Integrasie van inhoud met ander leerareas / Integration of content in other learning areas					
	4. Holistiese integrasie van die inhoud in levenswerklike konteks / Holistic integration of the content within reality realistic context					
Leermedia <i>Learning media</i>	1. Geen gebruik van leermedia of ander bronne nie / No use of learning and other resources			1 2 3 4		
	2. Min gebruik/beperkte gebruik van leermedia en ander bronne / Little use of learning and other resources					
	3. Relevant gebruik van leermedia en ander bronne / Relevant use of learning media and other resources					
	4. Opwindende, kreative, relevante, geïntegreerde gebruik van leermedia & ander bronne / Exciting, original, relevant, integrated use of learning media & other resources					
Leerbestuur <i>Learning Management</i>	1. Min of geen organisasie met oneffektiewe aanprysing, korreksie en straf, of geen beplande leeraktiwiteite <i>Little or no organisation with ineffective praise, correction and punishment, or no planned learner activities</i>			1 2 3 4		
	2. Swak organisasie met min aanprysing en die noodheid van baie korreksie en straf <i>Poor organisation with little praise and the need for much correction and punishment</i>					
	3. Goeie organisasie met gespanste aanprysing en korreksie waar nodig <i>Good organisation with appropriate and effective praise and correction when necessary</i>					
	4. Hoogs georganiseerd met die mees gepaste aanprysing vir ongehinderde uitvoering van die leeraktiwiteit <i>Highly organised with the most appropriate praise for unhindered execution of learning activity</i>					
Betrokkenheid <i>Involvement</i>	1. Die meeste leerders passief en onbetrokken en sommige leerders raak betrokke by nie-leeraktiwiteit <i>Most learners passive and distant and some learners become involved in non-learning activities</i>			1 2 3 4		
	2. Die meeste leerders passief en onbetrokken / Most learners passive and distant					
	3. Die meeste leerders is die meeste van die tyd geninteresseerd, / Most learners are interested most of the time					
	4. Hele groep is hoogs geninteresseerd, gemotiveerd, neem verantwoordelikheid vir eie leer <i>Highest organised with the most appropriate praise for unhindered execution of learning activity</i>					
Leerkwaliteit <i>Learning Quality</i>	1. Denke bly op laer die kennissvlakte / Thinking remains on the lower levels			1 2 3 4		
	2. Aktivering van die hoer vlakke van denke / Activating the higher levels of thinking					
	3. Hoogs vlak van denke somtyds verwag / Highest level of thinking sometimes expected					
	4. Voortdurende uitdagting tot die hoogste moontlike vlak van kreatiewe denke <i>Continual challenge towards the highest possible level of creative thinking</i>					
Konsolidasie <i>Consolidation</i>	1. Geen konsolidasie / No consolidation			1 2 3 4		
	2. Konsolidasie deur onderwyser gedoen / Consolidation done by teacher					
	3. Konsolidasie deur leerders gedoen / Consolidation done by learners					
	4. Hoogs moontlike vlak van kwaliteit tydens konsolidasie van leerders vereis <i>Highest possible level of quality demanded from learners during consolidation.</i>					
Bereik <i>Achieve</i> LU'e Achieve Los	1. Bereiking van enkele LU's / Achievement of few LOs			1 2 3 4		
	2. Bereiking van meeste LU's / Achievement of most LOs					
	3. Bereiking van alle LU's / Achievement of all LOs					
	4. Hoogs kreatiewe bereiking van alle LU's / Highly creative achievement of all LOs					

4.2.5 Reflect

I had entered a career with excitement expecting to experience a practically unrecognizable new education dispensation – especially in its practice - as compared with the time when I was at school. I was really disappointed with what was awaiting me, especially because what I had learned during my PGCE teacher education programme had made me very excited about education as I could see the superior benefits of OBE in relation to my own traditional education at school.

However, generally speaking, neither did I observe, nor experience much difference in teaching, interaction and assessment of the learners since my school experience. The differences between the old and the new were primarily expressed in terms of the following:

- a. “We don’t teach content”.
- b. “The learners need to do research”.
- c. “The learners need to do group work”.
- d. “There is a lot of assessment”.

Despite these statements, what happened essentially in practice is that content was still taught, but instead of the teacher transmitting all the content, the learners had to copy content from notes or handouts or textbooks into some or the other kind of workbook. Instead of learners doing such copying individually, they do it in groups – whatever that

might mean because even then some learners in a group could not sufficiently explain what the content that they had copied meant. Finally, although “no content” is supposed to be taught, when it came to assessment, the outcomes that were assessed were knowledge outcomes and the assessment itself, although laborious, was simply technicist in nature – ticking off whether outcomes were achieved or not, essentially assessing whether content was correctly copied from one or the other source to some kind of workbook.

Unfortunately, these criticisms became the exact ones I was guilty of. Amidst an overwhelming underlying negativity about OBE throughout all levels of teachers and management in the school, my initial attempts at doing what I thought I should - as portrayed in my PGCE teacher education programme - was frowned upon, and with the overwhelming novelty of education in practice in its full complexity – even besides the new OBE dispensation - I succumbed to the pressure of a generally non-conducive education practice environment to implement what I had learned and reverted to the comfort of what I was prescribed to do by my superiors and to the security of fitting in with the crowd – the way everyone else did it.

This was a great disillusionment on my part and, although I would not openly admit it, I felt a failure.

4.2.6 Review

Although the major challenge of a novice teacher does contribute to my own failed attempts at improving my OBE practice as a professional teacher, I refused to use this as an excuse. I had received the necessary training during my PGCE year and knew what is expected of an educator in an OBE classroom and that the training that I received in order to improve upon my own practices in the classroom must be implemented.

I realized that I needed to make a concerted effort to escape the trap I had fallen into due to a prevailing non-conducive OBE practice environment.

4.3 Cycle 3: Improving my OBE practice despite a non-conducive prevailing education practice context

After having fallen into the trap of doing what the others are doing, I became very discontent – especially with myself - and realized that I needed to transcend this detrimental influence by moving from converging with the majority to diverging into the dynamics of improving my OBE practice despite the non-conducive circumstances.

This cycle is therefore the third in the series of my action research and consists of the following steps:

- a. **Identify:** How could I best improve on my OBE practice despite the non-conducive prevailing education practice context?

- b. **Plan:** To pursue my original purpose of continual improvement, but this time to learn from the practicing expert teachers.
- c. **Act:** Learn from experts in OBE and design and execute learning tasks according to what I could learn from expert practicing teachers.
- d. **Observe:** Making the most appropriate observations of the best practices of experts in OBE, have interviews with them and design and execute my own learning tasks according to what I have learned from them.
- e. **Reflect:** Reflecting on the data collected regarding my new effort to improve my OBE practice despite a non-conducive prevailing education practice context.
- f. **Review:** How will I ensure continual improvement of my OBE practice despite a non-conducive prevailing education practice context?

4.3.1 Identify

Enough to say again that I had fallen into the trap of going the way of least resistance and following the majority – ignoring most of what I had learned during my initial PGCE teacher education programme. In addition, the challenge of a unique interaction between my learners and I in recognition of the new learner and learning centeredness required by OBE was not yet resolved. This became the challenge during this cycle of my action research.

4.3.2 Plan

I realized that I should detach myself professionally from colleagues who were espousing practices that are non-conducive to what I needed to improve on. I should seek out those colleagues who exhibit expertise in OBE and learn from their best practices.

4.3.3 Act

I identified the colleagues in my school who were regarded as the experts in OBE according to colleagues who could testify to that fact – even though they were not necessarily teachers in my subject. I attended some of their lessons and had informal interviews with them in order to learn as much as I possibly could from them.

From that which I could learn from the experts, I designed and executed as many as possible learning tasks according to my newly discovered sources – the experts in OBE. The following is an example of a learning task that I presented to my grade 10 Accounting class as a result of knowledge I had gained from the experts and my own subsequent efforts. The following learning task has been planned during this cycle of my development:



LEARNING TASK

1. Programme: Learning area: Subject:	4. Date: 5. Length of period:
Accounting	24 August 2009 45 min X 3

2. Context (theme):

3. Topic of this learning task: Balance sheet

6. Critical outcomes

&

7. Developmental outcomes

1	2	3	4	5	6	7
---	---	---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

8. Learning outcomes for learning programme/area/subject NCS (circle applicable number/s) 1 2 3 4 5 6

9. Refined learning outcome(s) in your own words (incorporating skills, knowledge, values and attitudes):

learners need to be able to demonstrate knowledge and understand and apply that knowledge

10. Assessment standards NCS: Indicate number/s, e.g. Gr 8, p13, b iii:

10.1

10.2

10.3

11. Assessment standard(s) in your own words

AS 5. Learners will be able to do and understand the balance sheet

12. Assessment

12.1 Assessment tools <i>Questionnaire</i>	12.2 Recording -	12.3 Assessor/s <i>Teacher</i>
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13. Integration with other learning programmes / learning areas / subjects

mathematical literacy

14. Resources

Text Books / Internet

15. Brief description of learning task (introduction, development and consolidation)

The learners will be presented with all the journals, general ledgers and income statement (from a exercise they have done at the end of term 3) and they need to find a solution on how to present Assets, Liabilities and Equity to a classmate after

16. Teaching strategies and techniques, e.g. problem-solving, discussion, etc. *and Accountant*

Financial statement preparation and problem solving and discussion

17. Special needs/learning barriers
(indicate how you will cater for learners with special needs)

18. Reflection / refinement / follow-up
(complete this section after teaching the learning task)

4.3.4 Observe

Learning from the experts was very valuable but there was an inherent problem: Although they were fulfilling all the requirements of OBE as far as I could establish, I could not obtain absolute clarity of exactly what their success could be attributed to. This left me to rely only on myself and the devices that I have at my disposal.

From my own learning task execution I can record the following observation:

- To fulfill the requirements of OBE I informed the learners what we were going to do that day and what they should be able to achieve at the end of the period – I gave them the outcomes;
- I then asked them if they knew how to compile a balance sheet;
- The learners struggled to give me the correct answer expected;
- I very subtly guided them to the textbook which could guide them – and from that point that learners started to use the textbook as their “research” – which has become such a familiar expression in OBE;
- The learners found the place of this topic in their textbooks and I asked them to tell me what to do;
- I wrote what they told me to do on the transparency as we went along;
- I concentrated on what they said and tried to follow their instructions;

- I also ensured that they instructed me correctly by asking them things like: “Are you sure that this is what I need to do?” or “Is this the right way to do it?” etc. But much more importantly, I continually asked them: “Why do I need to do this?” so that they grasped the reasons for doing it the way in the required manner;
- Then I instructed them to do one in their groups, but I emphasized that they should help one another.

Figure 4.3 is the learning task that I planned for this cycle in my professional development:



Figure 4.3



Punt (%):	62%			
Mark (%):	62%			
LT-ASSESSINGVORM / LT ASSESSMENT FORM A				
Transmissie-, transaksie- en transformasieparadigmas/Transmission, transaction and transformation paradigms				
Naam van student wat geassesseer word:	Johann Viljoen			
Name of student being assessed:	Johann Viljoen			
Naam van assessor: (Merk: Self/porteur-/mentor/dosent):	Toetsveld TOC			
Name of assessor: (Indicate: Self/peer/mentor/lecturer):			
LEERTAAKONTWERP (LTD)/LEARNING TASK DESIGN (LTD)				
Beskrywing van wat aangedui moet word	Teenwoordig Present			
Description or what should be indicated	Hier is my belangrike kriteria			
Volgnummer van LT en paradigma daarvan!				
Sequence number of LT and paradigm thereof				
Aantal LT's in elke paradigma geoprasioneer- hierdie een uitgesluit/ Number of LTs operationalised in each paradigm – this one excluded	0/1			
Naam/Name	Johan Viljoen C26502			
Studentenummer/Student number	265022244			
Datum/Date	Accoring			
Leerarea, program van vak/Learning area, programme or subject	10			
Graad/Grade	10			
Tyd wat benodig word vir die operasioneer van hierdie LT	2 days			
Vereistes waarvan die onderlinge verbandhouendheid essensieel is	Verbandhouendheid met onderlinge vereistes Relatedness with mutual requirements			
Requirements of which the mutual relatedness is essential	Onaanvaarbaar Unacceptable 0-2	Ontbereikend Inadequate 3-4	Goed Good 5-7	Uitstekend Excellent 8-10
Kritieke en ontwikkelingsuitkomste/Critical and developmental outcomes				
Leeruitkomste (LO)/learning outcomes (LO)				
Assesseringstandaarde (AS)/Assessment standards (AS)				
LT-uitkomste (LTout)/ LT outcomes (LTout)				
LT-assesseringstandaarde (LTass)/LT assessment standards(LTass)				
Lewenswerklike uitdaging/Real life challenge				
Outentieke leerkonteks/Authentic learning context				
Die leerproduk/The learning product				
Die leerproses/The learning process				
Die leerinhoud/The learning content				
Bronne/Resources	27			



LT-ASSESSERINGSVORM / LT ASSESSMENT FORM

Transmissie-, transaksie- en transformasieparadigmas/Transmission, transaction and transformation paradigms

NAAM VAN PERSOON WAT GEASSEER WORD: NAME OF PERSON BEING ASSESSED: <i>Igor Hugo</i>		Dui aan watter assessor dit is <i>Indicate which assessment it is</i> SELFASSESSERING SELF-ASSESSMENT			
LEERTAAKNOMMER / LEARNING TASK NUMBER: <i>-</i>		PORTUURASSESSERING PEER ASSESSMENT			
DATUM: DATE: <i>26 May 2014</i>		PUNT: MARK: <i>31/40</i>			
Omkring syfer van die mees gesikte kommentaar/Encircle number of most applicable comment					
Beplanning Planning	1. Een of meer vereistes (LU's, AS's, leeraktiwiteite, materiaal, organisasie en assessor) is afwesig One or more requirements (LOs, ASs, learning activities, materials, organisation and assessment) is absent 2. LU's, AS's, leeraktiwiteite, materiaal, organisasie en assessor teenwoordig, maar nie ten volle in ooreenstemming met mekaar en volledig interafhanglik nie LOs, ASs, learning activities, materials, organisation and assessment present but not fully aligned nor completely interrelated 3. LU's, AS's, leeraktiwiteite, materiaal, organisasie en assessor teenwoordig, ten volle in ooreenstemming met mekaar en volledig interafhanglik LOs, ASs, learning activities, materials, organisation and assessment present, fully aligned and completely interrelated 4. LU's, AS's, leeraktiwiteite, materiaal, organisasie en assessor teenwoordig, ten volle in ooreenstemming met mekaar en volledig interafhanglik en vorm 'n kreatiewe geheel LOs, ASs, learning activities, materials, organisation and assessment present, fully aligned and completely interrelated and forms a creative whole	1	2	3	4
Leer-klimaat Learning climate	1. Geen poging om 'n leerklimate te skep nie / No attempt to setting a learning climate 2. Poging aangewend maar irrelevant tot LU's / Attempt made but irrelevant to learning outcome 3. Opeising van aandag relevant tot LU's / Demand of attention relevant to LOs 4. Onmiddelike kreatiewe opeising van volle aandag relevant tot die LU's / Immediate creative demand of complete attention relevant to LOs	1	2	3	4
Kommunikasie Communication	1. Oninspirerend, onduidelik onseker, vervelend / Uninspiring, unclear, insecure, boring 2. Hoorbaar, en verstaanbaar / Audible and comprehensible 3. Entoesiasties, duidelik hoorbaar, en verstaanbaar / Enthusiastic, clearly audible and comprehensible 4. Uitstaande stem en taalgebruik op hoog energieniviel, entoesiasties, duidelik hoorbaar, en verstaanbaar Exceptional voice and language usage on high energy level, enthusiastic, clearly audible and comprehensible	1	2	3	4
Vakkundigheid Subject expertise	1. Vertoon slegs basiese kennis van inhoud / Displays only basic knowledge of content 2. Vertoon kennis van verbande met ander inhoud / Displays knowledge of relationships within other content 3. Integrasie van inhoud met ander leerareas / Integration of content in other learning areas 4. Holistiese integrasie van die inhoud in lewenswerklike konteks Holistic integration of the content within reality/realistic context	1	2	3	4
Leermedia Learning media	1. Geen gebruik van leermedia of ander bronre nie / No use of learning and other resources 2. Min gebruik/bepakte gebruik van leermedia en ander bronre / Little use of learning and other resources 3. Relevant gebruik van leermedia en ander bronre / Relevant use of learning media and other resources 4. Opwindende, kreatiewe, relevante, geïntegreerde gebruik van leermedia & ander bronre / Exciting, original, relevant, integrated use of learning media & other resources	1	2	3	4
Leerbestuur Learning Management	1. Min of geen organisasie met oneffektiewe aanprysing, korreksie en straf, of geen beplande leeraktiwiteite Little or no organisation with ineffective praise, correction and punishment, or no planned learner activities 2. Swak organisasie met min aanprysing en die nodigheid van baie korreksie en straf Poor organisation with little praise and the need for much correction and punishment 3. Goeie organisasie met gespasse aanprysing en korreksie waar nodig Good organisation with appropriate and effective praise and correction when necessary 4. Hoogs georganiseerd met die mees gepaste aanprysing vir ongehinderde uitvoering van die leeraktiwiteit Highly organised with the most appropriate praise for unhindered execution of learning activity	1	2	3	4
Betrokkenheid Involvement	1. Die meeste leerders passief en onbetrokkie en sommige leerders raai betrokke by nie-leeraktiwiteit Most learners passive and distant and some learners become involved in non-learning activities 2. Die meeste leerders passief en onbetrokkie / Most learners passive and distant 3. Die meeste leerders is die meeste van die tyd geïnteresseerd, / Most learners are interested most of the time 4. Hele groep is hoogs geïnteresseerd, gemotiveerd, neem verantwoordelikheid vir eie leer Total group involved, highly interested, motivated; take responsibility for own learning	1	2	3	4
Leerkwaliteit Learning Quality	1. Denke bly op laer die kennislakkie / Thinking remains on the lower levels 2. Aktivering van die hoërvlakke van denke / Activating the higher levels of thinking 3. Hoogste vlak van denke somtyds verwag / Highest level of thinking sometimes expected 4. Voortdurende uitdaging tot die hoogste moontlike vlak van kreatiewe denke Continual challenge towards the highest possible level of creative thinking	1	2	3	4
Konsolidasie Consolidation	1. Geen konsolidasie / No consolidation 2. Konsolidasie deur onderwyser gedoen / Consolidation done by teacher 3. Konsolidasie deur leerders gedoen / Consolidation done by learners 4. Hoogste moontlike vlak van kwaliteit tydens konsolidasie van leerders vereis Highest possible level of quality demanded from learners during consolidation.	1	2	3	4
Bereik LU'e Achieve LOs	1. Bereiking van enkele LU's / Achievement of few LOs 2. Bereiking van meeste LU's / Achievement of most LOs 3. Bereiking van alle LU's / Achievement of all LOs 4. Hoogs kreatiewe bereiking van alle LU's / Highly creative achievement of all LOs	1	2	3	4

4.3.5 Reflect

There were two major sources of data in this cycle of my action research. The first one was the practicing teachers, who were recognized as experts amongst their colleagues, from whom I might learn through observing their best OBE practices and finding out from them what they ascribe their success to. The other source, of course, was my own OBE practice as I attempted to emulate the experts. The reflection step in my action research of this cycle focused on these two sources of data.

- (i) Regarding what I have learned from the OBE experts:

Even though I tried to identify the OBE expert practitioners from the testimony of colleagues, I had to confirm such identification with my own experience because, in some cases, excellent teachers were identified, but they were not necessarily OBE expert practitioners.

No doubt, though, that I have seen excellent teachers at work and the complexity of what they did could not be captured in simple educational statements. Although it seems as though they were doing all the necessary things required by OBE as far as I could establish, I could not easily access their methods which proved so successful. In some cases the experts were also indicating that they do not know exactly what it is that makes them successful. They would express their passion for their work and their love for children but how that is manifested in their actions were still shrouded in some kind of mystery – certainly for me, but in

some cases even for them. This made me realize that education is much more than achieving outcomes and fulfilling seven educator roles simultaneously which evidently seems to be impossible. This reflection of mine confirmed that the mystery of what makes an excellent teacher - as it was established in the earliest research on the educator roles in the OBE system - still remains: “Even if a teacher fulfils all the roles and competences, he/she may still not qualify as an effective teacher. Effective teachers had ‘something extra’ over and above competence in defined roles: a classroom ‘presence’ embodied in ‘achieved’ (as opposed to ascribe) status …” (Harley, Bertram and Mattson, 1990 p. 75). This fortunately did not discourage me, but it ignited an even greater determination to become successful in my own OBE education practice.

(ii) Regarding what I have learned from my own OBE practice:

Even though I could not obtain absolute clarity from the experts on exactly how they accomplish being such excellent teachers, I tried to emulate them through the prescribed educator competences (foundational, reflective and especially practical), but found that even they are being described in such a broad sense that they have little value for improving all the actions I am involved in. However, I did put in as much effort as I could in the reflective competence – the one thing we became accustomed to in my PGCE teacher education programme. The following is an excerpt from that personal reflection:

Initially it was a little scary because I had to rely on the learners for what I needed to do. What was even scarier is that I had to be prepared exceptionally well because I needed to know whether the learners were right or wrong. I also had to be able to ask them questions about their certainty about the correctness of their suggestions. In addition it was even more challenging to me to ensure that the learners helped one another in their groups appropriately with seeking the correct answers – even though I was compelled to answer many more questions and explain in greater detail than I thought I should need to.

But noting that learners were really involved during the whole process and seeing how they were trying to help one another during group work excited me. It was so different from the old practices and what I observed the more unsuccessful teachers in OBE doing.

Once I began to feel more comfortable with the process, I felt an improvement. I was very conscious that I was really concentrating on what the learners were doing, and could therefore ascertain whether they were achieving the learning outcomes of the lesson right from the very start. This was very exciting for me. However, even though this was a large improvement from the traditional education as well as the superficial perception of what the “research” and “group work” entails, when reviewing homework I was still not satisfied with the persisting incorrectness of the assignments in spite of its effective “indirect” repetition of what they needed to do.

What was really encouraging, though, is that I found that I was much more involved with everything and aware of everything, especially the learning and learner centeredness of the whole process.

4.3.6 Review

Although I was satisfied with the fact that my focus was really on the learners achieving the learning outcomes, I was dissatisfied because the learning outcomes were not achieved on the expected level. In practice it is necessary for the learners to be able to read the textbook, interpret what they read and do what it says they need to do. In addition, there is little that can be done in different ways in accounting because of the GAAP principle (Generally Accepted Accounting Practices). Anything not complying with these principles is incorrect. Therefore accounting seems to be simply a matter of knowing the principles and carrying them out through repetition. I felt uncomfortable with my own perception about the subject, but I could not directly resolve this fact. I continued to implement as many variations of this lesson format as possible which I enjoyed very much, but there was no significant improvement towards achieving the desired outcomes.

4.4 Conclusion

In this chapter I conveyed the first three cycles of my action research. The purpose of which was to improve my OBE practice. However, having explored the avenues at my

disposal to achieve this, I found myself at an impasse because neither my preceding formal PGCE teacher education, nor current practices - even of experts OBE practitioners – could provide the skills I needed to improve my own OBE practice.

I needed a new impetus to propel me forward towards increasing my improvement in the required development of the learner and learning centeredness of the interactions between teacher and learner.

Although I had always believed that I would like to venture into post graduate studies, I became excited when I saw that the BEd Honours programme I was interested in contained a module with the title of “Facilitating Learning”. It is the focus on learning and how to educate it, that caught my attention and introduced a new cycle in my action research.

CHAPTER 5

Questionnaire on Teacher Interaction (QTI)

5.1 Cycle 5 – the QTI and facilitation of learning

The impetus that I needed came from a decision that I made to enrol for a BEd (Honors) degree. One of the fundamental modules revolved around the concept of facilitating learning. What made this introduction so significant is that I realized the obstacles I was facing: I realized in retrospect that the major difference between traditional education and Outcomes Based Education is that of an essential shift from the idea of teaching to the focus on how to ensure that the best possible learning will take place – and what the uniqueness of this shift entails.

This cycle is therefore the fourth in the series of my action research and consists of the following steps:

- g. Identify: How could I best improve my OBE education practice through facilitating learning?
- h. Plan: Designing the best possible learning tasks within a facilitating learning context.
- i. Act: Having learners execute the challenging learning tasks while I facilitate their learning.
- j. Observe: Collect data through personal reflections, self and peer assessments.

- k. Reflect: Reflecting on the data collected for the learning task and utilizing the requirements of facilitating learning as the eventual requirements.
- l. Review: How will I ensure continual improvement of my facilitating learning practice?

5.1.1 Identify

It is through my exposure to facilitating learning that I could identify the actual problem that Outcomes Based Education, as was implemented in South Africa, confronted education with and how it subsequently is transferred to my subject, Accounting. For that purpose I shall provide a concise summary of those essential aspects of facilitating learning that pertains to this research.

5.1.1.1 Changes in life inevitably requires a change in education

Educational change has often been attempted without establishing exactly why it is necessary, and, if so, how it should change. Three major changes in life have taken place in recent history. The first major change is in our external environment which we refer to as an inconvenient truth, (Gore, 2006) *An inconvenient truth: ‘The planetary emergency of global warming and what we can do about it,’* (New York (NY): Rodale) may represent the epitome of this reality. Although the destruction of our external environment may be attributed to natural disasters, there is no doubt that human beings are the main source of the demise of our external environment. Secondly due to various

reasons the ‘world of work’ and its demands have become increasingly unique (De Villiers, 2005; Neethling & Rutherford, 2005). Lastly the youth of our time is fundamentally different from previous generations (Jukes and Dosaj, 2006). We are all witnesses to these changes that are regarded by Drucker (2000), who states that it is one of the most significant shifts in human history characterized by an unprecedented change in human condition, and that society is totally unprepared for it. It should therefore be no surprise that Dryden and Vos (1999) describe the seriousness of the consequences of these changes as follows:

“The seismic scope of this change forces us to completely rethink everything we’ve ever understood about learning, education, schooling, business, economics and government”.

Not only are we unprepared for these changes, we are also obviously incapable of solving the problems that they – or to be more accurate, we – are the cause of. Reason being that we are trying to solve problems by doing more of the same whilst Einstein warned us about such foolishness ages ago when he said: “You cannot solve a problem with the same consciousness that created it”. Learning what already exists as the aim of education certainly does not suffice anymore.

5.1.1.2 The aim of education

We are living in an age of information with not only an overload of available information but even information ignorance. This is because of the sheer abundance of information available which is too excessive to fully access. However, whatever the abundance of information, its integrity is contested. This situation makes the world super complex and, in addition, because of its contested nature, neither existing nor added information relieves the increasing uncertainty (Barnett, 2007, p. 7) and has caused the age of insecurity which we are living in (Hargreaves, 2003) to render the future unknown.

Since we therefore do not know what the future holds, and since we do not have available knowledge of the future, existing knowledge (information) cannot help us to foresee the future. Therefore the learning to know notion in education is not a viable option any more. This does not mean that acquiring knowledge is not important. In all education, the expectancy that “students are expected to know things” (Barnett, 2007, p. 164) is indisputable. However, this purpose is insufficient if it is not qualified: “That knowledge is not to be superficial, but is supposed to have qualities of personal insight and understanding” (Barnett, 2007, p. 164). It is therefore not *that* the knowledge (or skills or values) should be acquired, but *how* it needs to be acquired that is of paramount importance, because “knowledge can be forgotten and skills can atrophy without use; but dispositions and qualities are durable in their nature”.

What is meant by qualities and dispositions can be collectively described as potential. Since we cannot rely on existing knowledge, neither is knowledge of the future available and the future therefore remains unknown with the inevitable uncertainty and insecurity accompanying it, the only essential factor left that can be influenced by education is human potential. Education should therefore aim at maximizing (completely develop and fully utilize) the learners' potential.

“Through their dispositions and their qualities, students have the capacities to acquire both knowledge and skills. Through their dispositions and qualities, students become themselves. They constitute the student's pedagogical being. It is they that have to be the focus of ‘teaching’...” (Barnett, 2007, p. 101).

In this regard, one of the most important statements which portray the significance of the shift required in education is that of Purpel and McLaren (2004, p. 176) when they say that education is not about finding things, it is about finding ourselves. It is therefore authenticity that “has to be fought for, won, and sustained” (Barnett, 2007, p. 40). Since finding ourselves is a lifelong process of learning, Slabbert, De Kock and Hattingh (2009, p. 49) formulate the aim of education in the following way:

“The aim of education is maximizing human potential through facilitating lifelong authentic learning to create a safe, sustainable and prosperous future for all”.

5.1.1.3 The purpose of facilitating learning

There can be little doubt that the only factor that qualifies education as education is learning. Since we do not propose any education with an evil, destructive or bad outcome, it is safe to state that if no learning has taken place, we cannot claim that any education has taken place. Learning is therefore pivotal to education.

The major question we need to answer is how is learning in education achieved? Our traditional answer to this question is through teaching. However, Sternberg, one of the most renowned educational psychologists of our time who specializes in intelligence warns us that: “The problem is that teachers think that if they ‘teach’, ‘students learn’”. (Sternberg, 2008, p. 143).

Facilitating learning is distinctly different from teaching. Rooth (2000, p. 35) states in this regard that “facilitating learning is *not* teaching, *not* telling, *not* lecturing, *not* preaching and *not* guiding”. She says that facilitating learning creates the learning environment in which learners can learn: explore, discover, construct and develop.

Facilitating learning is also qualitatively different from teaching. Teaching may be successful in producing learning to know quality. However, we have seen that education requires learning to be where learners are “facilitated to develop their unique potential.” (Holdstock, 1987, p. 49). This means that the facilitators of learning are “in the business of making themselves redundant.”(Alexander and

Potter, 2005, p. 179). Although this is regarded as a new pedagogy Heidegger, (1962, p. 44) claimed many years ago that: “The real teacher, in fact, lets nothing else be learned than – learning.” His conduct, therefore, often produces the impression that we probably learn nothing from him”. Facilitating learning as a new pedagogy is therefore effectively the direct opposite of teaching.

Finally, Mohanan (2005, p. 1) states that “if teaching activities do not result in learning, there has been no teaching. Likewise if the learning is lacking in quality, the teaching is unsuccessful to that extent.” Teaching, therefore, may neither result in learning nor may it produce the highest possible quality of learning. This produces an ethical dilemma: How could we justify something that should ensure that the highest possible quality of learning is achieved if it may inherently prevent this?

Facilitating learning is the deliberate and purposeful intervention of a facilitator of learning in the lives of learners, through confronting them with a real-life challenge in authentic context with its uncompromising complexity, which compels them to maximize (completely develop and fully utilize) their potential through the process of authentic lifelong learning. Facilitating learning, therefore, focuses on learning and its purposes are *initiating learning*, which should result in *learning*, and *maintaining learning* to ensure that the highest possible quality of learning is achieved.

Table 5.1 depicts the major features of facilitating learning in practice.

Table 5.1 The major features of facilitating learning in practice
(Slabbert, De Kock, and Hattingh, 2009:CD)

FACILITATING LEARNING IN PRACTICE		
What is the major purpose?	What is the facilitating learning function?	What is the relationship with the learning task?
INITIATING LEARNING	Learning Task Design (LTD)	Learning Task Design (LTD)
	Learning Task Presentation (LTP)	Learning Task Operation (LTO): The learning task is put into operation with both the facilitator of learning and the learners participating
MAINTAINING LEARNING	Authentic Learning (AL)	
	Learning Task Execution (LTE): • Metalearning (ML) • Co-operative Learning (CL)	
	Learning Task Feedback (LTf)	
	Learning Task Consolidation (LTC)	

5.1.1.4 The first function of facilitating learning: Learning task design (LTD)

From the preceding paragraph it should be obvious that facilitating learning through its purposes of initiating learning, learning, and maintaining learning requires the execution of functions that compels learners to maximize their human potential represented by certain qualities and dispositions. It has also been indicated that facilitating learning is indeed a new pedagogy. Referring to such specific qualities, Barnett (2004, p. 256) describes the nature of the required pedagogy as follows:

“The achievement of qualities such as these calls for a transformatory curriculum and pedagogy. This is a curriculum that is aimed at the transformation of the human being; nothing less.”

Education is therefore not primarily an epistemological task but an ontological challenge where “the student’s being and becoming [human qualities and dispositions] is more significant than the student’s knowing [knowledge and skills] efforts” (Barnett, 2007, p. 165). The transformatory pedagogy which has been identified is facilitating lifelong, authentic learning. However, most importantly is the requirement that engages learners in such learning. Such a transformatory curriculum is accomplished when students are engaged in ***authentic pedagogy*** requiring them to “become ‘active learners’, capable of solving complex problems and constructing meaning that is grounded in real-world experience” (Newman, Marks and Gamoran, 1995, p. 1).

This latter quotation provides the key as to what the prerequisites are for facilitating learning: Solving real-life problems embedded within real-world experiences with its uncompromising complexity. What is of crucial importance, though, is that the real life challenge in facilitating learning “is not offered as an example of the relevance of prior learning, or as an exercise for applying information already learnt in a subject based approach” (Barrows & Tamblyn, 1980, p. 18) - the “teaching the theory and then applying it in practice” idea. In fact, as in real life, the struggle in resolving a challenge, never encountered before, forces one to do whatever is necessary at the most appropriate significant time and the resulting knowledge and skills acquired in the process become

utterly meaningful and transferable to subsequent novel and challenging encounters in real life. Every learning task requires the learners to produce three end product outcomes: The first is the learning product - which is the resolved real life challenge, the learning process – which is the process the learners have followed to produce the learning product. Then there is the learning content – which is the curriculum content that the learners have learned through resolving the real life challenge. The learners therefore effectively produce their own, but much more meaningful textbooks. Designing such a learning task is indeed a demanding challenge for the facilitator of learning.

This function of facilitating learning was indeed a revelation to me and the reason why Outcomes Based Education in South Africa had failed. If no such demanding real life challenge exists which demands outcomes of exceptional significance, (solving existing real life problems or having the exciting opportunity to improve the quality of real life), there is nothing that can really be facilitated.

5.1.1.5 The second function of facilitating learning: Learning task presentation

Learners have to encounter a demanding real life challenge that they need to resolve. It should either be an existing problem that they are currently experiencing in their lives right now, which can be focused on, or an exciting opportunity to improve the quality of their lives, if not right now, then within the shortest possible time. Learning task presentation may be done in various ways, but always in the shortest possible time, avoiding any interaction between facilitator of learning and learners and only providing

an encounter with the real life challenge to be solved with utmost urgency, importance and clarity. Since the learning task presentation is having them experience the challenge in real life and in real time right now, the learners should be compelled into immediate action to resolve the challenge. What follows is the immersion in authentic learning.

5.1.1.6 The third function of facilitating learning: Authentic learning

The demanding challenge of learning in a super complex world with an unknown future, is to create the most powerful learning environment that will compel the highest quality of learning, which will cause the transformation of learners. It has become clear from the previous paragraph that authentic pedagogy is required. The authentic pedagogy has to ignite nothing less than authentic learning through creating the most powerful learning environments.

The most powerful learning environments are characterized by complex learning and which is “a description of real-life or professional tasks”. This world is closely related to social-constructivist views on learning based on the idea that learners construct knowledge based on their own mental and social activity. Constructivism ideas suggest that in order to learn, learning needs to be situated in problem solving in real-life, authentic contexts “... where meaningful experiences enable the learner to learn the ways of knowing of the expert” (Van Merriënboer & Paas, 2003, p. 5.)

Authentic learning is characterized by an immersion in a real-life experience, reflection on that real-life experience, a construction of the meaningfulness of that real-life experience, and a new exploration of another real life experience with the preceding one

as foundation (Slabbert, De Kock and Hattingh (2009, p. 68). However, since authentic learning takes place within a context of real-life in its uncompromising complexity, it demands the attention of all human faculties. Learners as human beings are multidimensional and thus represented, amongst others, by multiple intelligences (Sternberg, 2007, 2008; Gardner 1997, 2004; Goleman, 1995; De Beauport, 1996; Zohar and Marshal, 2000; Bar-on, Maree & Elias, 2006). But, much more importantly is the realization that learning (or the growth of consciousness and its subsequent maximizing of potential) is possible only “if the factors responsible for the integrity of all inseparable constituents of human individuality, i.e. **body** [physical intelligence (PQ)] **mind** [mental intelligence (IQ)], **soul** [emotional intelligence (EQ)], and **spirit** [spiritual intelligence (SQ)] are simultaneously activated”, (Dimitrov and Wilson, 2002:48) explicating the **holistic nature** of our being.

Authentic learning is the pivotal constituent that qualifies education as education and recent developments in psychology, experimental psychology, cognitive science, neuroscience, and associated fields have revealed a new conceptualization of learning which has turned our conventional corporate and educational wisdom on its head (Claxton, 1999, p. 10). These developments confirm that the biological and physiological functioning of the brain is essentially constructivist in nature (Von Glaserfeld, 2001, p. 163). The concepts of metacognition (Flavell, 2004), metalearning (Watkins, 2001; Slabbert, De Kock and Hattingh, 2009) and self-regulated learning (Perry, N.E., Phillips, L., & Hutchinson, L.R. (2006) and preparing student teachers to support self-regulated learning, *Elementary School Journal*, (106(1) p. 237-254.) are confirmation that learners

have the capacity to control their own learning and the level of the quality thereof.

Through authentic learning, learners become incredibly powerful human beings capable of **thinking** (in many ways) and **creativity** of extraordinary capacity to solve problems and improve the quality of life (Slabbert, De Kock and Hattingh, 2009:CD), and thus creating the future. Obviously that kind of power and freedom has to be imbedded in an ethical consciousness that produces moral character – the only way in which creating a safe, sustainable and prosperous future for all can be achieved.

5.1.1.7 The fourth function of facilitating learning: Learning task execution

The previous paragraph has described authentic learning as the deep imbedded learning that takes place inside the learner. However, authentic learning cannot happen in a vacuum. It is, in fact, the learning that takes place when the learners are executing the learning task.

What becomes prominent, though, is that it is therefore only through learning task execution that potential can be maximized. In that sense, learning task execution has to accommodate mechanisms through which the highest learning quality represented by maximizing (completely develop and fully utilize) human potential can be assured while the accompanying transformation of the highest order is achieved. Learning task execution is therefore also the first function of the facilitating learning purpose of maintaining learning.

Since it is the learner's own potential that is maximized, authentic learning is, therefore, during learning task execution first and foremost personal and individual, because it is aimed at personal transformation of the highest order (Alexander and Potter, 2005, p. 66). The process through which this transformation of the highest order takes place is that of metalearning.

Metalearning is the higher order learning process of managing one's own learning through a continual reflection on the learning process by taking control over and responsibility for improving the quality of one's own learning with the purpose of maximizing one's potential (Slabbert, de Kock and Hattingh, 2009, p. 109).

Watkins (2001, p. 7) confirms a number of the most important characteristics of metalearning, namely that it promotes the versatile learner, that it mediates the quality of learning outcome, and that it ensures high performance and exceptional retention because the learner has tremendous memory capacity when learning is embedded in real-life experiential contexts.

Metalearning cultivates an active, effective, independent, lifelong authentic learner who has acquired such intrapersonal qualities as responsibility, readiness, resilience, resourcefulness, reflexivity, and independence. But since the aim of education is creating a safe, sustainable and prosperous future for all, it confirms the inevitable social dimension of learning and subsequent socio-constructivist learning in nature.

Watkins (2001, p. 7) states: “Metalearning plays a key role in a learner’s self- regulation of learning, building the autonomy on which even collaborative work thrives”. Our inevitable social interconnectedness is best represented through cooperative learning (Jacobs, Power and Loh, 2002).

Cooperative learning takes place when learners in small groups cooperate to learn with the exclusive purpose to increase the quality of each other’s learning in order to maximize their individual and collaborative potential (Slabbert, De Kock and Hattingh, 2009, p. 112).

However, cooperative learning is not group work. To qualify as cooperative learning, stringent requirements are to be adhered to. They are for the base group:

- a. Groups compiled as heterogeneous as possible in all respects.
- b. Only four members per group because this number contains the highest number of interaction lines with the least number of members;
- c. Positive interdependence amongst members, meaning that each individual member is dependent upon every other member to achieve success with the learning task;
- d. Individual accountability meaning that each individual member is accountable for his/her own required contribution, but is also accountable for the work that everyone else has been doing;

- e. Promotive (face-to-face) interaction because all members have to interact with one another to promote their learning and collaboration;
- f. Assessment of collaboration – not assessment of the learning task - should be frequent and regular.

(Slabbert, De Kock and Hattingh, 2009:CD)

The most important value of cooperative learning lies in the community of truth. “The first step in understanding the community of truth is to understand that community is the essential form of reality, the matrix of all being”. (Palmer, 1998, p. 97). Truth, alternatively, “is an eternal conversation about things that matter, conducted with passion and discipline”.

What matters in education is the meaning learners construct from their real-world experiences when they resolve real-life challenges. We have also learned from the previous paragraphs that such knowledge is always contested because of the uncertainty caused by our super complex world with an unknown future. Neither mythical objectivism nor absolute relativism provides a way out. Even the community of truth cannot offer learners ultimate certainty. However, when they engage in the community of truth they enter into complex patterns of communication with passion and discipline: sharing their observations, interpretations and constructions, correcting and complementing each other, torn by conflict in this moment and joined by consensus in the next. It is through the dynamism of conflict that they can publicly test their ideas in the open in a communal effort to stretch one another beyond their perceived potential.

Such a community rescues them from ignorance, bias, and self-deception if they are willing to submit their assumptions, their observations, their theories – indeed themselves – to its scrutiny (Palmer, 1998, p. 101-104.)

Cooperative learning cultivates an active, effective, interdependent lifelong authentic learner who has acquired interpersonal human qualities like integrity, honesty, compassion, respect, patience, forgiveness and courage.

5.1.1.8 The fifth function of facilitating learning: Learning task feedback

Learning is maintained by the facilitator of learning through the principle of continuous feedback to the learners regarding their response (execution) of the learning task. Throughout the authentic learning process, be it individual (metalearning) or collaborative (cooperative), the facilitator of learning needs to make certain that the learners continue to learn. Every learning task feedback action of the facilitator of learning strives to encourage the learners to become increasingly independent. That is why the facilitator of learning will not give answers to learners' questions and/or become a source of information for them. This will make the learners dependent and will prevent them from maximizing their potential. The facilitator of learning (FOL) has to observe all the learning activities very carefully during maintaining learning, to be able to provide the most appropriate feedback to the learners, and thus ensuring that the best possible quality of learning is achieved. In this, the facilitator of learning is relentless: The facilitator of learning will not stop with executing the actions of learning task feedback

described here until the highest possible quality of learning has been achieved. Neither will the facilitator of learning stop with these actions until the learners can provide sufficient evidence that what they have learned is, for the particular time period in history and the level of learning they operate on, scientifically absolutely correct. This challenges the learners to achieve higher levels of learning and to enable them to learn to their full potential. Feedback from the learners also contributes to indicate to me how they are progressing and here the assessment of the learners once again plays an integral part in determining this progress. These extensive challenges, in the form of learning tasks and real life problems, are conducted and given to the learners to enable them to achieve their best possible potential.

It should be obvious that learning task feedback cannot be designed or planned for because it depends entirely on the responses of the learners in their execution of the learning task, and those are unknown until they actually occur. However, learning task feedback should be thoroughly anticipated. That is why learning task feedback is such a highly skilful, demanding and professional facilitating learning function.

Learning task feedback consists of a number of actions from the facilitator of learning which are arranged in the following paragraphs in a hierarchical order, which should be appropriately respected in a subsequent hierarchical execution.

This entire paragraph is a summary of the work of Slabbert, De Kock, and Hattingh, (2009, CD)

a. Providing emotional encouragement and support

If the learners are learning well and the quality of their learning is sufficient, the facilitator of learning may not give feedback or provide emotional encouragement and support. This may be non-verbal through gestures or facial expressions or verbal by saying things like: “You are really doing well” (encouragement); or “I know you can do it” (support).

b. Asking clarification

Even if learning is continuing smoothly, or if the facilitator of learning observes that the learners are going off the track or the quality of their learning is not sufficient, or suspects that this is the case, he/she has to determine exactly where the learners are in their learning process. The questions that the facilitator of learning will ask would be something like: “What are you doing?” which should be followed by: “Why are you doing this?” Through these questions the facilitator of learning seeks information to clarify the disposition of the learners. This is the only case when the facilitator of learning demands and answer from the learners and waits for such an answer until it is provided.

But asking clarification is not meaningful in itself and has to be followed by a challenge to engage learners in the experience of metalearning.

c. *Demanding metalearning from learners through:*

(i) Reverting back learner questions

When learners request help of any kind from the facilitator of learning non-verbally, through facial expressions or verbally through questions, the facilitator of learning has to return the question back to the learners by asking questions like: “What do you think?”, or “What would you do?”. The facilitator of learning needs to remove him or herself physically from the proximity of the learner immediately after the question was asked in order to allow the learner’s experience to search for and find the answer from within.

(ii) Requesting reflection

Whether the facilitator of learning has detected insufficient quality of learning or whether the learner has made it known somehow, the purpose of the facilitator of learning is to have learners reflect on what they did, assess it and improve on it. That is why the same principle of immediate removal of the facilitator from the proximity of the learners, after asking the question, should also be implemented here. The following may be some of these questions:

- Have you thought of everything?
- Have you considered all possibilities?

- Is this the best way of doing it?
- How many more can you find?
- Do you understand what you are doing?
- Do you understand why you are doing it?
- Is this enough?
- How will you improve this?
- How sure are you?
- How will you make sure?
- How well do you think you did?
- What is the meaning of this for your future?

(iii) Referral to resources

If learners cannot solve the problem in spite of previous actions from the facilitator of learning, he/she should refer learners to resources where they might find some information to help them, by asking questions such as: “What do you need?” and “Where will you find what you need?”

Obviously the facilitator of learning should have made provision for such a possibility and should have made sure that the resources are available and accessible in the most realistic and appropriate way.

(iv) Advising auto-education

If learners are still at this point seriously lacking in knowledge and/or skills to enable them to solve the problem, the facilitator of learning, as a

last resort, will have made provision for a whole spectrum of educational methods, tools, materials and resources for the learners to access on their own, in order to acquire the necessary knowledge and/or skills through auto-education. Note that although learners are acquiring knowledge and/or skills, this acquisition is meaningful because they have realized that they are lacking it and that they need it to solve the problem. They also learn how and where to acquire knowledge and skills when they need it. Lastly, they have become more independent, because they have had to acquire the knowledge and skills through their own efforts.

(v) Providing edutainment

One of the most important criteria for life in general, and obviously for learning is efficiency. Efficiency is determined by the combination of time it takes to complete a task, the effort that was exerted in completing the task and the accuracy with which it has been completed. If for any reason time and/or accuracy and/or effort becomes paramount for efficient learning, then, and only then, may facilitating learning require a special kind of intervention which may result in what is traditionally called “teaching”: Supplying information, demonstrating or illustrating something, showing something to be imitated, telling something to be memorized, explaining something to be “understood”, engaging in a Q and A discussion or the demand to become proficient in a particular skill through drill and practice. This will happen **only under very special conditions**. These conditions appear when learners are busy with learning task execution and the problem

they need to solve demands, at a particular time, that a particular piece of information or a particular skill is a necessary precondition for being able to continue with solving the problem. The facilitator also knows that, acquiring this particular piece of information or skill through the authentic learning process, will take up so much time and/or may require so much effort to produce the accuracy required, that the learners will be distracted from achieving the actual learning outcome, that will compel them to fully utilize their potential in the most efficient way. It means that acquiring this intermediate piece of information or skill is not an aim in itself, but serves only as a means to achieve the intended outcome in the most efficient way. Only under these very special conditions may the facilitator of learning employ the particular activities that will justify learning methods and strategies aimed at regurgitating and repeating like watching, listening, imitating, memorizing, drill, practice, etc. But under these conditions, these facilitating learning activities are called edutainment.

Edutainment is a very important part of facilitating learning. Edutainment is prompted by the real disposition of the learners. It is created by a need from the learners - the learners govern - or knowing full well that the learners will need the information/data or skill at a particular point in time for a “higher” purpose. There are very important prerequisites for implementing edutainment: The facilitator of learning will edutain only when there is no other possible way that learners will be able to obtain the

information/data or acquire the skill they need right now within the reality of the time limit allocated or reserved to solve the problem. Whether edutainment will be implemented or not will be guided by the question whether this will be the most efficient way for learners to obtain the necessary information/data and/or acquire the necessary skill? If learners are left to obtain the information or acquire the skill in any other way, will time, accuracy and effort unnecessarily be wasted in which much more important learning could have been done? Will this cause the learners to become distracted in solving the actual problem at hand efficiently? Is the learning process of obtaining the information or acquiring the skill a crucial learning experience, or are they rather only a means to get to the best solution of the current problem more efficiently to require the full utilization of potential? Whenever a decision has been made to implement edutainment, the format in which it is done is also crucial. As far as possible, it should be done, based on the principles of drama as learning (Heathcote, 1991; O'Neill, 1995; Wagner, 1999; Andersen, 2004; Taylor and Warner, 2005). Drama learning extends the fact to increase the requirements for real life problems and this leads to the learners being challenged to a higher extend which enhances their learning process.

The purpose of the edutainment is always to:

Provoke; disturb; create disequilibria; cause uneasiness and discomfort; stir; shake; touch the emotions; bring into sharp focus; rock the boat; unsettle; deceive; mislead; impact; stun; be radical; have learners really reflect and think critically and creatively! All these factors mentioned above will radically empower the learners to become life long independent learners.

There is, however, a circumstance under which learning a skill as quickly as possible (through demonstration, imitation, etc) is justifiable. This is when job creation to solve an immediate economic need becomes inevitable. But, this short-term learning has to articulate with the potential of long-term development – it means that, although it is an aim in itself in the short term, it can be only a means to eventually fulfil the aim of education. Important to note again is that learning a skill in this way focuses on the skill itself and not how it relates to conditions, circumstances, and the environment. Since circumstances, conditions, and the environment is in a continuous mode of dynamic change, it also continuously requires new skills, and it simply becomes futile for a learner not to be challenged through facilitating learning to fully utilize his/her potential.

5.1.1.9 The sixth function of facilitating learning: Learning task consolidation

At the end of each learning period (face-to-face interaction with learners) learning is also maintained through learning task consolidation. A few minutes before the end of a particular learning period, the facilitator of learning has to request learners to consolidate what they have learned up to that point and to present it to the entire group of learners. This entire paragraph is a summary of the work of Slabbert, De Kock, and Hattingh, (2009; CD). The following are the crucial actions that are executed during learning task consolidation:

a. *Ascertaining the rate of the learning progress*

The facilitator of learning demands from learners to share what they have learned up to that particular point in time with the entire group, and, learning from how their peers have progressed, the facilitator of learning and learners can ascertain the rate of learning progress.

b. *Assessing the quality of learning*

Not only does a simple sharing of what learners have learned take place, but rather a critical assessment of what has been learned by the peers and the facilitator of learning. This determines the quality of the learners' learning.

c. *Determining the next challenge*

Having established the progress and the quality of learning up to that particular point in time provides the opportunity for learners to realize what they have achieved during that particular learning period and to envision what still needs to be achieved to fulfil the required outcomes. This information is also available to the facilitator of learning and, in addition, it allows the facilitator of learning to determine what the challenge for the next learning period should be and how it should be executed.

This entire process, from learning task design to learning task consolidation represents a continual process of facilitating learning.

Although each of the preceding functions of facilitating learning has its own array of actions and requirements (not necessarily elaborated on in this summary), it was the discovery of the actions, requirements and options of learning task feedback and consolidation in addition to and in relation with the actions, requirements and options of learning task design that made the most significant impact on my perception of my Outcomes Based Education practice and why I failed in my attempts to be successful. It is the concise clarity and simple, but substantive, rationale behind learning task design and learning task feedback which revealed why my Outcomes Based Education failed and, in fact, why it has failed in South Africa.

In fact, what has become very clear is that facilitating learning is really the foundation of education and that any education system that is to be adopted should be benchmarked

against facilitating learning. Although the original construction of Outcomes Based Education adheres to the principles of facilitating learning, I did not find it necessary to refer to Outcomes Based Education anymore, and only made reference to facilitating learning as the basis of education and every education system or dispensation.

Figure 5.2 depicts a model of and for facilitating learning.



5.1.2 Plan

Being exposed to the aim of education in a Outcomes Based Education curriculum, where the aim is to maximize (completely develop and fully utilize) human potential through facilitating lifelong authentic learning to create a safe, sustainable and prosperous future for all, the concept of facilitating learning (its purposes, functions, actions, requirements and options) was certainly the most profound discovery I made in my academic and professional life. Armed with this wealth of exciting discoveries, I was stimulated to engage fully with facilitating learning as soon as possible. I therefore decided to design my first attempt at facilitating learning through the following learning task:



**Learning Task Design (LTD)
TEMPLATE**

Name					
Student number					
Date					
LT's In each Paradigm	Total	Transmission	Transact	Transform	Transcend
LT Seq Number and Paradigm				X	
Phase and Grade	Senior Phase – Grade 10				
Learning Program/Area/Subject	Accounting				
Curriculum content (Copied from the official Curriculum or Syllabus documents)	Income Statement and percentage calculations				
Time to operationise LT	1 week				

Learning Outcomes and Assessment Standards (Copied from the official Curriculum or Syllabus documents)

Learning Outcomes	X	Assessment Standards	X
LO 1		AS 2, AS 3	

Real Life Challenge (In one or two sentences)

To be able to enhance entrepreneurial skills and calculating budgets
--

Critical Outcomes (Copied from the official Curriculum or Syllabus documents)

CO 1	Identify and solve problems and make decisions using critical and creative thinking	X
CO 2	Work effectively with others as members of a team, group, organization and community	X
CO 3	Organize and manage themselves and their activities responsibly and effectively	X
CO 4	Collect, analyze, organize and critically evaluate information	X
CO 5	Communicate effectively using visual, symbolic and/or language skills in various modes	X
CO 6	Use science and technology effectively and critically, showing responsibility towards the environment and the health of others	
CO 7	Demonstrate an understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation	X

Developmental Outcomes (Copied from the official Curriculum or Syllabus documents)

DO 1	Reflect on and explore a variety of strategies to learn more effectively	X
DO 2	Participating as responsible citizens in the life of local, national and global communities	X
DO 3	Be culturally and aesthetically sensitive across a range of social contexts	
DO 4	Explore education and career opportunities	X
DO 5	Developing entrepreneurial opportunities	X



Fundamental human virtues

Intrapersonal	X	Interpersonal	X
Self-confidence	X	Humanization	X
Motivation	X	Communication	X
Initiative	X	Dealing with feelings	
Effort	X	Justice and forgiveness	
Perseverance	X	Love	
Common sense	X	Leadership	
Responsibility	X		
Independence	X		
Joy			
Love			

LEARNING TASK PRESENTATION

Verbal Presentation

Verbal presentation of the entrepreneurial day on what they have done and how they went about buying and selling of products/services in order to make a profit

Written Presentation

Written presentation of the Income statement and calculations

LEARNING TASK OUTCOMES

Learning Task Outcomes (LTout), Learning Task Assessment Standards (LTass) and Assessment Methods, Tools and Techniques

LTout	LTass	Assess Met, Tools, Tech
LO 1	AS 2	Memorandum
LO 1	AS 3	Memorandum

AUTHENTIC LEARNING CONTEXT

Organization of learning space	None
Roles, functions and organization of participants	None
Material and equipment	None



END PRODUCT OUTCOMES

(As would be expected/required to be produced by a learner exceptionally well)

The Learning Product

Income Statement and calculations

The Learning Process

- | | |
|---|------------------------------------|
| 1 | Learn to do calculations |
| 2 | Learn to calculate percentages |
| 3 | Learn how to do a Income Statement |
| 4 | Learn how to be a entrepreneur |
| 5 | |

The Learning Content

[Redacted]

RESOURCES

Textbooks, Internet and interviews with business people

Learning Task

You will have to create a business plan for an entrepreneurial day. On the entrepreneurial day you will have a business have to sell a product or a service. Thereafter you will have to calculate how much profit you have made and present all your incomes and expenses on an income statement with all your calculations. You will have to work in groups with a maximum of 6 learners in a group.

5.1.3 Act

I operationized my learning task with my grade 10 Accounting learners as far as possible in accordance with the purposes of facilitating learning, the functions of facilitating learning and the actions, requirements and options of each of the facilitating learning functions.

5.1.4 Observe

Hereunder is a self-assessment, peer assessment and peer reflection which I requested and executed:

Figure 5.2 Self assessment of learning task of the pre-test

Punt (%): <i>87%</i>		Mark (%): <i>87%</i>	
LT-ASSESSINGSVORM / LT ASSESSMENT FORM B Transendentale paradigm/Transcendental paradigm			
Naam van student wat geassesseer word: <i>Bernardus M. M.</i>	Name of student being assessed: <i>Bernardus M. M.</i>	Datum/Date: <i>10 July 2017</i>	
Naam van assessor: (Merk: Self/porteur-/mentor/doseent): <i>I. G. J. Joubert</i>	Name of assessor: (Indicate: Self/Peer/Mentor/Lecture): <i>I. G. J. Joubert</i>		
LEERTAKONTWERP (LTO)/LEARNING TASK DESIGN (LT)			
Beskrywing van wat aangedui moet word	Teenwoordig Present		
Volgnummer van LT en paradigma daarvan/ Sequence number of LT and paradigm thereof	<i>Geopraatlike geografie</i>		
Aantal LT's in elke paradigma geoprasioneer- hierdie een uitgesluit/ Number of LTs operationalised in each paradigm – this one excluded	<i>1 van 6</i>		
Naam/Name	<i>Bernardus M. M.</i>		
Studentenummer/Student number	<i>07201534</i>		
Datum/Date	<i>07/07/2017</i>		
Leeraea, program of vak/Learning area, programme or subject	<i>Geografie</i>		
Graad/Grade	<i>11</i>		
Tyd wat benodig word vir die operasioneering van hierdie LT/ Time needed to operate this LT	<i>1 week</i>		
Vereistes waарan die onderlinge verbandhoudendheid essensiell is	Verbandhoudendheid met onderlinge vereistes		
Requirements of which the mutual relatedness is essential	Relatedness with mutual requirements		
Onaanvaarbaar <i>Unacceptable</i>	Ontoereikend <i>Inadequate</i> 10-19	Goed <i>Good</i> 20-29	Uitstekend <i>Excellent</i> 30-40
Kritieke en ontwikkelingsuitkomste/Critical and developmental outcomes			
Leeruitkomste (LO)/Learning outcomes (LO)			<i>3.2</i>
Assesseringstaarde (AS)/Assessment standards (AS)			<i>3.3</i>
LT-wijkomste (LTout)/LT outcomes (LTout)			<i>3.4</i>
LT-assesseringstaarde (LTass)/LT assessment standards(LTass)			<i>3.5</i>
Lewenswerklike uitdaging/Real life challenge			<i>3.6</i>
Ontentielike leerkonteks/Authentic learning context			<i>3.7</i>
Die leerproduuk/The learning product			<i>3.8</i>
Die leerproses/The learning process			<i>3.9</i>
Die leerinhoud/The learning content			<i>3.9</i>
Bronne/Resources			

EERTAAKOPERATIONERING (LTOP) / LEARNING TASK OPERATION (LTOP)

Transcendentale paradigm/Transcendental paradigm

				Toegekken/ Award
		Ontoereikend / Inadequate	Goed / Good	
LTP	Onaanvaarbaar/ Unacceptable Geen herkenbare uitdaging is gestel nie/ No recognisable challenge has been set	Die temat/ onderwerp/ inhoud is in 'n vraag of probleem ontskep/ The theme/ topic/ content is transformed into a question or problem	'n Lewenswerklike uitdaging word in die vorm van 'n veronderstelling ("Sé nou maar") gestel/ A real life challenge is set in the form of a supposition ("as if")	'n Lewenswerklike uitdaging is in werklikheidskonteks (werklik of realisties) gestel/ A real life challenge is set in a real life context (real life or realistic) 8
LTP	Onskeker, oninspirerend, onduidelik, vervaardigend/ Insecure, uninspiring, unclear, boring	Hoorbaar en verstaanbaar maar sonder opwinding/ Audible and comprehensible but with no excitement	Entoesiasies en duidelik hoorbaar en verstaanbaar/ Enthusiastic and clearly audible and comprehensible	Entoesiasies, duidelik hoorbaar en verstaanbaar met onmiddellike opeising van volle aandag gevestig op die uitdaging voor hand/ Enthusiastic, clearly audible and comprehensible with immediate demand of full attention on the challenge at hand 7
LTE	Geen of toevallige individuele leer vind plaas/ No or coincidental individual learning takes place	Leerders werk individueel maar voort nie die metalearstrategie uit nie/ Learners work individually but do not execute the metalearning strategies	Leerders beplan, voer uit, monitor en assesseer hulle eie individuele leer / Learners plan, execute, monitor and assess their own individual learning	Leerders doen volledige metaleer en verwerv opsidelik fundamentele intrapersonlike lewensvaardighede / Learners do complete metalearning and obviously acquire fundamental intrapersonal life skills 7
LTE	Geen of toevallige groepswerk vind plaas/ No or coincidental group work takes place	Leerders doen groepswerk maar is nie betrokke in koöperatiewe leer nie/ Learners work in groups but they are not engaged in cooperative learning	Leerders doen koöperatieve leer wat aan die vereistes voldoen/ Learners do cooperative learning that complies with the requirements	Leerders doen volledige koöperatieve leer en verwerv opsidelik fundamentele interpersoonlike lewensvaardighede / Learners do complete cooperative learning and obviously acquire fundamental interpersonal life skills 7
LTF	Voorstien kognitiewe ondersteuning deur die beantwoording van leerders se vrae/ Provide cognitive support by answering learner's questions	Daag kognitiwe ontwikkeling uit deur die vra van hoeforde vrae as reaksie op leerdaarval/ Challenging cognitive development by asking higher order questions as reaction to learners' questions	Vermy beantwoording van leerders se vrae deur dit na hulle terug te verwys/ Prevent answeriving learners questions by referring questions back to them	Voerstier emotionele aanmoediging en ondersteuning en daag leerders verder uit deur die vra van metaleervrae/ Providing emotional encouragement and support and challenging learners further by asking metalearning questions 6
LTC	Geen konsolidasie of dit word deur die FOL gedoen/ No consolidation or it is done by the FOL	Konsolidasie deur individuele leerders gedoen / Consolidation done by individual learners	CLGs voorsien terugvoer en word informeel geassesseer/ CLGs provide feedback and are assessed informally	CLG's voorsien terugvoer met kritiese assesering deur die ander CLGs om leerkwaliteit te verhoog/ CLGs provide feedback with critical assessment by all other CLGs to improve learning quality 7
PUNTI MARK	0-2	3-4	3-4	3-10



Figure 5.3 Self assessment of learning task of the post-test

Punt (%): Mark (%):		G 37%	
Naam van student wat geassesseer word: <i>Bon Uy</i>			
Name of student being assessed: <i>Bon Uy</i>			
Naam van mentor/mentor/dosent): <i>Bon Uy</i>			
Name of mentor/mentor/dosent): <i>Bon Uy</i>			
Naam van assessor: (Mark/Self/Peer/Mentor/Lecturer): <i>Bon Uy</i>			
Name of assessor: (Indicate: Self/Peer/Mentor/Lecturer): <i>Bon Uy</i>			
LEERTAAKONTWERP (LTO)/LEARNING TASK DESIGN (LTD)			
Beskrywing van wat aangedui moet word Description of what should be indicated	Teenwoordig Present		
Volgnummer van LT en paradigma daarvan! Sequence number of LT and paradigm thereof	<i>Winklig lering met behulp van selfportret</i>		
Aantal LT's in elke paradigma geoprasioneer- hierdie een uitgesluit! Number of LTs operationised in each paradigm – this one excluded	<i>1 van 10 2 van 6/8/5 3 van 4/5/6/7</i>		
Naam/Name			
Studentenoornummer/Student number			
Datum/Date			
Leerarea, program of vak/Learning area, programme or subject			
Graad/Grade	<i>1997</i>		
Tyd wat benodig word vir die operasioneering van hierdie LT/ Time needed to operate this LT			
Vereistes waарan die onderlinge verbandhoudendheid essensiell is Requirements of which the mutual relatedness is essential	Verbandhoudendheid met onderlinge vereistes Relatedness with mutual requirements		
Kritieke en ontwikkelingsuitkomste/Critical and developmental outcomes Leeruitkomste (LO)/Learning outcomes (LO)	Onaanvaarbaar Unacceptable	Ontoereikend Inadequate	Goed Good
Assesseringstandaarde (AS)/Assessment standards (AS)	0,9	10-19	20-29
LT-uitkomste (L-Tout)/LT outcomes (LTout)			
LT-assesseringstandaarde (L-Tass)/LT assessment standards(L-Tass)			
Lewenswerklike uitdaging/Real life challenge			
Outentieke leeronteks/Authentic learning context			
Die leerprodukt/The learning product			
Die leerproses/The learning process			
Die leernhoud/The learning content			
Bronne/Resources			



LEERTAAKOPERASIONERING (LTOP) / LEARNING TASK OPERATION (LTOP)

Transcendent paradigm/Transcendental paradigm

Onaanvaarbaar/ Unacceptable	Ontoereikend / Inadequate	Goed / Good	Uitstekend/ Excellent	Toegekken/ Award
Geen herkenbare uitdaging is gestel nie/ No recognisable challenge has been set	Die tema/ onderwerp inhoud is in 'n vraag of probleem onskep/ The theme/topic content is transformed into a question or problem	'n Lewenswerklike uitdaging word in die vorm van 'n veronderstelling ('se nou maar') gestel/ A real life challenge is set in the form of a supposition ("as if")	Geen herkenbare uitdaging is gestel nie/ No recognisable challenge has been set	10
Onseker, oninspirerend, onduidelik, venvelend/ Insecure, uninspiring, unclear, boring	Hoorbaar en verstaanbaar maar sonder opwindig/ Audible and comprehensible but with no excitement	Enthusiasties en duidelik hoorbaar en verstaanbaar/ Enthusiastic and clearly audible and comprehensible	Onseker, oninspirerend, onduidelik, venvelend/ Insecure, uninspiring, unclear, boring	8
Geen of toevallige individuele leer vind plaas/ No or coincidental individual learning takes place	Leerders werk individueel maar voer nie die metaaleerstrategie uit nie/ Learners work individually but do not execute the metalearning strategies	Leerders beplan, voer uit, monitor en assesseer hulle eie individuele leer / Learners plan, execute, monitor and assess their own individual learning	Geen of toevallige individuele leer vind plaas/ No or coincidental individual learning takes place	7
Geen of toevallige groepwerk vind plaas/ No or coincidental group work takes place	Leerders doen koöperatiewe leer wat aan die vereistes van metalearing voldoen! Learners do cooperative learning that complies with the requirements	Leerders doen koöperatiewe leer wat aan die vereistes van metalearing voldoen! Learners do cooperative learning that complies with the requirements	Geen of toevallige groepwerk vind plaas/ No or coincidental group work takes place	7
Voorstien kognitiwe ondersteuning deur die beantwoording van leerders se vrae/ Provide cognitive support by answering learner's questions	Daag kognitiwe ontwikkeling uit deur die vra van hoefonds vrae as reaksie op leerervrae/ Challenging cognitive development by asking higher order questions as reaction to learners' questions	Verryf beantwoording van leerders se vrae deur dit na hulle terug te vervoeg/ Prevent answering learners questions by referring questions back to them	Voorstien emosionele aanmoediging en ondersteuning en daag leerders verder uit deur die vra van metalearing vrae/ Provide emotional encouragement and support and challenging learners further by asking metalearning questions	7
Geen konsolidasie of dit word deur die FOL gedoen/ No consolidation or it is done by the FOL	Konsolidasie deur individuele leerders gedoen / Consolidation done by individual learners	CLGs voorstien terugvoer en word informeel geassesseer/ CLGs provide feedback and are assessed informally	CLGs voorstien terugvoer met kritiese assesering deur die ander GLGs om leerkwaliiteit te verbreg/ CLGs provide feedback with critical assessment by all other CLGs to improve learning quality	7
PUNT/ MARK	0-2	3-4	5-7	8-10



Figure 5.4 Peer assessment of the learning task in the pre-test



LEERTAAKOPERASIONERING (LTOP) / LEARNING TASK OPERATION (LTOP)

Transendentale paradigmata Transcendental paradigm

LTP	Onaanvaarbaar/ Unacceptable	Ontoorkundend / Inadequate	Goed / Good	Uitstekend / Excellent	Toegekenen/ Award
Geen herkenbare uitdaging is gestel nie/ No recognisable challenge has been set	Die tema/ onderwerp inhoudt is in 'n vraag of probleem omseek/ The theme/ topic content is transformed into a question or problem	'n Lewenswerklike uitdaging word in die vorm van 'n veronderstelling ("sé nou maar") gestel/ A real life challenge is set in the form of a supposition ("as if")	"n Lewenswerklike uitdaging is in werklikheidskonteks (werklik of realisties) gestel/ A real life challenge is set in a real life context (real life or realistic)	6	
Onseker, oninspirerend, onduidelik, vengelend/ insecure, uninspiring, unclear, boring	Hoorbaar en verstaanbaar maar sonder opwinding/ Audible and comprehensible but with no excitement	Entoesiasies en duidelik hoorbaar en verstaanbaar/ Enthusiastic and clearly audible and comprehensible	Entoesiasies, duidelik hoorbaar en verstaanbaar met onmiddellike oplossing van volle aandag gevestig op die uitdaging voor hand/ Enthusiastic, clearly audible and comprehensible with immediate demand of full attention on the challenge at hand	8	
Geen of toevallige individuele leef vind plek/ No or coincidental individual learning takes place	Leerders werk individueel maar voer nie die metalearnstategie uit nie/ Learners work individually but do not execute the metalearning strategies	Leerders beplan, voer uit, monitor en assesseer hulle eie individuele leer / Learners plan, execute, monitor and assess their own individual learning	Leerders doen volledige metaleer en vervaardig lewensvaardighede / Learners do complete metalearning and obviously acquire fundamental interpersonal life skills	7	
Koop leer / Metaleer	Geen of toevallige groepwerk vind plek/ No or coincidental group work takes place	Leerders doen groepwerk maar is nie betrokke in koöperatiewe leer nie/ Learners work in groups but they are not engaged in cooperative learning	Leerders doen koöperatiewe leer wat aan die vereistes voldoen/ Learners do cooperative learning that complies with the requirements	Leerders doen volledige koöperatiewe leer en vervaardig fundamentele interpersonele lewensvaardighede / Learners do complete cooperative learning and obviously acquire fundamental interpersonal life skills	7
LTF	Voorsien kognitiwe ondersteuning deur die beantwoording van leerders se vrae/ Provide cognitive support by answering learner's questions	Daag kognitiwe ontwikkeling uit deur die vrae van hoëorde vrae as reaksie op leerdervrae/ Challenging cognitive development by asking higher order questions as reaction to learners' questions	Verryk beantwoording van leerders se vroeë deur dit na hulle terug te vervoer/ Prevent answering learners' questions by referring questions back to them	Voorseen emotionele aannoediging en ondersteuning en daag leerders verder uit deur die vrae van leerdervrae/ Provide emotional encouragement and support and challenging learners further by asking metalearning questions	7
LTC	Geen konsolidasie of dit word deur die FOL gedoen/ No consolidation or it's done by the FOL	Konsolidasie deur individuele leerders gedaan / Consolidation done by individual learners	CLGs voorsien terugvoer en word informeel gesassesseer/ CLGs provide feedback and are assessed informally	CLGs voorsien terugvoer met kritiese assesering deur die ander CLGs om leerkwaliteit te verhoog/ CLGs provide feedback with critical assessment by all other CLGs to improve learning quality	7
PUNT/ MARK	0-2	3-4	5-7	8-10	



Figure 5.5 Peer assessment of the learning task in the post-test

Punt (%): Mark (%): 84	
LT-ASSESSINGSVORM / LT ASSESSMENT FORM B Transendentale paradigma/Transcendental paradigm	
Naam van student wat geassesseer word: <i>T.D. LOUIS VAN DER</i>	Datum/Date: <i>18 SEPTEMBER 2009</i>
Name of student being assessed: <i>(Mark: Self/mentor/dosent): T.D. LOUIS VAN DER</i>	
Naam van assessor: (Mark: Self/mentor/Lecturer): <i>T.D. KRUGER</i>	
Name of assessor: (Indicate: Self/mentor/Lecturer): <i>T.D. KRUGER</i>	
LEERTAAKONTWERP (LTO)/LEARNING TASK DESIGN (LTD)	
Beskrywing van wat aangedui moet word <i>Description of what should be indicated</i>	
Volgnummer van LT en paradigma daarvan/ Sequence number of LT and paradigm thereof	Volg. nr. <i>MEKAAR</i>
Aantal LT's in elke paradigma geoprasioneer- hierdie een uitgesluit/ Number of LTs operationalised in each paradigm – this one excluded	<i>C. Q. N</i>
Naam/Name	<i>Dean WYS</i>
Studentennummer/Student number	<i>07026163</i>
Datum/Date	<i>9 SEPTEMBER</i>
Leerarea, programme of vak/Learning area, programme or subject	<i>REKENWISKUNDE</i>
Graad/Grade	<i>10</i>
Tyd wat benodig word vir die operasioneering van hierdie LT/ <i>Time needed to operationalise this LT</i>	<i>1 TERMYN</i>
Vereistes waarvan die onderlinge verbandhoudendheid essensiellie is <i>Requirements of which the mutual relatedness is essential</i>	Verbandhoudendheid met onderlinge vereistes <i>Relatedness with mutual requirements</i>
Onaanvaarbaar <i>Unacceptable</i>	Ontoereikend <i>Inadequate</i>
0-9	10-19
Kritieke en ontwikkelingsuitkomste/Critical and developmental outcomes	
Leeruitkomste (LO)/learning outcomes (LO)	
Assesseringstaarde (AS)/Assessment standards (AS)	
LT-uikomste (LTout)/LT outcomes (LTout)	
LT-asseseringstaarde (LTass)/LT assessment standards(LTass)	
Lewenswerklike uitdaging/Real life challenge	
Outentieke leerkonteks/Authentic learning context	
Die leerprodukt/The learning product	
Die leerproses/The learning process	
Die leerinhoud/The learning content	
Bronne/Resources	



LEERTAAKOPERASIONERING (LTOP) / LEARNING TASK OPERATION (LTOP)
Transendentale paradigma/Transcendental paradigm

LTC	LTF	LTP	Ontdekking / Discovery	Ontdekking / Discovery	Goed / Good	Uitstekend/ Excellent	Toekenning/ Award
Geen herkenbare uitdaging is gestel nie! No recognisable challenge has been set	Die tema onderwerp inhoud is in 'n vraag of problem onstep/ The theme/ topic content is transformed into a question or problem	In Lewenswerklike uitdaging word in die vorm van 'n veronderstelling ('sé nou maar') gestel/ A real life challenge is set in the form of a supposition ('as if')	'n Lewenswerklike uitdaging is in werkelikhedskonteks (werklik of realisties) gestel/ A real life challenge is set in a real life context (real life or realistic)	10			
Onsaker, oninspirerend, ondideelk, vervelend/ Insecure, uninspiring, unclear, boring	Hoorbaar en verslaanbaar maar sonder opwinding/ Audible and comprehensible but with no excitement	Entoesiasies en duidelik hoorbaar en verstaanbaar/ Enthusiastic and clearly audible and comprehensible	Entoesiasies, duidelik hoorbaar en verstaanbaar met onmiddellike opleising van volle aandag gevestig op die uitdaging voor hand/ Enthusiastic, clearly audible and comprehensible with immediate demand of full attention on the challenge at hand	9			
Geen of loevallige individuele leer vind plek/ No or coincidental individual learning takes place	Leerders werk individueel maar voer nie die metalearstrategie uit nie! Learners work individually but do not execute the metalearning strategies	Leerders beplan, voer uit, monitior en assesseer hulle eie individuele leer / Learners plan, execute, monitor and assess their own individual learning	Leerders doen volledige metalear en verwerf spesifiek fundamentele intrapersonlike lewensvaardighede / Learners do complete metalearning and obviously acquire fundamental intrapersonal life skills	8			
Geen of toevalige groepswerk vind plaas/ No or coincidental group work takes place	Leerders doen groepwerk maar is nie betrokke in koöperatiewe leer nie! Learners work in groups but they are not engaged in cooperative learning	Leerders doen koöperatiewe leer wat aan die vereistes voldoen / Learners do cooperative learning that complies with the requirements	Leerders doen volledige koöperatiewe leer en verwierf opsigtelk fundamentele interpersonlike lewensvaardighede / Learners do complete cooperative learning and obviously acquire fundamental interpersonal life skills	9			
	Voorstien kognitiewe ondersteuning deur die beantwoording van hoëordre vrae as reaksie op leerdervrae/ Provide cognitive support by answering learners' questions	Daag kognitiewe ontwikkeling uit deur die vra van hoëordre vrae as reaksie op leerdervrae/ Challenging cognitive development by asking higher order questions as reaction to learners' questions	Vermy beantwoording van leerders se vrae deur dit na hul terug te verwys/ Prevent answering learners questions by referring questions back to them	7			
LTC	LTF	LTP	Koöp leer / Metalearners Coop learn / Metalearners	Voorstien emosionele aanmoediging en ondersteuning en draag leerders verder uit deur die vra van metaleervrae/ Provide emotional encouragement and support and challenging learners further by asking metalearning questions	CLGs voorstien terugvoer met kritiese assesseringsdeur die ander CLGs om leerwaarde te verhoog/ CLGs provide feedback and are assessed informally by all other CLGs to improve learning quality	8	
LTC			PUNT/ MARK	0-2	3-4	5-7	8-10



Figure 5.6 Peer reflection of the pre-test

Hoërskool Skooldpresident C.R. Swart

Grade 10 Accounting

Dear still tries to maintain control in his class but has improved immensely since the last class I attended.

Dear also remains to be very passionate about his subject matter and comes across as energetic to the learners. I still think that he guides the learners too much and he must try to leave the responsibility with the learners to explore and enhance their learning process.

Overall I will say that you show a lot of improvement with the interaction and relationship with the learners.

By
J. Kruger



Figure 5.7 Peer reflection of post-test

Hoërskool Staatspresident C.R Swart

Grade 10 Accounting

Dean tends to be authoritarian in communication with the learners, thus focusing more on discipline and structure in the class than the learning tasks. Dean is very enthusiastic about his learning area and has a profound impact on the learners with regards to motivation. The learners seem to enjoy his class.

- ✓ I recommend that Dean should provide the learners with bit more freedom and less structure, this will enable their learning process. Finally I recommend that Dean give the learners an opportunity to explore and learn more without constant guidance.

By
J. Kruger

5.1.5 Reflect

From my observation I can reflect that there had been a huge improvement from the previous cycle, but that the learners still asked me a lot of questions and that they still relied too much on me. When learners ask too many questions, this indicates to me that they are still not independent learners. I still try to optimize my interaction and behaviour with them, but can reflect that I'm still too much in control and still have too much structure in the classroom for the learners to be able to explore their own learning and to totally become independent learners.

5.1.6 Review

From the reflection I can now review that I will have to give a better and more real life challenge to the learners which will be a larger challenge for them. I will need to concentrate on my behavior and interaction towards the learners and also to have less controlled interaction with them in order for them to be able to have a better quality of learning and become independent learners and not to constantly rely on me.

5.2 Cycle 5: Improving my facilitating learning practice through qualitative and quantitative means

I was excited about my first attempts at facilitating learning, however, the extensive labour to obtain qualitative data and its analysis and interpretation as well as its accuracy

has become of increasing concern. I started to search for a way in which the labour to obtain results would not be so intense, but which would provide similar and even more accurate results. During my BEd Honours programme Dr Gerrit Jan Koopman, a visiting professor from the University of Utrecht introduced us to the Questionnaire on Teacher Interaction (QTI) instrument. I could hardly believe the coincidence and accepted the challenge of utilizing this instrument as a future tool to indicate my increased improvement in my facilitating learning practice.

This cycle is therefore the fifth in the series of my action research and consists of the following steps:

- a. Identify: How could I best improve my facilitating learning practice by using the QTI?
- b. Plan: Designing the best possible real life challenges for learners to resolve.
- c. Act: Having learners execute the challenging learning tasks while I facilitate the learners' learning according to all the purposes, functions, actions requirements and options of the facilitating learning functions.
- d. Observe: Administer the QTI and collect the quantitative data as well as other supportive qualitative data.
- e. Reflect: Reflecting on the QTI and other collected data.
- f. Review: How will I ensure continual improvement of my facilitating learning practice through the QTI?

5.2.1 Identify

Although I am in a process of continual pursuance of the improvement of my facilitating learning, I was looking for a less labour intensive way to collect data but which would be equally valid and easy to administer. It was especially the demanding learning task feedback function that I intended improving on. Since this facilitating learning task function is the epitome of interaction between facilitator of learning and learner, what I could obtain from my introduction to the QTI is that it fits the purpose as close as I could expect.

5.2.1.1 Origin of the QTI

The QTI is a result of a 25 year research programme that investigated learner-teacher interpersonal relationships. The research focused on constructing a knowledge base about managing classrooms to create effective learning environments. The programme started in the Netherlands but has now spread to many other countries such as Australia, Canada, Isarael, Slovenia, Turkey, Korea, Taiwan, Singapore and the United States of America.

What is most important about the QTI is that it demonstrated high reliability and validity in various countries (Fisher, D., Waldrip, B., Dorman, J. and Den Brok, P. (2007).

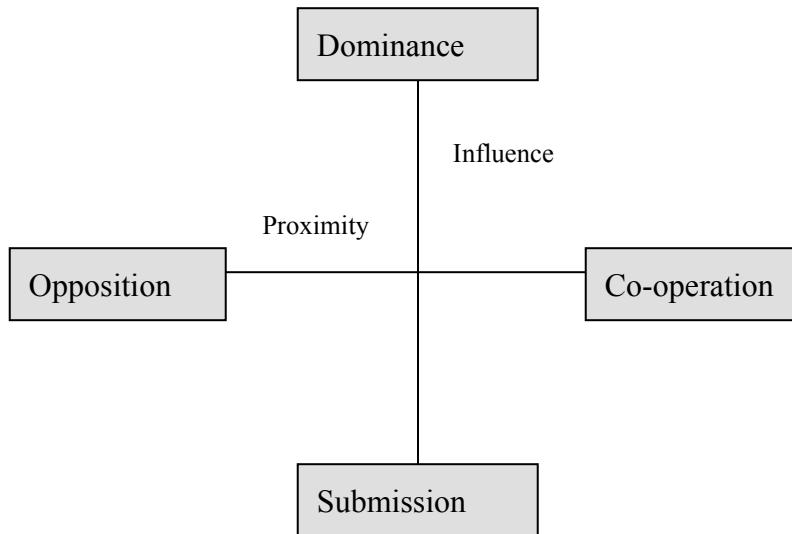
Although the QTI is a quantitative instrument and would normally require a large sample number, I decided to use it to improve my professional development in facilitating learning because of it brings into focus exactly what essentially determines the highest

quality of learning that is the most appropriate interaction between facilitator of learning and learner and the added advantage of quantifying it, despite the fact that the sample of participants would be small. It is also an investigation as to what extent this instrument will be helpful to assist facilitators of learning in the improvement of their facilitating learning practice and subsequent OBE practice.

Leary, T (1975) has identified that human interaction could be described essentially by two dimensions. Although these two dimensions might have been known by different names, they have generally been accepted as universal descriptors of human interaction. The two dimensions are that of influence and proximity. The dimension of influence indicates who is directing or controlling the communication, how often, and consists of a dominance-submission polarity. The dimension of proximity indicates the degree of cooperation or closeness between those who are communicating with an opposition-cooperative polarity.

The coordinate system of the Leary model is indicated in figure 5.8.

Fig 5.8 The coordinate system of the Leary model.

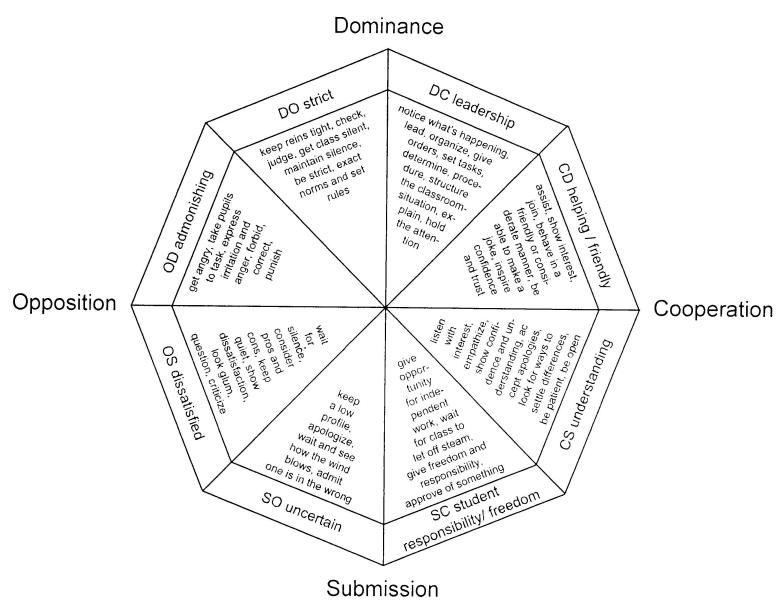


Wubbels, T., Creton, H., Levy, J. and Hooymayers, H. (1993) adapted the Leary model which is a general one to one that could be utilized in education and developed a model which they call the Model for Interpersonal Teacher Behaviour (MITB).

They identified that each of the quadrants in the Leary model could be subdivided into two sections. Each of these sections, in turn, are labelled DC, CD, CS, SC, SO, OS, OD and DO (where D = dominance, C = co-operation, O = opposition and S = submission) according to their position in the coordinate system. For example, the two sections DC and CD are both considered to have elements of dominance and cooperation. However, in the DC section, the dominance aspect predominates over the cooperation aspect. Each of these labelled sections has subsequently also been identified with a particular type of

interpersonal teacher behaviour. In this way, the Model for Interpersonal Teacher Behaviour (MITB) could be depicted in figure 5.9.

Figure 5.9



It should be obvious that the interpersonal teacher behaviour type depicted on the right hand side of the model (leadership, helping/friendly, understanding, student

Based on this model, Wubbles, Y., Creton, H. and Hooymayers, H. [(1985) Discipline problems of beginning teachers: Interpersonal teacher behaviour mapped out. Paper presented at the annual conference of the American Education Research Association (AERA), Chigargo, Illinois, April 1985.] developed the Questionnaire on Teacher Interaction (QTI).

5.2.1.2 The QTI and the representation of its results

For each of the eight sections of interpersonal teacher behaviour (leadership, helping/friendly, understanding, student responsibility/freedom, uncertain, dissatisfied admonishing, strict) a number of questions were developed. Table 5.3 provides a typical question item for each of the types of interpersonal teacher behaviours.

Table 5.3 Scale code, name and description, and typical item in each scale

CODE OF SECTION	NAME OF BEHAVIOUR TYPE	DESCRIPTION OF BEHAVIOUR TYPE	TYPICAL QUESTION ITEM
DC	Leadership	Leads, organizes, gives orders, determines procedure and structures the classroom situation.	This teacher knows what is going to happen next in this class.
CD	Helping/Friendly	Shows interest, behaves in a friendly or considerate manner and inspires confidence and trust.	This teacher helps us with our work.
CS	Understanding	Listens with interest, empathizes,	This teacher trusts us.

		shows confidence and understanding and is open with students.	
SC	Student Responsibility/Freedom	Gives opportunity for independent work, gives freedom and responsibility to students.	This teacher allows us to take responsibility for what we do.
SO	Uncertain	Behaves in an uncertain manner and keeps a low profile.	This teacher allows us to tell him/her what to do.
OS	Dissatisfied	Expresses dissatisfaction, looks unhappy, criticizes and waits for silence.	This teacher thinks that we cheat.
OD	Admonishing	Gets angry, express irritation and anger, forbids and punishes.	This teacher gets angry quickly.
DO	Strict	Checks, maintains silence and strictly enforces the rules.	This teacher is strict.

The responses to each question required are in the form of a five-point Likert-type scale which is scored from 0 (never) to 4 (always). The responses to each of the questions, therefore provides a value or a weighting for each behaviour type.

- i. **Which follows is an example of the questionnaire and an indication of which questions need to be answered:**

QUESTIONNAIRE ON TEACHER INTERACTION

	never	always
1 . The teacher allows us a lot of choice in what we study	0 1 2 3 4	
2 . The teacher takes a personal interest in us	0 1 2 3 4	

3 .	The teacher gives us a lot of free time in the class	0	1	2	3	4
4 .	The teacher has a sense of humour	0	1	2	3	4
5 .	The teacher realizes when we don't understand	0	1	2	3	4
6 .	The teacher is friendly	0	1	2	3	4
7 .	We have to be silent in the teacher's class	0	1	2	3	4
8 .	The teacher trusts us	0	1	2	3	4
9 .	The teacher thinks we can't do things well	0	1	2	3	4
1		0	1	2	3	4
0 .	We can influence the teacher					
1		0	1	2	3	4
1 .	We need the teacher's permission before we speak	0	1	2	3	4
1		0	1	2	3	4
2 .	The teacher is concerned when we have not understood him/her	0	1	2	3	4
1		0	1	2	3	4
3 .	If we don't agree with the teacher we can talk about it	0	1	2	3	4
1		0	1	2	3	4
4 .	The teacher is lenient	0	1	2	3	4
1		0	1	2	3	4
5 .	The teacher seems dissatisfied					
1		0	1	2	3	4
6 .	The teacher is demanding	0	1	2	3	4
1		0	1	2	3	4
7 .	The teacher thinks we cheat	0	1	2	3	4
1		0	1	2	3	4
8 .	The teacher is willing to explain things again	0	1	2	3	4
1		0	1	2	3	4
9 .	The teacher thinks we don't know anything	0	1	2	3	4
2		0	1	2	3	4
0 .	The teacher seems uncertain					
2		0	1	2	3	4
1 .	The teacher puts us down	0	1	2	3	4
2		0	1	2	3	4
2 .	If we want something the teacher is willing to cooperate	0	1	2	3	4
2		0	1	2	3	4
3 .	The teacher's tests are hard					



2		0	1	2	3	4
4	. The teacher helps us with our work					
2		0	1	2	3	4
5	. <u>The teacher gets angry unexpectedly</u>					
2		0	1	2	3	4
6	. If we have something to say the teacher will listen					
2		0	1	2	3	4
7	. The teacher's standards are very high					
2		0	1	2	3	4
8	. The teacher threatens to punish us					
2		0	1	2	3	4
9	. The teacher knows everything that goes on in the classroom					
3	. We have the opportunity to choose assignments which are most interesting	0	1	2	3	4
0	to us					
3		0	1	2	3	4
1	. The teacher sympathizes with us					
3		0	1	2	3	4
2	. The teacher tries to make us look foolish					
3		0	1	2	3	4
3	. We can decide some things in the teacher's class					
3		0	1	2	3	4
4	. The teacher is unhappy					
3		0	1	2	3	4
5	. <u>The teacher lets us fool around in class</u>					
3		0	1	2	3	4
6	. The teacher explains things clearly					
3		0	1	2	3	4
7	. The teacher lets us get away with a lot in class					
3		0	1	2	3	4
8	. The teacher is someone we can depend on					
3		0	1	2	3	4
9	. The teacher can take a joke					
4		0	1	2	3	4
0	. <u>The teacher lets us boss him/her around</u>					



4		0	1	2	3	4
1	. The teacher is suspicious					
4		0	1	2	3	4
2	. The teacher gets angry quickly					
4		0	1	2	3	4
3	. If we don't finish our homework we're scared to go to the teacher's class					
4		0	1	2	3	4
4	. The teacher is strict					
4		0	1	2	3	4
5	. The teacher is not sure what to do when we fool around					
4		0	1	2	3	4
6	. The teacher acts as if he/she does not know what to do					
4		0	1	2	3	4
7	. The teacher is patient					
4	The teacher is a good leader					
8		0	1	2	3	4
4		0	1	2	3	4
9	. The teacher is severe when marking papers					
5		0	1	2	3	4
0	. The teacher holds our attention					
5		0	1	2	3	4
1	. We learn a lot from the teacher					
5		0	1	2	3	4
2	. The teacher is impatient					
5		0	1	2	3	4
3	. It is easy to pick a fight with the teacher					
5		0	1	2	3	4
4	. The teacher's class is pleasant					
5		0	1	2	3	4
5	. The teacher is too quick to correct us when we break a rule					
5		0	1	2	3	4
6	. The teacher has a bad temper					
5		0	1	2	3	4
7	. The teacher talks enthusiastically about his/her subject					



5		0	1	2	3	4
8	. The teacher looks down on us					
5		0	1	2	3	4
9	. The teacher is hesitant					
6		0	1	2	3	4
0	. It's easy to make a fool out of the teacher					
6		0	1	2	3	4
1	. We are afraid of the teacher					
6		0	1	2	3	4
2	. The teacher acts confidently					
6		0	1	2	3	4
3	. The teacher is sarcastic					
6		0	1	2	3	4
4	. The teacher is timid					

The questions applicable for each scale are as indicated in table 5.4:

Table 5.4

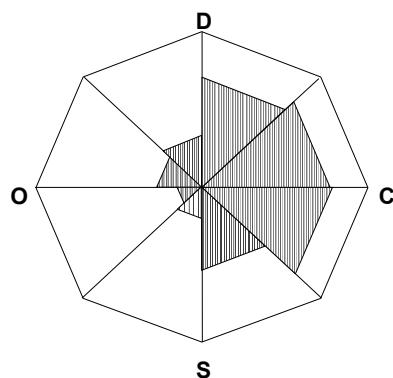
Scale	Questions
Leadership	29, 36, 48, 50, 51, 57, 62

Helping/Friendly	2, 4, 6, 12, 24, 38, 39, 54
Understanding	5, 8, 13, 18, 22, 26, 31, 47
Student Responsibility/Freedom	1, 3, 10, 14, 30, 33, 35, 37
Uncertain	20, 40, 45, 46, 59, 60, 64
Dissatisfied	9, 15, 1, 19, 21, 28, 32, 34, 41
Admonishing	25, 42, 52, 53, 55, 56, 58, 63
Strict	7, 11, 16, 23, 27, 43, 44, 49, 61

After calculating the average of all the questions which are applicable to each scale a figure will be gained. There are 8 quadrants in each typology and with the figures that were gained from the questionnaires a typology will be drawn.

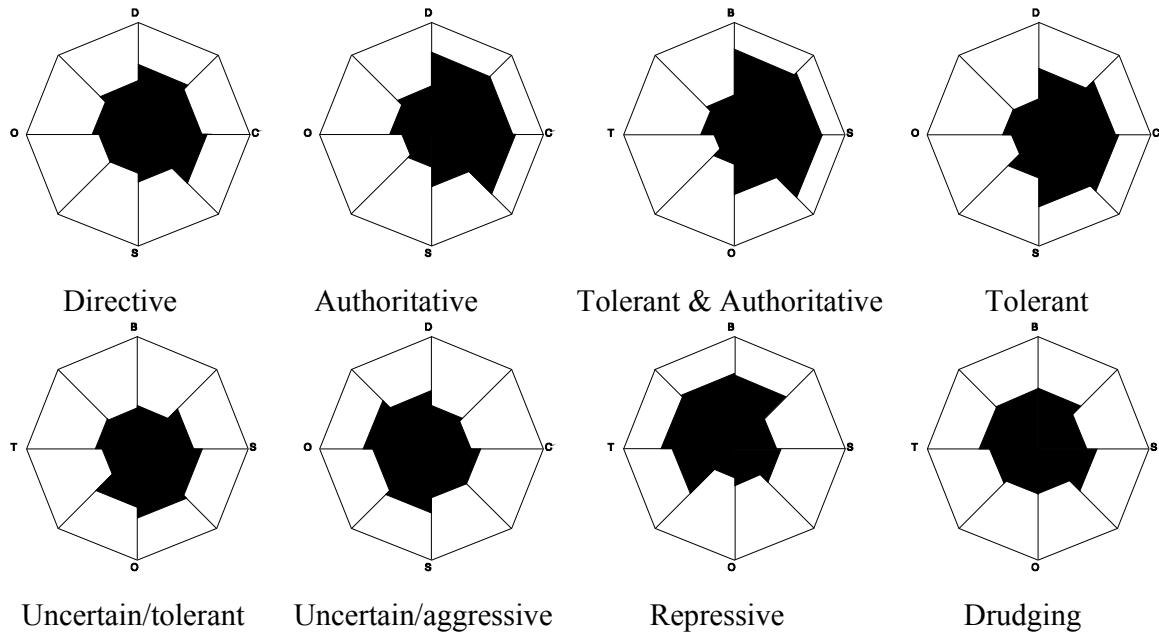
The results of a typology are represented graphically by figure 5.10 as an example.

Figure 5.10 Example of a profile of a teacher's interpersonal behaviour



Through the many years of research and many accumulative results, Brekelmans, M., Levy, J. and Rodrigues, R. (1993) identified and described eight different patterns of interpersonal relationships in classrooms called typologies, namely Directive, Authoritative, Tolerant/Authoritative, Tolerant, Uncertain/Tolerant, Uncertain/Aggressive, Drudging and Repressive. Figure 5.5 indicated the eight typologies of interpersonal teacher behaviour.

Figure 5.5 Graphic representations of eight typologies of interpersonal teacher behaviour. (Brekels, Wubbels & den Brok, 2002).



Each of these typologies are described in table 5.11

Table 5.11 Descriptions of the classroom environment of the eight interpersonal teacher behaviour typologies (gained from a slide show presentation).

Interpersonal profile types	The classroom environment applicable to every interpersonal type
Directive	<p>The learning environment in a class with teachers with a Directive profile is well structured and task-oriented. Directive teachers are organized efficiently and normally complete all lessons on time. They dominate class discussion, and generally hold students' interest. These teachers usually aren't close to their students, though they are occasionally friendly and understanding. They have high standards and are seen as demanding. Things seem businesslike, but the teachers have to work at it. They get angry at times and have to remind the class that they are there to work. They like to call on students who misbehave and are inattentive. This normally straightens them up quickly.</p>
Authoritative	<p>The Authoritative atmosphere is well-structured, pleasant and task-oriented. Rules and procedures are clear and students don't need to be reminded. They are attentive, and generally produce better work than their peers in the Directive teachers' class. Authoritative teachers are enthusiastic and open to students' needs. They take a personal interest in them, and this comes through in the lessons. Whereas their favourite method is the lecture, Authoritative teachers frequently use other techniques. The lessons are well planned and logically structured.</p>
Tolerant and Authoritative	<p>Tolerant and Authoritative teachers maintain a structure that supports student responsibility and freedom. They use a variety of methods, to which students respond well. They frequently organize their lessons around small group work. While the class environment resembles the</p>

	<p>climate in the Authoritative class, Tolerant/Authoritative teachers develop closer relationships with students. They enjoy the class and are highly involved in most lessons. Both students and teachers can be seen laughing, and there is very little need to enforce the rules. These teachers ignore minor disruptions, choosing instead to concentrate on the lesson. Students work to reach their own and the teachers' instructional goals with little or no complaining.</p>
Tolerant	<p>There seem to be separate Dutch and American views of Tolerant teachers. To the Dutch, the atmosphere is pleasant and supportive and students enjoy attending class. They have more freedom in this class than in those above, and have some real power to influence curriculum and instruction. Students appreciate their teachers' personal involvement and their ability to match the subject matter with their learning styles. They often work at their own pace and the class atmosphere sometimes may be a little confused as a result. In the U.S., however, Tolerant teachers are seen to be somewhat disorganized. Their lessons are not prepared well and they don't challenge students. These teachers often begin the lesson with an explanation and then send the students off to individually complete an assignment. While the teachers are interested in students' personal lives, their academic expectations for them are not evident.</p>
Uncertain/Tolerant	<p>Uncertain/Tolerant teachers are co-operative but don't show much leadership in class. Their lessons are poorly structured, are not introduced completely and don't have much follow-through. They generally tolerate disorder, and students are not task-oriented.</p>

	<p>Uncertain/Tolerant teacher are quite concerned about the class, and are willing to explain things repeatedly to students who haven't been listening. The atmosphere is so unstructured, however, that only the students in front are attentive while the others play games, do homework, and the like. Students are not provocative, however, and the teachers manage to ignore them while loudly and quickly covering the subject. Uncertain/Tolerant teachers' rules of behavior are arbitrary, and students don't know what to expect when infractions occur. The teachers' few efforts to stop the misbehaviour are delivered without emphasis and have little effect on the class. Sometimes these teachers react quickly, and at other times completely ignore inattentiveness. Class performance expectations are minimal and mostly immediate rather than long-range. The overall effect is of an unproductive equilibrium in which teachers and students seem to go their own way.</p>
Uncertain/Aggressive	<p>This class is characterized by an aggressive kind of disorder. Teachers and students regard each other as opponents and spend almost all their time in symmetrically escalating conflicts. Students seize nearly every opportunity to be disruptive, and continually provoke the teachers by jumping up, laughing and shouting out. This generally brings a panicked over-reaction from the teachers, which is met by even greater student misbehaviour. An observer in this class might see the teacher and students fighting over a book that the student has been reading. The teacher grabs the book in an effort to force the student to pay attention. The student resists because he or she thinks the teacher has no right to his or her property. Since neither one backs down, the situation often</p>

	<p>escalates out of control. In the middle of the confusion Uncertain/Aggressive teachers may suddenly try to discipline a few students, but often manage to miss the real culprits. Because of the teacher's unpredictable and unbalanced behaviour, the students feel that the teacher is to blame. Rules of behaviour are not communicated or explained properly. These teachers spend most of their time trying to manage the class, yet seem unwilling to experiment with different instructional techniques. They prefer to think 'first, they will have to behave'. Learning is unfortunately the least important aspect of the class.</p>
Repressive	<p>Students of Repressive teachers are uninvolved and extremely docile. They follow the rules and are afraid of the teachers' angry outbursts. These teachers seem to over-react to small transgressions, frequently making sarcastic remarks or giving failing grades. Repressive teachers are the epitome of complementary rigidity. These teachers' lessons are structured, but not well organized. Whereas directions and background information are provided, few questions are allowed or encouraged. Occasionally, students will work on individual assignments, for which they receive precious little help from the teachers. The atmosphere is guarded and unpleasant, and the students are apprehensive and fearful. Since the Repressive teachers' expectations are competition-oriented and inflated, students worry about their exams. The teachers seem to repress student initiative, preferring to lecture while the students sit still. They perceive the teachers as unhappy and impatient and their silence seems like the calm before the storm.</p>

Drudging	<p>The atmosphere in a Drudging teacher's class varies between the disorder with the Uncertain/Aggressive and Uncertain/Tolerant teachers and sometimes the Directive teacher's class atmosphere. One thing is constant, however: these teachers continually struggle to manage the class. They usually succeed (unlike the other two types), but not before expending a great deal of energy. Students pay attention as long as the teachers actively try to motivate them. When they do get involved, the atmosphere is oriented toward the subject matter and the teachers do not generate much warmth. They generally follow a routine in which they do most of the talking and avoid experimenting with new methods. Drudging teachers always seem to be going downhill and the class is neither enthusiastic, supportive nor competitive. Unfortunately, because of the continual concern with class management these teachers sometimes look as though they are on the verge of burnout.</p>
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In close association with the typologies, the cognitive, affective, participatory, reality and activity learning outcomes for each of these typologies were also identified (Information gained from a PowerPoint presentation).

For each type there is a specific rating toward the learning that takes place in a classroom by that type of facilitator, which consists of:

- **Cognitive outcomes**

Is the recall or recognition of knowledge and the development of intellectual abilities and skills,

- **Affective outcomes**

Is the dealing with interests, attitudes, appreciations, values, and emotional sets or biases,

- **Participating learning**

This indicates whether the learners are actively involved in their own learning,

- **Reality learning**

To be able to resolve real life challenges,

- **Activity learning**

To be able to do something by taking the knowledge and being able to apply it practically.

Table 5.12 provides the levels of corresponding learning outcomes for each typology of interpersonal teacher behaviour.

Table 5.12 Learning outcomes for each typology of interpersonal teacher behaviour

Directive	Rating
Cognitive outcomes	Highest
Affective outcomes	High
Participation learning	High
Reality learning	High
Activity learning	High

Authoritative	Rating
Cognitive outcomes	High
Affective outcomes	Highest
Participation learning	Highest
Reality learning	High
Activity learning	Medium

Tolerant and Authoritative	Rating
Cognitive outcomes	High

Affective outcomes	High
Participation learning	High
Reality learning	High
Activity learning	Highest

Tolerant	Rating
Cognitive outcomes	Medium
Affective outcomes	High
Participation learning	Medium
Reality learning	Medium
Activity learning	High

Uncertain and Tolerant	Rating
Cognitive outcomes	Lowest
Affective outcomes	Lowest
Participation learning	Lowest
Reality learning	Lowest
Activity learning	Lowest

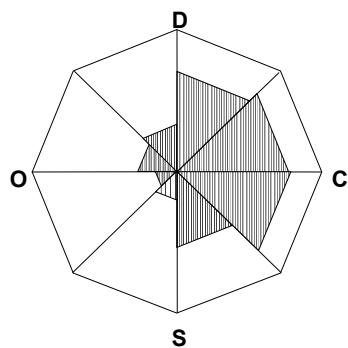
Uncertain and Aggressive	Rating
Cognitive outcomes	Highest
Affective outcomes	High
Participation learning	High
Reality learning	High
Activity learning	High

Repressive	Rating
Cognitive outcomes	Medium
Affective outcomes	Medium
Participation learning	Low
Reality learning	Medium
Activity learning	Medium

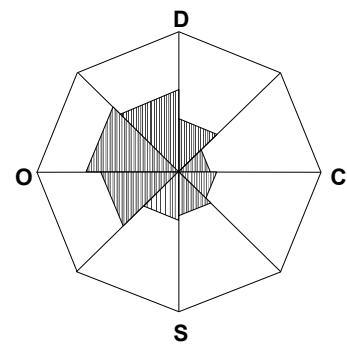
Drudging	Rating
Cognitive outcomes	Medium
Affective outcomes	Medium
Participation learning	Medium
Reality learning	Medium
Activity learning	Medium

In addition to the eight typologies of interpersonal teacher behaviour, a typology for the average “best” teacher and the average “worst” teacher could also be identified (Information gathered from a PowerPoint presentation).

This is depicted in figure 5.6.



Average “best” teacher



Average “worst” teacher

The identification of all these typologies has the advantage that any individual interpersonal teacher behaviour profile could be compared with the typologies to identify the type of interpersonal teacher behaviour of any individual teacher.

5.2.1.3 How the QTI questionnaire is administered

The QTI is administered in the following way: The learners complete a questionnaire of their perception of their teacher’s interpersonal behaviour before a teacher intervention, or, if they have not yet encountered the particular teacher, they would complete the questionnaire in terms of what they would expect the interpersonal behaviour of the

teacher should be. The teacher also completes a questionnaire that would represent his or her perception of his or her own interpersonal behaviour before intervention.

Then one or more interventions may follow in which both the learners as well as the teacher have direct, first hand experience of the interpersonal behaviour of the teacher.

As soon as possible after the intervention, both teacher and learners complete a questionnaire pertaining to their experience of their teacher's interpersonal behaviour during the intervention(s).

The pre-intervention and post-intervention profiles of both teacher and learners are constructed and compared with the interpersonal teacher behaviour typologies to determine the interpersonal teacher behaviour type of the teacher. A repetition of this process may allow for ascertaining the improvement of interpersonal teacher behaviour.

5.2.1.4 The QTI and facilitating learning

What needs to be emphasized is the typologies that were identified are those of the perception of a teacher and not necessarily of a facilitator of learning. It should also be clear that there would be some similarities in typologies between a teacher and a facilitator of learning. In this regard, the average “best” teacher typology would correspond with the best facilitator of learning. The interpersonal teacher behaviour typology that would, therefore, best represent the best interpersonal facilitator of learning behaviour typology seems to be Tolerant/Authoritative interpersonal behaviour. There

are, and should be, significant differences, though. The Student responsibility/freedom behaviour should be at a maximum and the Leadership behaviour should be low and should be characterized mainly by the way in which the highest possible quality of learning is demanded in a ‘Helping, Friendly and Understanding’ way.

With this background on the QTI, I was ready to utilize it to my benefit.

5.2.2 Plan

I prepared everything to administer the QTI as required for my particular situation. With 25 learners in my Grade 10 Accounting class, I administered the QTI to my learners and completed a questionnaire as a “pre-intervention test” and collected the results.

I also conducted a pre-intervention semi-structured interview with my Head of Department and one of my peers in the BEd (Honors) programme and wrote my own self-reflection on my interpersonal teacher interaction.

The results of the “pre-intervention” QTI and the semi-structured interviews will be provided and discussed in the reflection step of this cycle of my action research.

I also designed the next real life challenge that my Grade 10 Accounting learners need to resolve as my intervention, taking the reflection on the data of the previous cycle into consideration.



My learning task follows:

Learning Task Design (LTD)

Name	Deon Uys								
LT's in each Paradigm	Total	Transmission	Transact	Transform	Transcend				
	10	5	3	1	2				
LT Seq Number and Paradigm	11	Transcendental		Real life					
Phase and Grade	Senior Phase – Grade 10								
Learning Program/Area/Subject	Accounting								
Curriculum content (Copied from the official Curriculum or Syllabus documents)	<ul style="list-style-type: none">- Record information from all source documents to trial balance level accurately, using the perpetual inventory system of a sole trader;- Master the preparation of final accounts and financial statements where all given adjustments were taken into consideration, and analyze and motivate the effect of the transactions on the accounting equation of a sole trader;- apply cost and budget concepts in calculations;- accurately complete salary and wages journals and post to ledger accounts;								
Time allocated the LT	1 quarter								

Learning Outcomes and Assessment Standards (Copied from the official Curriculum or Syllabus documents)

Learning Outcomes	X	Assessment Standards	X
Learning outcome 1	X	Assessment standard 1	X
Learning outcome 2	X	Assessment standard 2	X
Learning outcome 3	X	Assessment standard 3	X
		Assessment standard 4	
		Assessment standard 5	X
		Assessment standard 6	X

Real Life Challenge (In one or two sentences)

How will you convince the authorities of the school with tangible real evidence that you will take complete responsibility for your tuck shop and that you will ensure that it will be self-sustainable and will become a model for health and development enhancement tuck shop outlets for youngsters.



Critical Outcomes (Copied from the official Curriculum or Syllabus documents)

CO 1	Identify and solve problems and make decisions using critical and creative thinking	X
CO 2	Work effectively with others as members of a team, group, organization and community	X
CO 3	Organize and manage themselves and their activities responsibly and effectively	X
CO 4	Collect, analyze, organize and critically evaluate information	X
CO 5	Communicate effectively using visual, symbolic and/or language skills in various modes	X
CO 6	Use science and technology effectively and critically, showing responsibility towards the environment and the health of others	
CO 7	Demonstrate an understanding of the world as a set of related systems by recognizing that problem-solving contexts do not exist in isolation	X

Developmental Outcomes (Copied from the official Curriculum or Syllabus documents)

DO 1	Reflect on and explore a variety of strategies to learn more effectively	X
DO 2	Participating as responsible citizens in the life of local, national and global communities	X
DO 3	Be culturally and aesthetically sensitive across a range of social contexts	
DO 4	Explore education and career opportunities	X
DO 5	Developing entrepreneurial opportunities	X

Fundamental human virtues

Intrapersonal	X	Interpersonal	X
Self-confidence	X	Humanization	X
Motivation	X	Communication	X
Initiative	X	Dealing with feelings	
Effort	X	Justice and forgiveness	
Perseverance	X	Love	
Common sense	X	Leadership	
Responsibility	X		
Independence	X		
Joy			
Love			



LEARNING TASK PRESENTATION

Verbal Presentation

Our parents have been increasingly complaining in growing groups about the products available for purchase at our tuck shop to you our learners and have identified that most of the products are damaging to your health and physical, neurological and even psychological development. Our tuck shop also seems to become increasingly less profitable because learners are requesting certain products but does not find it in stock to satisfy your needs. And I heard your complaints because you are with me just after long break. And the amount of sugar you are absorbing during break is really not conducive to your required attention span and your blood sugar levels to engage in the level of learning you are required to accomplish. Because of the decreasing profitability of the tuck shop, the school can also not afford the lady working in and maintaining the tuck shop anymore. The principal has been submitted to extreme external pressure also from health agencies and he is contemplating to close the tuck shop completely. From my previous experience with you during the closure of the tuck-shop for renovation purposes, I new that you would go ballistic if the tuck shop is shut down. I approached the principal about the possibility of keeping it open. He was very adamant: "Only if someone takes full responsibility to make it self sufficient and if I will never have any complaints about the tuck shop from anyone". I subtly probed his feeling about the accounting learners would take it over. He initially frowned very deeply at that suggestion but after a little more effort he simply said: "The requirements will stay the same for whoever would wants to take over the tuck shop".

So the tuck shop is now yours if you want it. And here is the beauty: If you are able to convince me without a shadow of a doubt through tangible real evidence that you are able to completely take over that responsibility, then we will chuck all the classes for this term and the boring homework and this will become your challenge for this term – because this responsibility requires you to learn all the work you should have done for this term. You will also not write tests, except the tests that are compulsory by the department for your portfolio. At the end of this term in accounting because the evidence of your ability to do this that you will provide me with, is enough proof that you not only know the work but that you can even actually run a business. Now it's up to you. (Of course, if there are learners who do not want to take on the challenge – which I doubt – they will remain sitting in the classes and being taught and doing lots of boring homework).because that will be my contribution to your a bit more and hinted that the learners pressure and does not more and more and have

Written Presentation

The written presentation will be the same as the verbal presentation above, written out and provided to each individual learner on a strip of paper which they should paste in their workbooks.



LEARNING TASK PRESENTATION

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LEARNING TASK OUTCOMES

Learning Task Outcomes (LTout), Learning Task Assessment Standards (LTass) and Assessment Methods, Tools and Techniques

LTout	LTass	Assess Met, Tools, Tech
LO 1	1 – 6	Rubric
LO 2	1 - 3	Rubric
LO 3	1, 3	Rubric

AUTHENTIC LEARNING CONTEXT

Organization of learning space	Normal class organization
Roles, functions and organization of participants	No specific role, function and organization necessary.
Material and equipment	No additional material and equipment necessary other than what the learners already have regarding accounting books, etc

END PRODUCT OUTCOMES

(As would be expected/required to be produced by a learner exceptionally well)

The Learning Product

Complete financial books of a business

The Learning Process

The learners will explore and learn in a practical way about all the accounting procedures that is necessary for the financial books of a business. They will learn with a hands on experience what is necessary in a business on the financial side, as well as the importance thereof. They will learn the whole accounting process – from the journal entries up to the financial statements and the interpretation thereof. They will also learn the importance of budgets and that this plays an important role in the planning of business procedures.

The Learning Content

All journals
General ledger
Final accounts
Adjustments
Trial balance
Income statement
Balance sheet
Interpretation of statements

RESOURCES

Textbook, internet and interviews

5.2.3 Act

I operationized my learning task with my grade 10 Accounting learners as far as possible in accordance with the purposes of facilitating learning, the functions of facilitating learning and the actions, requirements and options of each of the facilitating learning functions.

5.2.4 Observe

I administered the QTI “post-intervention test” and conducted “post-intervention” interviews with my Head of Department as well as one of my peers in the BEd (Honors) programme and wrote my own reflection on my perception of my interpersonal facilitator of learning behaviour.

5.2.4.1 Self reflection of the pre-test

With this cycle I can reflect that there are improvements that took place regarding my facilitation of learning. From my experience at this stage I observed that the learners show more interest in the learning tasks and that there is a definite improvement that has taken place. From my own reflection that I wrote I stated: “The learners are not eager enough and motivated enough”. This indicates to me that I would have to use a different approach to communicate and interact with them. I also stated: “With some learners it is difficult to maintain the learning and I continuously ask and try to encourage them to

complete the learning tasks". What I also experienced is that due to this maintaining of learning I tend to become too strict with the learners, which cause some of them to loose interest in the learning task. I have certain rules in the classroom, but also when I focus too much on them I experience that the learners tend to become negative and that their attitudes change. My observation is that the learners then also become de-motivated in the learning tasks. I also observed that there are still a lot of questions being asked by the learners.

5.2.4.2 Self-reflection of the post-test

With regards to my self-reflection, I noticed that there is a different behaviour from the learners. The learners appear to be more comfortable and relaxed but they still do the learning tasks without constant motivation from my side. In some cases I still needed to enforce the rules and discipline to keep the class in order, but I tried to avoid it as much as possible.

I also observed that the learners are more comfortable in approaching me and asking questions. I feel that I can still decrease the structure in my classes. There are some learners who still need to be asked and motivated to complete the learning tasks. I also noticed that sometimes when the learners are busy with the learning tasks, I still tend to help them too much and although I try to motivate them to complete these tasks, I sometimes, instead of giving them the necessary guidance, rather help them. This can lead to the learners still being too dependant on me. What I also observed is that I have a better relationship with the learners now and that the atmosphere in the classroom is more

relaxed, but not in such a way that it has a negative effect on learning, but rather a positive effect.

Overall I can observe that there are some major changes and improvement that took place. I feel more comfortable in the classroom and it also appears that my facilitation of learning is better.

5.2.4.3 Peer reflection of the pre-test

The peer reflection revealed that I am too strict with the learners and that I tend to get too angry with them. The reflection states that: “More emphasis is being put on the discipline and structure in the class than the learning tasks”. It is also indicated that I am very eager and enthusiastic about facilitating in the specific learning area and that this has a positive contributing factor in motivating the learners. The learners do not feel uncomfortable in the classroom and it is stated that: “The learners seem to enjoy your class”. The reflection also highlights some recommendations. The recommendations are that I should give the learners more freedom and not continuously try to structure their learning process.

Another recommendation is that I should use different approaches and not to maintain too much structure with the learners. I should also lead the learners to explore more: “You tend to help the learners too much when completing the learning tasks”.

5.2.4.4 Peer reflection of the post-test

The peer-reflection indicated that I am still strict with the learners, but that it has decrease from the previous class that he attended. It is stated that: “You still like to have order in

your class”. This is also an indication that I like to have discipline in the classroom and in some cases I might still be too strict with the learners. There is a change regarding the interaction with the learners and that learners are handled in a different way: “I can see that you speak in a different and softer way” and “You still like to motivate the learners and are eager to start with the learning task, but still tend to help them too much”. I am also very motivated and eager in the facilitating learning: “You show a lot of energy and enthusiasm in your teaching”.

“Overall I will say that you show a lot of improvement with the interaction and relationship with the learners.”

5.2.4.5 Semi-structured interview of the pre-test

A semi-structured interview is an interview where the interviewer asks the interviewee certain questions to direct that person in a direction according to the information that is required. There are also other methods of conducting interviews, such as structured interviews and open interviews. Structured interviews are too rigid and the interviewees are not given enough freedom to properly express themselves. Regarding open interviews it can lead to the interviewee having too much freedom and the information that is required by the interviewer can in some cases not been collected, which leads to irrelevant and unusable data regarding this study. Therefore for the purpose of this study the semi-structured interview will be the most appropriate.

I have conducted the semi-structured interview with the Head of the Department of the school where I taught. The Head of the Department was present in the classroom to observe how I facilitate learning.

The questions that were asked during the interview and the answers were as follows:

- **Question 1**

What were your experiences of the interaction between the learners and I?

Answer

There is good interaction between you and the learners, but I would say that you should give the learners more opportunity to communicate with you as well.

There are some learners that require better explanations and not a lot of opportunity is given to them to express themselves.

- **Question 2**

Did the way that interaction took place contribute to the enhancement of the learning atmosphere?

Answer

Yes, the interaction and what you require from the learners is clear and understandable. The learners are instructed on what they need to do and learn and it is clear what is required from them and if they don't understand you are

willing to help them. You are very helpful and friendly with the learners but that can change quickly by being too strict.

■ **Question 3**

Which specific action/s could you identify that can influence the interaction?

Answer

In some cases you are too strict with the learners and I can see that thereafter the learners are not comfortable to ask questions and take part in the lesson. Another aspect I have observed is that you like to be in control of the class and have a rigid structure that you follow. You follow too much of a routine and this can lead to the learners to become bored.

■ **Question 4**

How can you describe my knowledge and attitude towards the subject and facilitation process?

Answer

You have good knowledge in accounting and I can see that you are very eager to teach accounting. This motivates the learners and they have trust in you regarding the subject and I can see that some learners are motivated by it.

After analysing the information gathered from the semi structured interview with the use of the questions as indicated above, it also is apparent that I have a strong tendency towards an autocratic teaching style with certain set boundaries for the learners that can

lead to the establishment of a set rigid structure in the classroom. The interviewee stated that: “You tend to be too strict with the learners”. This leads to learners not to be able to communicate effectively with me, as well as other learners in the classroom, and this can hamper the active involvement of the learners in the learning process. Resulting from the semi-structured interview it became apparent that dissatisfaction amongst the learners towards me can occur due to the set structures in the classroom. This is substantiated by the interviewee who stated that: “You follow too much of a routine”.

This set structure hampers the freedom of the learners to be active and creative in their own learning process. It was also stated that: “The learners are instructed on what they need to do and learn”, therefore little opportunity for discussion and feedback from the learners had been allowed in the facilitation of learning and communication was mostly only directed from me to the learners. Due to the structures in the classroom and the fact that I am too rigid the learners are not given an opportunity to explore in the learning process. According to the interview it indicates that I am helpful and friendly towards the learners during the learning process, but on the other hand I can be too strict and sometimes aggressive with the learners and that too many boundaries are set in the classroom.

The leadership that I have shown in the classroom can be too overwhelming for the learners to encourage and enhance their own learning process. It is also stated that: “You like to be in control”. Leadership in this instance also correlates with strictness and as already stated, I tend to be too strict with the learners in order to maintain the set

structure, which can cause the learners to have less freedom for exploration and creativity in the learning process. This can hamper learning and the utilization of the potential of the learners. The interviewee also stated that I have good knowledge regarding the subject by stating: “You have good knowledge in Accounting and I can see that you are very eager to teach Accounting” which also confirms that I enjoy teaching my subject and that this has a positive effect on the learners.

5.2.4.6 Semi Structured interview of the post-test

With regard to the semi-structured interview, the same questions were posed to the same person and, as with the pre-test, the following answers were collected:

- **Question 1**

What were your experiences of the interaction between the learners and I?

Answer

Interaction improved a lot. It seems to me as if the learners are more comfortable in the classroom and are more actively involved in the learning process. The atmosphere in the classroom is less tense and structured and the manner in which you handle the learners has improved.

- **Question 2**

Did the way that interaction took place contribute to the enhancement of the learning atmosphere?

Answer

The way that you speak to the learners has improved, although in some cases instruction and the enforcement of rules can make the learners negative.

- **Question 3**

Which specific action/s could you identify that can influence the interaction?

Answer

The enforcement of rules. You still tend to put too much emphasis on classroom discipline and in some cases I can see that you still tend to be strict, but can see that it has improved compared to the previous class that I attended.

- **Question 4**

How can you describe my knowledge and attitude towards the subject and facilitation process?

Answer

As with the previous interview your knowledge and attitude toward the subject remains good and you are keen in facilitating Accounting. I can observe that you have a lot of passion for the subject.

With the semi structured interview, after the intervention process, it became clear that the factors and flaws I identified from the pre-test, to adapt and improve upon the process in order to improve on the facilitation practice in the classroom did improve my interaction and general classroom practice. The interview also revealed that: “it seems to me as if the

learners are more comfortable in the classroom and are more actively involved in the learning process”. This indicates that the involvement of the learners has increased from the previous interview and that they are allowed more feedback which can improve learning.

The interviewee also stated that: “The way that you speak to the learners has improved”, which indicates that communication between the learners and I have become more proactive, but there is still an indication that it is controlled by me as stated by the interviewee: “In some cases instruction and the enforcement of rules can make the learners negative”. Communication now occurred more freely and comfortably compared to that previously experienced by the learners during the pre-test. I still have an autocratic way of facilitation as stated by the interview: “You also tend to put too much emphasis on classroom discipline which takes up a lot of the learning time”. More responsibility has been given to the learners for their own learning.

“The way that you handle the learners has improved”. This revealed that I am handling the learners with more empathy than previously and am also taking into consideration the personal feelings and sense of belonging of the learners in the classroom and the impact thereof on the learning atmosphere. A definite improvement can be seen in these factors as well as from the response of the learners.

My interaction with the learners indicates that there is still a matter of autocratic behavior present, but it is not as prominent as with the pre-test. My tone of voice as well as my

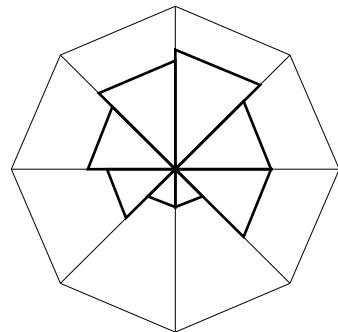
manner of speaking to the learners has also improved. The interaction between the learners and I is now more open and free and the learners are more comfortable involved in their own learning process and less pressurized.

I still set a lot of structures in the facilitation process. The manner of my practice has improved and the learners now have more responsibility and freedom in their own learning process, although there are still certain structures and boundaries set by me which can be improved. The presence of too much structure can lead to an amount of strictness and leadership that is above the required ideal figure and can hamper the responsibility and freedom of the learners in the learning process.

“You are keen in facilitating Accounting”. This confirms that I still remain enthusiastic about the subject and the facilitation thereof. This has not changed during the intervention process.

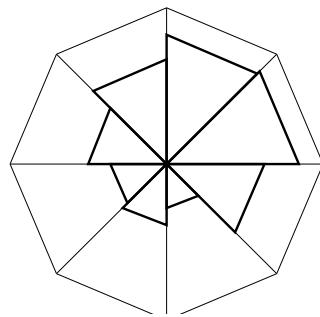
5.2.4.7 Results of the QTI of the pre-test gathered from the learners as well as myself compared to the ideal scales and typologies

- a. This typology has been drawn from the questionnaires that the learners have completed:



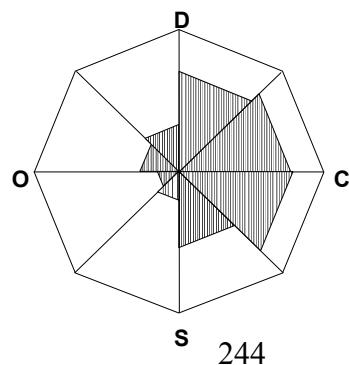
This type of typology is correlating to a directive type of typology.

- b. The following typology has been drawn on how I see myself from the questionnaire that I have completed:



This typology type correlates mostly with the authoritative type of typology.

- c. The following typology is the ideal typology according to QTI:



This typology is a presentation of Tolerant and Authoritative interpersonal relationship

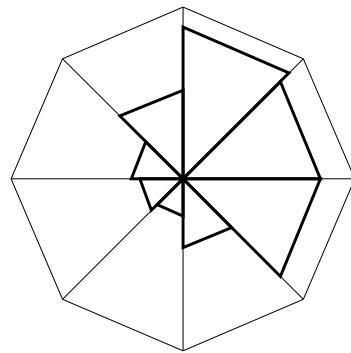
- d. Table 5.13 gives a summary of the figures of the different factors of the typology which was identified by the pre-test of changes by the learners and myself, compared to the ideal figures for each scale:

Figure 5.13 Figures of the QTI from the pre-test

	The ideal figure according to QTI	Results from the learners questionnaires	QTI as completed by me regarding how I reflect on my own interaction and behaviour
Leadership – DC	2.2	2.9	3.3
Helpful and friendly – CD	2.2	2.4	3.4
Understanding – CS	2.1	2.4	2.5
Responsibility and friendly - CS	1.7	0.9	1.1
Uncertainty – SO	1.5	0.9	1.6
Dissatisfied – OS	1.5	1.7	1.4
Admonishing – OD	2.0	2.1	2.0
Strictness - DO	1.9	2.7	2.7

5.2.4.8 Results of the QTI of the post-test gathered from the learners

- a. The following typology has been drawn with data gathered from the post-test by the learners:



- b. This type of typology represents a Tolerant and Authoritative type of typology, but with a stronger tendency towards leadership.

In table 5.14, the following scales will indicate the results of the pre-test compared to the results of the post-test, as well as the comparison with the ideal typology according to the QTI.

Table 5.14 Figures of QTI from the post - test

	Ideal figures according to QTI	Pre-test of the QTI by the learners	Post-test of the QTI by the learners
Leadership – DC	2.2	2.9	3.5
Helpful and friendly – CD	2.2	2.4	3.2
Understanding – CD	2.1	2.4	3.2
Responsibility and friendly - CS	1.7	0.9	1.6
Uncertainty – SO	1.5	0.9	0.8
Dissatisfied - OS	1.5	1.7	1.0
Admonishing - OD	2.0	2.1	1.2
Strictness - DC	1.9	2.7	1.1

5.2.5 Reflect

Using the QTI and the scales identified in the pre-test which needed improvement, and with the changes that I made as a consequence of the information gathered with the pre-test, I can confirm that an improvement in my facilitating learning took place. The data that I gained from the QTI was very valuable in order to identify the scales which need improvement. I also learned the difference between how the learners experience me, how I experience myself and how this compares to the scales and typology of the ideal facilitator of learning.

5.2.6 Review

With the help of the QTI and how I administered the implementation thereof combined with Interviews and reflections, I have improved upon my facilitation of learning. Before the use of the QTI during the pre-test my typology was correlating with the directive type of typology. By using the QTI to identify the scales that needed improvement and which I subsequently acted on, my typology changed and improved from a Directive type of typology towards a Tolerant and Authoritative typology. I have learned how to be able to implement these changes in the classroom and also the value that these changes have on the facilitation of learning.

I would not have been able to identify and to improve upon these changes without going through all of these cycles and by using the methods and tools available to me. The valuable information that I have gained from the use of the QTI, the semi-structured interview as well as the reflections, have given me a better overview of my own practices

and what needs to be changed and improved. I also realize the value that the QTI can contribute to a facilitator of learning's practices, by experiencing the influence that it had on my practices and the improvements that it established. In order to move forward into the next cycle I should still continue to focus and try to improve upon the scales that still do not meet the ideal figure according to QTI. I have found an incredibly valuable instrument which is not labour intensive to collect data, but which would be adequately valid and easy to administer.

By continuing to reflect and using the QTI in the future, I will be able to continue to improve on the very demanding and highly professional facilitating learning function of learning task feedback.

5.3 Conclusion

In this chapter I have improved my facilitation of learning by improving upon my interaction and general behaviour with the learners in the classroom. I have used a tool, Questionnaire on Teacher Interaction (QTI) that tests the interaction and behaviour of a facilitator of learning and I have experienced the value of this measuring instrument. I have realised that this instrument identifies the factors that need improvement and have also compared it to an outsider's point of view by conducting semi-structured interviews and the use of both peer-reflections and self-reflections. During the intervention I have learned how to be able to implement these changes in the classroom and also the value that these changes have on the facilitation of learning.

Unfortunately, I had to suddenly and unpredictably leave the education profession due to personal circumstances beyond my control. Although this particular part of this participatory action research could not be taken through to its final consequences, ending with this cycle represented a very appropriate climax from which any other education practitioner can benefit. This will be revealed in the next chapter.

CHAPTER 6

Conclusions and Recommendations

6.1 Introduction

It is most unfortunate that I could not continue with further cycles of participatory action research demonstrating how my own professional development could be sustained in a scholarly way through the QTI instrument. It is, however, with sincere gratitude that I would like to thank my supervisor at this point in time for his wisdom in recognizing that my research had already contributed significantly to sustained professional development

at a point in my life when I was utterly discouraged and on the verge of abandoning the finalization of this research report.

One of the major lessons I have learned during this process is that such research is a highly personal process because it had an unavoidable impact on my life – and my fellow Master’s degree peers agree. Secondly, I had to be exceptionally flexible because no matter how well I planned – which I had done nonetheless – anything could happen in action research and did happen which forced me to make sudden and appropriate changes. However, I discovered that, because I was so intimately involved in my own research, it subsequently became a personal journey. I could identify the value of everything I did - even those things that I thought might be unnecessary or meaningless – and employed it in the most appropriate way to make the research significant irrespective of the changes that I had to implement.

It is finally through the continued encouragement and support from my supervisor amidst turbulent times, that I was able to produce this dissertation, which is, in retrospect, more valuable to the scholarly professional development of young teachers than I could imagine. Let us explore these introductory comments.

6.2 Finding answers to the research questions

In this paragraph I would like to convey the way in which this research has been able to find answers to the research questions. For that purpose I would like to address the main research question through each of the sub-research questions in the following paragraphs.

6.2.1 Main research question

The main research question, as stated previously has been formulated as follows:

How can I improve my education practice to ensure that the learners will achieve the learning outcomes of Grade 10 Accounting?

This research question has been sub-divided into three sub-research questions, for each of which I intended to find an answer. Finding the answer to each research question would constitute the answer to the main research question. This will be discussed in the following paragraphs.

6.2.2 Sub questions in order to find the answer to the main research question

There were three sub-research questions for which the accumulated answers will provide the answer to the main research question.

6.2.2.1 To what extent do current education policies and practices of OBE support the achievement of Grade 10 Accounting learning outcomes?

The intention of the developers of the National Curriculum Statement (NCS) and the Norms and Standards for Educators and their training of teachers to become Outcomes

Based Education practitioners in South Africa, no doubt, was to have learners successfully achieve the learning outcomes for all learning programmes, areas and subjects, on all levels including Grade 10 Accounting.

On the surface, therefore, it seems as though everything was perfectly aligned for success as envisaged by the policies. Implementation of OBE in practice, however, proved to be quite a challenge. The following became clear from my experiences during this research:

- a. OBE has been “imported” from the international arena outside South Africa, and even outside Africa, and specifically from developed countries, which adopted this education system. It was therefore unfamiliar, not born from our own soil and a “sophisticated” education system.
- b. The first major characteristic of OBE is that the focus is moved from ‘content to be learnt’ to ‘outcomes to be achieved’, which caused content to be viewed as minor importance.
- c. The second major characteristic is the move from a teacher and teaching centered approach to a learner and learning centered approach.
- d. Teachers have been trained at immense cost to implement the OBE system in a cascading way – the trained training the untrained.
- e. This caused most teachers to become technicists in their education practice, slavishly following OBE prescriptions without the necessary understanding of its purpose.

- f. This reduced OBE, in effect, to nothing more than a reproduction of transmitted knowledge
 - (i) Learners reproducing knowledge that was either *transmitted* to them or which they simply *accessed* through one or the other resource.
 - (ii) Learners *imitating* what they were shown to do (skills).
 - (iii) Learners *imitating* the way in which something should be done (values/attitudes) as outcomes.
- g. However, the two major characteristics of OBE represent a paradigm shift – nothing less. Unfortunately, the well-known research based evidence that a paradigm shift is not obtained through training - a cognitive action of adopting a policy - has been ignored. A paradigm shift requires an internal transformation of those who need to effect the change (teachers, or rather, facilitators of learning) before they would be able to ensure the transformation that needs **s** to take place in those they are responsible for the learners.

The neglect of this transformation requirement represents a gross misconception of OBE. OBE, in fact, is an incredibly valuable and effective system if recognized for exactly what it is: The outcomes on the very lowest level of a particular learning programme area or subject is essentially derived from the life performance roles every human being needs to fulfill and thus particularized from that perspective. Unfortunately this alignment has been lost in the eventual implementation documents of OBE as well as the training of the teachers in OBE.
- h. Finally OBE also requires a transformative environment for education to be effective: Not an environment of passively learning to know things, but an

environment of actively doing things: A transformation of a learning schedule regarding flexible space and time including working in the space and time of performing real life roles.

Although there is nothing wrong with the policy documents, nor the outcomes in the implementation documents in itself, it is the discrepancy between its intention and the neglect of the required transformation to implement it in practice that does not support the achievement of the learning outcomes of Grade 10 Accounting as it should be reflected in life performance roles.

6.2.2.2 How could I improve the quality of my education practices to have learners achieve the learning outcomes of Grade 10 Accounting?

The discrepancy regarding intended and actual enacted curriculum mentioned in the preceding paragraph was the source of major challenges for me to improve my OBE practice. I experienced an OBE practice but could not readily identify the practice as my teacher education programme portrayed it. When I completed my teacher education programme and entered my career as a professional OBE teacher, instead of being reduced, this discrepancy was emphasized during my initial experience as a professional teacher. Teachers were exhibiting a resistance to OBE and even negativity. Most of them were also effectively teaching to the outcome, meaning that only the lowest levels of Bloom's Taxonomy of educational objectives were achieved with values/attitudes, skills

and knowledge being transmitted by the teacher and reproduced as outcomes by the learners on a knowledge level only, while reaching a level of proven comprehension only occasionally. Besides recognizing that learners were doing some “research” (actually copying content from one source to their workbooks) and working in groups (actually sitting in groups, effectively co-operating actively with one learner who was doing something or the other learners in the group copying the work or not participating at all), the actual essence of OBE, namely the interaction between the teacher and the learners, as I discovered, was not the focus.

What was most shocking to me, is how relatively easily and quickly I joined this downward spiral of decreasing learning quality even though I was determined that it would not happen to me.

Fortunately, my determination was strong enough to rescue me, and through an exceptional concerted effort I could escape the shackles that the majority of teachers were entangled in. I put in all the effort that I could to identify the OBE expert practitioners and learn from them. This became most profitable in an inspiring sense because of the significant differences I could observe in their practice and how different their learners responded. However, neither they themselves nor I could really determine what exactly was the cause of the difference and exactly what practices constitute excellence in OBE practice.

My liberation from this stalemate could not be provided by the previous education dispensation, because we know that it was not sufficient, neither through the current teacher education in OBE practice, nor through the best practices of recognized OBE practitioners. I had to go beyond what generally existed and was available in teacher education. Fortunately I found one of my greatest life changing experiences when I was introduced to the cutting edge concept of facilitating learning in education. OBE suddenly became the actual reality it was meant to be. I realized that facilitating learning in its purposes, functions (especially the learning task feedback function), actions, requirements and options, is the epitome of education as far as my young career in education allowed me to establish. It represented the essence of education and OBE, as an educational system is a perfect match for its manifestation. In fact, if one is a facilitator of learning, one recognizes that learning, and subsequently learning outcomes, is the only factor that qualifies education as education and that facilitating learning is so fundamental to education that a facilitator of learning will be an excellent educator irrespective of the education system he or she has to operate in.

Facilitating learning has therefore become paramount and the principles and practices of Outcomes Based Education is for all practical purposes fully enveloped in facilitating learning.

6.2.2.3 How could I ensure sustained improvement of the quality of my education practices to have learners achieve the learning outcomes of Grade 10 Accounting?

My education practices have now been identified as my facilitating learning practices.

Sustained improvement of the quality of my facilitating learning practices is a requirement for professional development. This means that such sustained improvement is not an option but a necessity in the facilitator of leaning's scholarship. It has become an increasing challenge to ensure such sustained and continual professional development through scholarship.

What has made such scholarly professional development such a challenge is the almost exclusive reliance on qualitative means through which it is made possible. We all know the labour intensiveness of collecting and analyzing qualitative data. That is why my exposure to the Questionnaire on Teacher Interaction (QTI) has become a blessing in disguise. The QTI provides a profile of interpersonal teacher interaction, which reveals a corresponding interpersonal teacher interaction typology. The typology represents, for all practical purposes, the quality of the teacher interaction during the learning task feedback function. The instrument takes a few minutes to be administered to learners, a spreadsheet entry in Excel provides that data analysis, an interpersonal teacher interaction profile is available, and the typology can be revealed.

Although none of the typologies match that of the best facilitator of learning, with an adjustment in the Leadership scale's questions and/or a change in their weighting to capture the demand for quality learning, and a recognition that the Reality scale has to

become as large as possible, an ideal profile for the “best” possible facilitator of learning could be constructed and utilized effectively.

Although this would require some more work, the utilization of this quantitative instrument would provide the opportunity for sustained improvement of my facilitating learning practice.

6.3 The quest for professional development

Probably the most valuable deduction from this research is in the area of the required professional development of each educator. It provides a type of blueprint of the early and possible continued journey of what it means to choose to follow a career as teacher or more accurately as facilitator of learning: Such a career starts off with a process of professional development when the prospective facilitator of learning enrolls for his or her facilitator of learning education programme, proceeds when the career is entered as a professional facilitator of learning and continues throughout the career path whether in a formal or informal way.

It is especially the value of utilizing a quantities instrument like that of the QTI that makes professional development during the entire career path – even from the very beginning – a most feasible possibility. The utilization of such an instrument, especially during the facilitator of learning education would add incredible support to the accuracy of the feedback to the student facilitator of learning, and subsequently a much more

focused response to improve the facilitator of learning practice during a period when such accuracy is important and little time available for such actions. In addition, the student facilitator of learning can administer the instrument without any additional assistance.

6.4 Recommendations

There are a few recommendations that stem from this research. The one recommendation has been referred to several times in different places in this research. Currently the interpersonal teacher interaction that best represents that of the “best” facilitator of learning is the same as the “best” teacher. That typology is identified as the Tolerant/Authoritative typology. However, the description of this typology does not correspond to the reality of facilitating learning and the subsequent “best” facilitator of learning. Two adjustments need to be made on the short term to that typology to ensure its most effective utilization for the professional development of the facilitator of learning: The Leadership scale should be weighted much less (a tentative value of approximately 2.5), with an added qualification in the description of the class atmosphere, in that the facilitator of learning continually retains a leadership role, but mainly for the purpose of demanding the highest possible learning quality to ensure that the Cognitive outcomes from the learners will be at its maximum. The second adjustment should be that of increasing the value of the Responsibility/Freedom scale tentatively to the same as the Helpful/Friendly and Understanding scales (3) to ensure that Reality Learning outcomes of the learners will be at its maximum.

On the longer term, the Leadership and the Responsibility/Freedom scales should be revised in the questions that constitute those scales. The questions should be revised to ensure that the authoritative dominance decrease in value and demanding learning quality increases in value, respectively. This could also be achieved by increasing or decreasing the weighing of certain questions. This may amount to extensive research in collaboration with the developers of the QTI and their associates all over the world.

In addition, the more extensive Experiences of Teaching and Learning Questionnaire (ETLQ) may also be investigated as an option to be utilized for the purposes of continued, sustained professional development.

6.5 Conclusion

Although this research has not been intended as a formal narrative life history, or live experience research methodology, it has become a written account of my experience during my research endeavor. Because I was so intensively involved in the research, I had several serious personal encounters that needed to be contended with throughout the process.

However, in the final analysis I could find appropriate answers to my research questions and through this personal experience relate to them. I believe I can make a valuable contribution to the body of knowledge, regarding the professional development of facilitators of learning as a process that lasts an entire career as an educator.



Annexures

Table 3.1 SECRETARY'S COMMISSION ON ACHIEVING NECESSARY SKILLS (SCANS) (USA 2000)

Foundation Skills	Workplace Competencies
<ul style="list-style-type: none">▪ Basic Skills▪ Thinking Skills▪ Personal Qualities	<ul style="list-style-type: none">▪ Resources▪ Information▪ Interpersonal▪ Systems▪ Technology

FOUNDATION SKILLS

Basic Skills

F1 Reading
Locates, understands, and interprets written information in prose and documents--

including manuals, graphs, and schedules--to perform tasks; learns from text by determining the main idea or essential message; identifies relevant details, facts, and specifications; infers or locates the meaning of unknown or technical vocabulary; and judges the accuracy, appropriateness, style, and plausibility of reports, proposals, or theories of other writers.

F2 Writing

Communicates thoughts, ideas, information, and messages in writing; records information completely and accurately; composes and creates documents such as letters, directions, manuals, reports, proposals, graphs, flow charts; uses language, style, organization, and format appropriate to the subject matter, purpose, and audience. Includes supporting documentation and attends to level of detail; checks, edits, and revises for correct information, appropriate emphasis, form, grammar, spelling, and punctuation.

F3 Arithmetic

Performs basic computations; uses basic numerical concepts such as whole numbers and percentages in practical situations; makes reasonable estimates of arithmetic results without a calculator, and uses tables, graphs, diagrams, and charts to obtain or convey quantitative information.

F4 Mathematics

Approaches practical problems by choosing appropriately from a variety of mathematical techniques; uses quantitative data to construct logical explanations for real world situations; expresses mathematical ideas and concepts orally and in writing; and understands the role of chance in the occurrence and prediction of events.

F5 Listening

Receives, attends to, interprets, and responds to verbal messages and other cues such as body language in ways that are appropriate to the purpose; for example, to comprehend; to learn; to critically evaluate; to appreciate; or to support the speaker.

F6 Speaking

Organizes ideas and communicates oral messages appropriate to listeners and situations; participates in conversation, discussion, and group presentations; selects an appropriate medium for conveying a message; uses verbal language and other cues such as body language appropriate in style, tone, and level of complexity to the audience and the occasion; speaks clearly and communicates a message; understands and responds to listener feedback; and asks questions when needed.

Thinking Skills

F7 Creative Thinking

Uses imagination freely, combines ideas or information in new ways, makes connections between seemingly unrelated ideas, and reshapes goals in ways that reveal

new possibilities.

F8 Decision Making

Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternatives.

F9 Problem Solving

Recognizes that a problem exists (i.e., there is a discrepancy between what is and what should or could be), identifies possible reasons for the discrepancy, and devises and implements a plan of action to resolve it. Evaluates and monitors progress, and revises plan as indicated by findings.

F10 Seeing Things in the Mind's Eye

Organizes and processes symbols, pictures, graphs, objects or other information; for example, sees a building from a blueprint, a system's operation from schematics, the flow of work activities from narrative descriptions, or the taste of food from reading a recipe.

F11 Knowing How to Learn

Recognizes and can use learning techniques to apply and adapt new knowledge and skills in both familiar and changing situations. Involves being aware of learning tools such as personal learning styles (visual, aural, etc.), formal learning strategies (note taking or clustering items that share some characteristics), and informal learning strategies (awareness of unidentified false assumptions that may lead to faulty conclusions).

F12 Reasoning

Discovers a rule or principle underlying the relationship between two or more objects and applies it in solving a problem. For example, uses logic to draw conclusions from available information, extracts rules or principles from a set of objects or written text; applies rules and principles to a new situation, or determines which conclusions are correct when given a set of facts and a set of conclusions.

Personal Qualities

F13 Responsibility

Exerts a high level of effort and perseverance toward goals attainment. Works hard to become excellent at doing tasks by setting high standards, paying attention to details, working well, and displaying a high level of concentration even when assigned an unpleasant task. Displays high standards of attendance, punctuality, enthusiasm, vitality, and optimism in approaching and completing tasks.

F14 Self-Esteem

Believes in own self-worth and maintains a positive view of self; demonstrates knowledge of own skills and abilities; is aware of impact on others; and knows own

emotional capacity and needs and how to address them.

F15 Sociability

Demonstrates understanding, friendliness, adaptability, empathy, and politeness in new and on-going group settings. Asserts self in familiar and unfamiliar social situations; relates well to others; responds appropriately as the situation requires; and takes an interest in what others say and do.

F16 Self-Management

Assesses own knowledge, skills, and abilities accurately; set well-defined and realistic personal goals; monitors progress toward goal attainment and motivates self through goal achievement; exhibits self-control and responds to feedback unemotionally and non-defensively; is a "self-starter."

F17 Integrity/Honesty

Can be trusted. Recognizes when faced with making a decision or exhibiting behavior that may break with commonly-held personal or societal values; understands the impact of violating these beliefs and codes on an organization, self, and others; and chooses an ethical course of action.

WORKPLACE COMPETENCES

Resources

C1 Allocates Time

Selects relevant, goal-related activities, ranks them in order of importance, allocates time to activities, and understands, prepares, and follows schedules.

C2 Allocates Money

Uses or prepares budgets, including making cost and revenue forecasts, keeps detailed records to track budget performance, and makes appropriate adjustments.

C3 Allocates Material and Facility Resources

Acquires, stores, and distributes materials, supplies, parts, equipment, space, or final products in order to make the best use of them.

C4 Allocates Human Resources

Assesses knowledge and skills and distributes work accordingly, evaluates performance, and provides feedback.

Information

C5 Acquires and Evaluates Information

Identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy.

C6 Organizes and Maintains Information

Organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion.

C7 Interprets and Communicates Information

Selects and analyzes information and communicates the results to others using oral, written, graphic, pictorial, or multi-media methods.

C8 Uses Computers to Process Information

Employs computers to acquire, organize, analyze, and communicate information.

Interpersonal

C9 Participates as a Member of a Team

Works cooperatively with others and contributes to group with ideas, suggestions, and effort.

C10 Teaches others

Helps others learn.

C11 Serves Clients/Customers

Works and Communicates with clients and customers to satisfy their expectations.

C12 Exercises Leadership

Communicates thoughts, feelings, and ideas to justify a position, encourages, persuades, convinces, or otherwise motivates an individual or groups, including responsibly challenging existing procedures, policies, or authority.

C13 Negotiates to Arrive at a Decision

Works toward an agreement that may involve exchanging specific resources or resolving divergent interests.

C14 Works with Cultural Diversity

Works well with men and women and with a variety of ethnic, social, or educational backgrounds.

Systems

C15 Understands Systems

Knows how social, organizational, and technological systems work and operates effectively within them.

C16 Monitors and Corrects Performance

Distinguishes trends, predicts impact of actions on system operations, diagnoses deviations in the function of a system/organization, and takes necessary action to correct performance.

C17 Improves and Designs Systems

Makes suggestions to modify existing systems to improve products or services, and develops new or alternative systems.

Technology**C18 Selects Technology**

Judges which set of procedures, tools, or machines, including computers and their programs, will produce the desired results.

C19 Applies Technology to Task

Understands the overall intent and the proper procedures for setting up and operating machines, including computers and their programming systems.

C20 Maintains and Troubleshoots Technology

Prevents, identifies, or solves problems in machines, computers, and other technologies.

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Annexure

Table 3.1 SECRETARY'S COMMISSION ON ACHIEVING NECESSARY SKILLS (SCANS) (USA 2000)

Foundation Skills	Workplace Competencies
<ul style="list-style-type: none"> ▪ Basic Skills ▪ Thinking Skills ▪ Personal Qualities 	<ul style="list-style-type: none"> ▪ Resources ▪ Information ▪ Interpersonal ▪ Systems ▪ Technology

FOUNDATION SKILLS

Basic Skills

F1 Reading
Locates, understands, and interprets written information in prose and documents--including manuals, graphs, and schedules--to perform tasks; learns from text by determining the main idea or essential message; identifies relevant details, facts, and specifications; infers or locates the meaning of unknown or technical vocabulary; and judges the accuracy, appropriateness, style, and plausibility of reports, proposals, or theories of other writers.

F2 Writing
Communicates thoughts, ideas, information, and messages in writing; records information completely and accurately; composes and creates documents such as letters, directions, manuals, reports, proposals, graphs, flow charts; uses language, style, organization, and format appropriate to the subject matter, purpose, and audience. Includes supporting documentation and attends to level of detail; checks, edits, and revises for correct information, appropriate emphasis, form, grammar, spelling, and punctuation.

F3 Arithmetic
Performs basic computations; uses basic numerical concepts such as whole numbers and percentages in practical situations; makes reasonable estimates of arithmetic results without a calculator, and uses tables, graphs, diagrams, and charts to obtain or convey quantitative information.

F4 Mathematics
Approaches practical problems by choosing appropriately from a variety of

mathematical techniques; uses quantitative data to construct logical explanations for real world situations; expresses mathematical ideas and concepts orally and in writing; and understands the role of chance in the occurrence and prediction of events.

F5 Listening

Receives, attends to, interprets, and responds to verbal messages and other cues such as body language in ways that are appropriate to the purpose; for example, to comprehend; to learn; to critically evaluate; to appreciate; or to support the speaker.

F6 Speaking

Organizes ideas and communicates oral messages appropriate to listeners and situations; participates in conversation, discussion, and group presentations; selects an appropriate medium for conveying a message; uses verbal language and other cues such as body language appropriate in style, tone, and level of complexity to the audience and the occasion; speaks clearly and communicates a message; understands and responds to listener feedback; and asks questions when needed.

Thinking Skills

F7 Creative Thinking

Uses imagination freely, combines ideas or information in new ways, makes connections between seemingly unrelated ideas, and reshapes goals in ways that reveal new possibilities.

F8 Decision Making

Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternatives.

F9 Problem Solving

Recognizes that a problem exists (i.e., there is a discrepancy between what is and what should or could be), identifies possible reasons for the discrepancy, and devises and implements a plan of action to resolve it. Evaluates and monitors progress, and revises plan as indicated by findings.

F10 Seeing Things in the Mind's Eye

Organizes and processes symbols, pictures, graphs, objects or other information; for example, sees a building from a blueprint, a system's operation from schematics, the flow of work activities from narrative descriptions, or the taste of food from reading a recipe.

F11 Knowing How to Learn

Recognizes and can use learning techniques to apply and adapt new knowledge and skills in both familiar and changing situations. Involves being aware of learning tools such as personal learning styles (visual, aural, etc.), formal learning strategies (note

taking or clustering items that share some characteristics), and informal learning strategies (awareness of unidentified false assumptions that may lead to faulty conclusions).

F12 Reasoning

Discovers a rule or principle underlying the relationship between two or more objects and applies it in solving a problem. For example, uses logic to draw conclusions from available information, extracts rules or principles from a set of objects or written text; applies rules and principles to a new situation, or determines which conclusions are correct when given a set of facts and a set of conclusions.

Personal Qualities

F13 Responsibility

Exerts a high level of effort and perseverance toward goals attainment. Works hard to become excellent at doing tasks by setting high standards, paying attention to details, working well, and displaying a high level of concentration even when assigned an unpleasant task. Displays high standards of attendance, punctuality, enthusiasm, vitality, and optimism in approaching and completing tasks.

F14 Self-Esteem

Believes in own self-worth and maintains a positive view of self; demonstrates knowledge of own skills and abilities; is aware of impact on others; and knows own emotional capacity and needs and how to address them.

F15 Sociability

Demonstrates understanding, friendliness, adaptability, empathy, and politeness in new and on-going group settings. Asserts self in familiar and unfamiliar social situations; relates well to others; responds appropriately as the situation requires; and takes an interest in what others say and do.

F16 Self-Management

Assesses own knowledge, skills, and abilities accurately; set well-defined and realistic personal goals; monitors progress toward goal attainment and motivates self through goal achievement; exhibits self-control and responds to feedback unemotionally and non-defensively; is a "self-starter."

F17 Integrity/Honesty

Can be trusted. Recognizes when faced with making a decision or exhibiting behavior that may break with commonly-held personal or societal values; understands the impact of violating these beliefs and codes on an organization, self, and others; and chooses an ethical course of action.



WORKPLACE COMPETENCES

Resources

C1 Allocates Time

Selects relevant, goal-related activities, ranks them in order of importance, allocates time to activities, and understands, prepares, and follows schedules.

C2 Allocates Money

Uses or prepares budgets, including making cost and revenue forecasts, keeps detailed records to track budget performance, and makes appropriate adjustments.

C3 Allocates Material and Facility Resources

Acquires, stores, and distributes materials, supplies, parts, equipment, space, or final products in order to make the best use of them.

C4 Allocates Human Resources

Assesses knowledge and skills and distributes work accordingly, evaluates performance, and provides feedback.

Information

C5 Acquires and Evaluates Information

Identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy.

C6 Organizes and Maintains Information

Organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion.

C7 Interprets and Communicates Information

Selects and analyzes information and communicates the results to others using oral, written, graphic, pictorial, or multi-media methods.

C8 Uses Computers to Process Information

Employs computers to acquire, organize, analyze, and communicate information.

Interpersonal

C9 Participates as a Member of a Team

Works cooperatively with others and contributes to group with ideas, suggestions, and

effort.

C10 Teaches others

Helps others learn.

C11 Serves Clients/Customers

Works and Communicates with clients and customers to satisfy their expectations.

C12 Exercises Leadership

Communicates thoughts, feelings, and ideas to justify a position, encourages, persuades, convinces, or otherwise motivates an individual or groups, including responsibly challenging existing procedures, policies, or authority.

C13 Negotiates to Arrive at a Decision

Works toward an agreement that may involve exchanging specific resources or resolving divergent interests.

C14 Works with Cultural Diversity

Works well with men and women and with a variety of ethnic, social, or educational backgrounds.

Systems

C15 Understands Systems

Knows how social, organizational, and technological systems work and operates effectively within them.

C16 Monitors and Corrects Performance

Distinguishes trends, predicts impact of actions on system operations, diagnoses deviations in the function of a system/organization, and takes necessary action to correct performance.

C17 Improves and Designs Systems

Makes suggestions to modify existing systems to improve products or services, and develops new or alternative systems.

Technology

C18 Selects Technology

Judges which set of procedures, tools, or machines, including computers and their programs, will produce the desired results.

C19 Applies Technology to Task

Understands the overall intent and the proper procedures for setting up and operating machines, including computers and their programming systems.

C20 Maintains and Troubleshoots Technology

Prevents, identifies, or solves problems in machines, computers, and other technologies.

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Annexure

Table 3.1 SECRETARY'S COMMISSION ON ACHIEVING NECESSARY SKILLS (SCANS) (USA 2000)

Foundation Skills	Workplace Competencies
<ul style="list-style-type: none"> ▪ Basic Skills ▪ Thinking Skills ▪ Personal Qualities 	<ul style="list-style-type: none"> ▪ Resources ▪ Information ▪ Interpersonal ▪ Systems ▪ Technology

FOUNDATION SKILLS

Basic Skills

F1 Reading
Locates, understands, and interprets written information in prose and documents--including manuals, graphs, and schedules--to perform tasks; learns from text by determining the main idea or essential message; identifies relevant details, facts, and specifications; infers or locates the meaning of unknown or technical vocabulary; and judges the accuracy, appropriateness, style, and plausibility of reports, proposals, or theories of other writers.

F2 Writing
Communicates thoughts, ideas, information, and messages in writing; records information completely and accurately; composes and creates documents such as letters, directions, manuals, reports, proposals, graphs, flow charts; uses language, style, organization, and format appropriate to the subject matter, purpose, and audience. Includes supporting documentation and attends to level of detail; checks, edits, and revises for correct information, appropriate emphasis, form, grammar, spelling, and punctuation.

F3 Arithmetic
Performs basic computations; uses basic numerical concepts such as whole numbers and percentages in practical situations; makes reasonable estimates of arithmetic results without a calculator, and uses tables, graphs, diagrams, and charts to obtain or convey quantitative information.

F4 Mathematics
Approaches practical problems by choosing appropriately from a variety of

mathematical techniques; uses quantitative data to construct logical explanations for real world situations; expresses mathematical ideas and concepts orally and in writing; and understands the role of chance in the occurrence and prediction of events.

F5 Listening

Receives, attends to, interprets, and responds to verbal messages and other cues such as body language in ways that are appropriate to the purpose; for example, to comprehend; to learn; to critically evaluate; to appreciate; or to support the speaker.

F6 Speaking

Organizes ideas and communicates oral messages appropriate to listeners and situations; participates in conversation, discussion, and group presentations; selects an appropriate medium for conveying a message; uses verbal language and other cues such as body language appropriate in style, tone, and level of complexity to the audience and the occasion; speaks clearly and communicates a message; understands and responds to listener feedback; and asks questions when needed.

Thinking Skills

F7 Creative Thinking

Uses imagination freely, combines ideas or information in new ways, makes connections between seemingly unrelated ideas, and reshapes goals in ways that reveal new possibilities.

F8 Decision Making

Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternatives.

F9 Problem Solving

Recognizes that a problem exists (i.e., there is a discrepancy between what is and what should or could be), identifies possible reasons for the discrepancy, and devises and implements a plan of action to resolve it. Evaluates and monitors progress, and revises plan as indicated by findings.

F10 Seeing Things in the Mind's Eye

Organizes and processes symbols, pictures, graphs, objects or other information; for example, sees a building from a blueprint, a system's operation from schematics, the flow of work activities from narrative descriptions, or the taste of food from reading a recipe.

F11 Knowing How to Learn

Recognizes and can use learning techniques to apply and adapt new knowledge and skills in both familiar and changing situations. Involves being aware of learning tools such as personal learning styles (visual, aural, etc.), formal learning strategies (note

taking or clustering items that share some characteristics), and informal learning strategies (awareness of unidentified false assumptions that may lead to faulty conclusions).

F12 Reasoning

Discovers a rule or principle underlying the relationship between two or more objects and applies it in solving a problem. For example, uses logic to draw conclusions from available information, extracts rules or principles from a set of objects or written text; applies rules and principles to a new situation, or determines which conclusions are correct when given a set of facts and a set of conclusions.

Personal Qualities

F13 Responsibility

Exerts a high level of effort and perseverance toward goals attainment. Works hard to become excellent at doing tasks by setting high standards, paying attention to details, working well, and displaying a high level of concentration even when assigned an unpleasant task. Displays high standards of attendance, punctuality, enthusiasm, vitality, and optimism in approaching and completing tasks.

F14 Self-Esteem

Believes in own self-worth and maintains a positive view of self; demonstrates knowledge of own skills and abilities; is aware of impact on others; and knows own emotional capacity and needs and how to address them.

F15 Sociability

Demonstrates understanding, friendliness, adaptability, empathy, and politeness in new and on-going group settings. Asserts self in familiar and unfamiliar social situations; relates well to others; responds appropriately as the situation requires; and takes an interest in what others say and do.

F16 Self-Management

Assesses own knowledge, skills, and abilities accurately; set well-defined and realistic personal goals; monitors progress toward goal attainment and motivates self through goal achievement; exhibits self-control and responds to feedback unemotionally and non-defensively; is a "self-starter."

F17 Integrity/Honesty

Can be trusted. Recognizes when faced with making a decision or exhibiting behavior that may break with commonly-held personal or societal values; understands the impact of violating these beliefs and codes on an organization, self, and others; and chooses an ethical course of action.



WORKPLACE COMPETENCES

Resources

C1 Allocates Time

Selects relevant, goal-related activities, ranks them in order of importance, allocates time to activities, and understands, prepares, and follows schedules.

C2 Allocates Money

Uses or prepares budgets, including making cost and revenue forecasts, keeps detailed records to track budget performance, and makes appropriate adjustments.

C3 Allocates Material and Facility Resources

Acquires, stores, and distributes materials, supplies, parts, equipment, space, or final products in order to make the best use of them.

C4 Allocates Human Resources

Assesses knowledge and skills and distributes work accordingly, evaluates performance, and provides feedback.

Information

C5 Acquires and Evaluates Information

Identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy.

C6 Organizes and Maintains Information

Organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion.

C7 Interprets and Communicates Information

Selects and analyzes information and communicates the results to others using oral, written, graphic, pictorial, or multi-media methods.

C8 Uses Computers to Process Information

Employs computers to acquire, organize, analyze, and communicate information.

Interpersonal

C9 Participates as a Member of a Team

Works cooperatively with others and contributes to group with ideas, suggestions, and

effort.

C10 Teaches others

Helps others learn.

C11 Serves Clients/Customers

Works and Communicates with clients and customers to satisfy their expectations.

C12 Exercises Leadership

Communicates thoughts, feelings, and ideas to justify a position, encourages, persuades, convinces, or otherwise motivates an individual or groups, including responsibly challenging existing procedures, policies, or authority.

C13 Negotiates to Arrive at a Decision

Works toward an agreement that may involve exchanging specific resources or resolving divergent interests.

C14 Works with Cultural Diversity

Works well with men and women and with a variety of ethnic, social, or educational backgrounds.

Systems

C15 Understands Systems

Knows how social, organizational, and technological systems work and operates effectively within them.

C16 Monitors and Corrects Performance

Distinguishes trends, predicts impact of actions on system operations, diagnoses deviations in the function of a system/organization, and takes necessary action to correct performance.

C17 Improves and Designs Systems

Makes suggestions to modify existing systems to improve products or services, and develops new or alternative systems.

Technology

C18 Selects Technology

Judges which set of procedures, tools, or machines, including computers and their programs, will produce the desired results.

C19 Applies Technology to Task

Understands the overall intent and the proper procedures for setting up and operating machines, including computers and their programming systems.

C20 Maintains and Troubleshoots Technology

Prevents, identifies, or solves problems in machines, computers, and other technologies.

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