

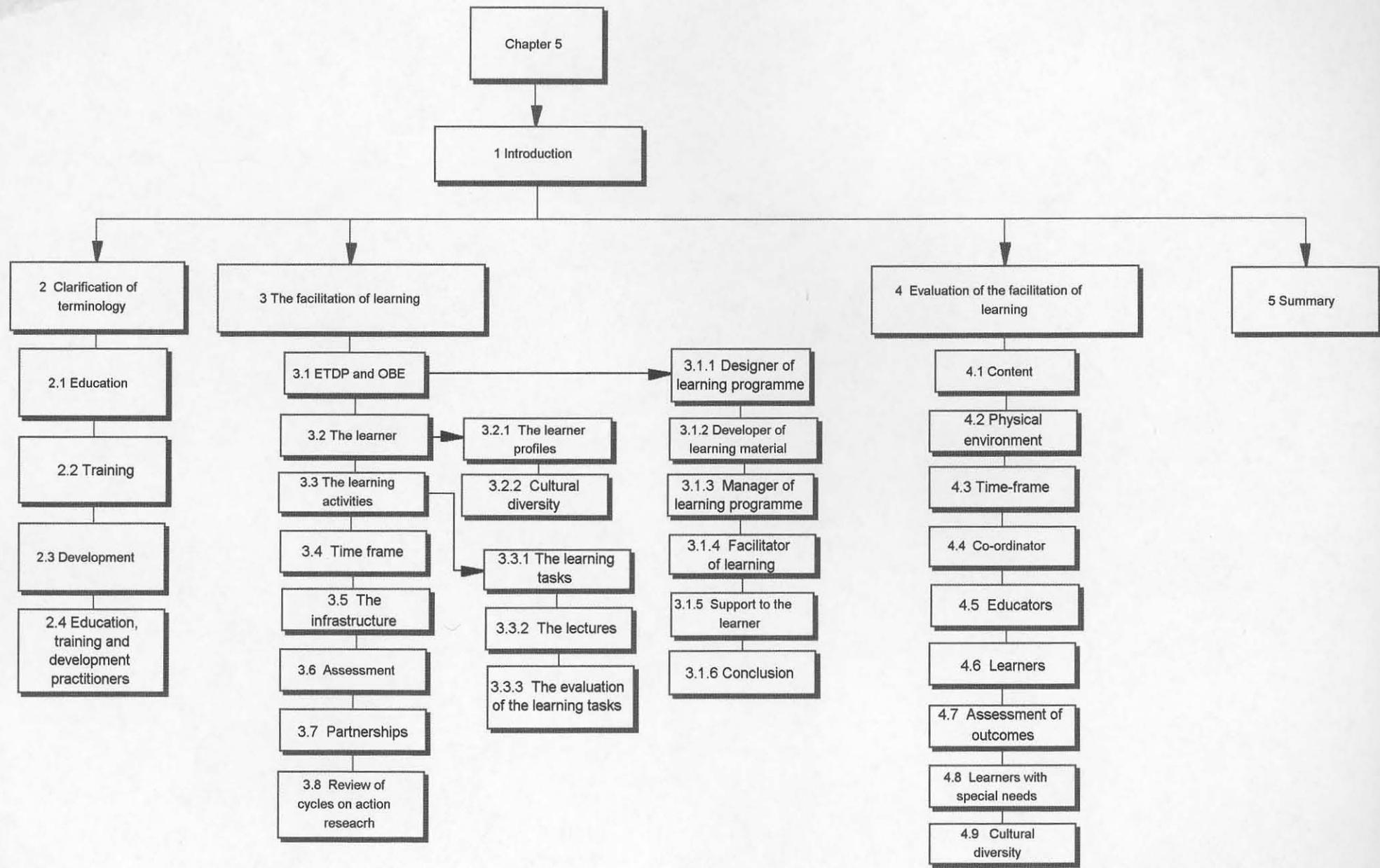
"The seed of a tree has the nature of a branch or twig or bud. It is a part of a tree, but if separated and set in the earth to be better nourished, the embryo or young tree contained in it takes root and grows into a new tree."

(Isaac Newton, 1642 – 1727)

Chapter 5



As the graphic rotates clockwise, the emphasis falls on the facilitation of learning, turning away the learning programme. I regard the governmental policy and present learning theories as described in Chapter 3 as the roots of the tree of education in South Africa. After sowing the seed in developing the learning programme [Chapter 4], it must grow. The facilitation of learning becomes the branch or twig or bud. If the seed is nourished, the embryo or young tree contained in it takes root and grows into a new tree. Chapter 5 describes the facilitation of learning where educators and learners are engaged in activities to become competent in the specific and critical cross-field outcomes.



CHAPTER 5

Facilitation of learning

“As teachers we assume that what we teach will be learned and applied by our learners in other classes, in their daily lives, and in future careers.

Unfortunately, the research on “learning transfer” does not support this assumption. (Johnson, 1995:33)

1 Introduction

The purpose of this study is to develop a better understanding, and providing an holistic overview of outcome-based learning in South African context with special reference to an integrated and generic process of calibrated assessment of competence against the national unit standards or qualification.

Chapter 3 addresses the first sub-question of this study pertaining to the legislative and educational concepts of education, training and development in South Africa. Chapter 4 addresses the second sub-question of this study and describes the composition of the learning programme for a registered qualification. Chapter 5 introduces the third sub-question of this study, i.e.:

What does the facilitation of learning for a registered qualification regarding assessment in South African education entail?

This chapter elaborates on the facilitation of the learning programme and addresses the “What?” and the “How?” questions of the three dimensions of a qualification.

According to Meyer & Mokoele (2002:14) the education transformation in South Africa has now emphasised the importance of the new Education, Training and Development system (ETD). Educators have to rethink how they are acting in a learning situation, and restructure opportunities for the learners to become actively involved in their own learning. They must also know how to guide learners to construct their own knowledge from their prior knowledge to achieve the specific and critical cross-field outcomes. Factual knowledge rapidly becomes obsolete and the new paradigm ‘learning to learn’ is more important than memorising facts (Beyleveld & Jama, 2002:113). The challenge is therefore to become an educator who helps learners to search rather than to follow.

2 Clarification of terminology

This chapter addresses the implementation of the learning programme in South African education, training and development in an outcome-based learning system and clarification of certain relevant terminology is needed in order to ensure that all concepts referred to in this chapter are unambiguously clear.

2.1 Education

Dewey (2001) refers to education as “something that should not be imposed from without but should be drawn from the endless possibilities from within the child ... education is life and not merely a preparation for life”. Erasmus and Van Dyk (1999:2) state that education is “the activities directed at providing knowledge, skills, moral values and understanding required in the normal course of life”.

It can therefore be said that:

- Education is life
- Education includes activities
- Education is not restricted to learning that takes place in a formal training institution but it includes all opportunities any learner has to be prepared for the challenges of life, i.e. life-long learning

2.2 Training

According to Meyer & Mokoele (2001:14) training entails the transfer of specific skills to an individual to perform specific tasks. Training is therefore narrower than education and is task-orientated and will be important as far as the performance of specific tasks enhances the life of the learner in the workplace.

2.3 Development

Development elaborates on the concept of education, and entails the ongoing learning opportunities for learners to improve and maintain high levels of performance (Meyer & Mokoele, 2001:14).

Development prepares the learner for life-long learning including the transfer of skills to perform tasks and therefore live a full life.

2.4 Distance learning

To contextualise the facilitation of learning in this study, a clarification of the situation in terms of the delivering of content is provided. A variety of investigations into alternative methodologies than face-to-face learning have been conducted to determine ways in which learning can be facilitated³¹.

There are different teaching models to assist learners to accomplish educational outcomes of relevant knowledge, skills and attitudes. Traditional distance learning implies a distance between the learner and the educator and is an alternative to local classroom learning. It allows learners to study without having to be in a classroom or school at the same place or time as the educator or other learners and depends on some form of technology, e.g. computer technology, Internet, video-conferencing, satellite television, telephone or mail (Kearsley, 1998:49).

³¹ It is not the purpose of this study to give a detailed description of these, and it will only be referenced

According to Oberg & Freeman (1996:4) traditional distance learning is characterised by the following:

- The learner and educator are separated during the learning process
- Two-way communication still exists
- There is some form of course content transfer and evaluation of learning

Du Plessis (1995:69), Gardner & McNally (1995:31), Boone (1996:33), Collins, Hemmeter, Schuster & Stevens (1996:49-51), Nielsen (1997:284-285) and Spooner, Spooner, Algozzine & Jordan (1998:123) describe the following contemporary mentor and tutor models as part of distance learning:

- Synchronous: broadcasting, telephone, two-way video, video-conferencing, visiting lecturers, guest lecturers, mentoring, etc.
- Asynchronous: Internet, facsimile facilities, and other technology enhanced distance learning practices

The use of electronic technologies for the delivery and support of instruction continues to grow at an exponential rate. On-line tools could be very useful as the technological infrastructure expands in terms of capabilities and power (Daniel, 1998; Katz, 1999). Boone (1995), Hall & Marrett (1996), Knapczyk & Rodes (1995), Nielsen (1997) and Sebastian *et al* (1996), record research on international experiences where educators provide local support but the main delivery mode is interactive teleconferencing, television, radio, computer and paper-based materials.

The approach in this qualification is a team effort and differs from those mentioned above, none of which include the unique way in which this qualification is presented. The facilitation of this qualification is similar to traditional distance learning in as far as the learners are at a distance from the higher education institution, but it differs in that the learners are still under supervision of a local educator and within the framework proposed by a national co-ordinator [Chapter 4]. According to Boone (1996:35) learners prefer attending classes in a normal classroom and do not want to lose personal contact with the educator or face-to-face interaction. This scenario is also supported by observations in this study where learners tend to complain that the contact time is insufficient and that they prefer the interaction between the educator and learner. This way of presenting qualifications also prevents too much attention from being focussed on implementation and maintenance of hardware and technology and not enough on the human interaction between educator and learner (Boone, 1996:41).

Organisational support is a crucial factor in education at a distance (Nielsen, 1997:304). In this study organisational support was allocated to the national co-ordinator who had to oversee the unit standards and learning material development, educator support and the registration of the learners. The infrastructure was provided by the local educator support.

The facilitation is therefore in dual mode, i.e. it is nationally coordinated and locally presented by trained educators with the focus on distance management. In the beginning the co-ordinator accepted that the educators could have freedom to decide on their own learning strategies, but as the project developed, it became clear that more guidance and national structures had to be introduced for quality assurance purposes.

This qualification allows the learners to work and study concurrently and provides the opportunity to complete a qualification without leaving the hometown.

The agreement between the two stakeholders for presenting this qualification includes:

- Training the educators in the qualification [Chapter 4]
- Accrediting educators to act as educators in the different venues [Chapter 4]
- Co-ordination of training on a national level by one co-ordinator

This means that the training was locally presented but nationally co-ordinated.

2.5 Education, Training and Development Practitioners (ETDP) / Educators

The education, training and development practitioner (ETDP) will become the educator for a qualification [Chapter 1]. The National Training Board (1994) refers to the different roles of the ETDP as explained in Table 67.

Table 67: The different roles of the EDTP

Roles	Description
Manager [Chapter 5]	Ensuring that the structured learning process is effective through coordination of education, training and development related activities
Administrator [Chapter 5]	Providing support and logistical backup for the implementation of training
Strategist [Chapter 4, Chapter 5]	Formulating plans for training and development, organisation, policies and practices to accommodate vision and mission
Needs analyst [Chapter 4]	Identifying learning and developing needs of both individuals and organisations
Learning experience designer [Chapter 5]	Designing interventions in terms of outputs and outcomes, learning opportunities and delivery to facilitate learning
Learning materials developer [Chapter 5]	Developing learning materials that will assist practitioners and learners in achieving the learning objectives
Group learning educator [Chapter 5]	Guiding interventions that enable individuals or groups to learn in a group context
Individual learning educator [Chapter 5]	Guiding interventions that enable individual learning needs to be satisfied
Assessor [Chapter 4, Chapter 5, Chapter 6, Chapter 7]	Assessing the competency status of individuals against agreed quality standards, using outputs and outcomes as the basis of evidence
Evaluator [Chapter 8]	Evaluating the impact of education, training and development on the effectiveness of individuals or organisations

The ETDP acts as a facilitator of learning for the individual or group to achieve a particular learning outcome through their own input in creating new ideas and understanding (Nel, 2001:143). An educator must be flexible, relevant, respect learners, be objective, stimulate thinking skills and accept limitations.

The assumptions concerning the educators for this qualification were:

- Educators are qualified teachers and therefore fully prepared to do the training
- Educators are adequately trained to present the qualification
- Educators have the same cognitive constructivist approaches
- Pedagogy and andragogy are mutually inclusive

3 The facilitation of the learning

In an outcome-based learning system the role of the EDTP as an educator with a teacher-centred approach turns into a learner-centred educator as explained in the following sections from a compilation by Meyer & Mokoele (2001:20), Olivier (2000:70, 72,103-107), Smith (2001:186-187), Spady (1994:11,12) and Van der Horst & McDonald (1997:89).

3.1 The education, training and development practitioner (ETDP) / educator and outcomes-based education (OBE)

Chapter 3 argues the paradigm shift in South African education, training and development with reference to the traditional content-based learning and the present expected outcome-based learning [Chapter 3]. The unavoidable question arises: Is the present educator sufficiently prepared to accept the challenge of outcome-based learning?

3.1.1 Designer of the learning programme

The process for facilitation of learning begins with the unit standards or qualification that are contained in the qualification. To determine whether the learner is competent against the specific outcomes the unit standard must be expressed in a clear and structured learning programme [Chapter 4]. The unit standard is a legal document and the educator must design a learning programme that is flexible in presentation and reflecting on activities.

In this qualification the co-ordinator developed the unit standards and the educators were invited to develop their own individual learning programmes that would be unique to each one's circumstances and their learners' needs.

Initially the educators were provided with an instructor's manual that included all the elements of the learning experience. It was unnecessary for the educators to give any more input but simply to follow instructions. When the outcome-based learning paradigm was introduced the educators were still operating in a content-based and teacher-centred environment and their prior knowledge and exposure were insufficient to contribute to the design of a learning programme. At the stage when the educators were requested to design their own learning programmes they had to submit them to the co-ordinator for approval. Table 68 contains two examples of the learning programmes that the co-ordinator received for this unit standard.

Table 68: Two examples of learning programme design by educators

Example 1: Centre Du ³²	
Week 1: NTG 471 manuals handed out NTG assignments & unit standards handed out & discussed / questions answered lesson content: LAN, MAN, LAN, topology (learners report back after group work) Assessment due next week: Personal Profile Week 2: view Personal Profiles handout assessment procedures for NTG 471 assignments / discussions follows list of references given to learners books on display re-cap: LAN, MAN, WAN & topology cable demonstration & discussion group discussion re: troubleshooting / report back afterwards Assignment due: NTF 471: 5 /2001 (Networking due on 13 & 15 March for the respective groups)	
Example 2 Centre Nw ³³	
NTG 471 Schedule for 2001	
13 Feb	Basic design + linking two pages
20 Feb	Critical study + design principles for web pages
27 Feb	Graphics
6 March	Networking
13 March	Work on Portfolio / Assessment matrix
20 March	Work on Portfolio / Assessment matrix
27 March	Work on Portfolio / Assessment matrix
3 April	Work on Portfolio / Assessment matrix
Session Details NTG 471	
<u>Design principles (3 hours):</u> <ol style="list-style-type: none"> 1. Learners find two URLs in their Learning Area 2. Learners copy URLs to a Word document 3. Learners make a column of a least five indicator of what they like and what they dislike about the Web site 4. Learners group in threes, share their URLs 5. Every learner has now six URLs (two of own and two times two = 4 of team mates) 6. The learner does the same with the other four URLs 7. Learners get together, discuss the likes and dislikes and put together the "mother" of all tables for likes and dislikes of Web sites. 8. Learners find one URL on Design Principles 9. Learners compile own design principles 10. Learners get together and put together the "mother" of design principles 11. Learners evaluate their gut feeling (step 1 to 7) with what the literature says. <u>Assignment:</u> Learners hand in all the documents finished on class for assessment	

Table 68 to be continued on next page.

³² Note: This is a copy from the original as received from the educator and should not be edited for language

³³ Note: This is a copy from the original as received from the educator and should not be edited for language

Table 68: Two examples of learning programme design by educators [continued]

Session Details NTG 471
<p><u>Design Principles Follow up (2 hours):</u></p> <ol style="list-style-type: none"> 1. Class discussion on web principles: table to criticise a web page 2. As <u>one</u> group: compose an overall table of Design Principles (Nw 2001) from personal likes and dislikes AND the Web sites you consulted. 3. Plan your own site, keeping these principles in mind. (Pencil and paper: hand in + receive back) in preparation for the Learning task (choose from Project 1) <p><u>Assignment:</u></p> <p>Learners hand in all documents finished in class for assessment</p> <p><u>Networking (2 hours):</u></p> <ol style="list-style-type: none"> 1. Learners discuss the network at the centre and answer the following questions: (each hand in own answers in Word) <ol style="list-style-type: none"> a. Is it a LAN, MAN or WAN? b. Which protocol does it use? c. What are the components? d. What type of network is it? (e.g. peer-to-peer) e. Which topology is used? f. What type of cabling is used? g. What software is used to network the computers? 2. Find 2 sites that give more explanation on networks and paste the URL's in a Word document. 3. List advantages and disadvantages of using network in general, using certain types and topologies in particular. 4. Get together with a fellow learner and exchange URL's, making now a list of 4 sites. 5. Add + and – aspects to your own list from number 3) <p><u>Assignment:</u></p> <p>Learners hand in all documents finished in class for assessment</p>

Analysis and interpretation

- Of all learning programmes received Example 2 was the best. Some educators (e.g. DR) just ignored the instruction to compile a learning programme and to have it approved by the co-ordinator.
- There is a significant difference between the two learning programmes presented by these two educators. The educator in example 1 was never exposed to any outcome-based learning information sessions or activities, while the educator in example 2 had been exposed to training and information sessions presented by the co-ordinator. With reference to the discussion in chapter 4 (section 3.4.2) however, the educator in example 2 did not develop her own unique learning programme from the unit standard, but tried to reproduce the example sent to her by the co-ordinator in her own words.
- There is no reference to the unit standard or specific outcomes in this learning programme.
- There was little or no input from other participants for the designing of the learning programme, it being restricted to the contributions of the educator.
- The lack of a structured plan to introduce a real outcome-based learning programme is evident in these examples and needs attention. Teachers from a content-based learning background do not necessarily know how to make the change to outcome-based learning and have to be exposed to a process of training and information gathering to be able to make a complete paradigm shift.

3.1.2 Developer of learning material

The purpose of the learning material is to provide the learner with opportunities to explore better, to contribute to be creative and to be able to deliver alternative ways to design and deliver content.

The hardcopy learning material in this qualification consisted initially of:

- A reference and resources manual for instructors
- A reference and resources manual for learners

These manuals were compiled by the co-ordinator and the educators had to order these from a company who provided services on a national basis.

As outcome-based learning was introduced, the learning material expanded to:

- A variety of Web site addresses
- A process to guide learners to find their own alternative learning material

Analysis and interpretation

- Educators ordered the learning material from the provider. There was confusion if manuals did not arrive in time because they were ordered late, wrong manuals were ordered, or because of suppliers' incompetent delivery systems.
- In a content-based learning environment, the teacher is provided with a prescribed textbook based on a prescribed syllabus, makes a reduction of the content to be presented to the learners and that supports the convergent thinker. In outcome-based learning the educators must guide the learner to find alternative sources of information to construct knowledge that support the divergent thinker. Educators in a content-based system could not provide alternative learning material or guide learners to find alternative resources themselves. They therefore relied on the prescribed learning material and could not function without it.
- In some centres (e.g. Be, CT, Du, Ra, Tz) the educators provided alternative material that was beyond the unit standard requirements and the learners' potential, e.g. as on NQF level 7. The result was that learners were overloaded with learning material of which they could neither make a selection nor absorb the content.
- Traditionally the learner is provided with prescribed learning material. When it was expected from learners to find their own learning material, learners who had never been exposed to this scenario complained *interalia* about the quality and standard of web-based resources. They did not realise that although language editing is important, it is not always crucial to exposure of new information. The web-based material is a fully updated resource and although books are important their information is sometimes outdated because it takes a long time to compile and print a book.

- Educators could not convince the learners that one of the critical cross-field outcomes in outcome-based learning is to find and collect information, to analyse the information and to structure knowledge and represent the information in an acceptable document. The learners therefore complained about the amount of reading to be done to synthesise the most important aspects, making the assumption that a textbook is already a reduction of the content and it is easy to learn the content for reproduction.

3.1.3 Manager of the learning programme

Outcome-based learning provides for the educator to become a manager in the classroom and therefore involved in managing the learning program, activities and infrastructure. The traditional teacher is not familiar with freedom to make decisions outside the framework of what is expected of a good teacher. A traditional good teacher produces results reflecting in high symbols and pass rates. Now the educator becomes a co-learner and a partner in decision-making.

Analysis and interpretation

- The feedback in this study confirms that educators relied on prescribed guidelines of instruction. Instead of becoming a manager of the learning programme they depended heavily on the manuals and instructions from the co-ordinator to provide guidelines to manage the learning programme.
- There was a general incompetence to manage the learning programme and the learners in a responsible way without guidance and prescribed rules and regulations. A reason for this may be the fact that most of the educators that were trained to present the qualification on behalf of UP are from the general education and training band. In this case an incorrect assumption was made that educators in pedagogy (childhood education) would be able to manage a learning programme in andragogy (adult education). This resulted in conflict between the teachers and the learners. The inability to manage adults in a learning programme could affect the outcome of the facilitation of learning.
- The management of the learning programme includes management of the infrastructure. This qualification relies primarily on the use of computers in a technology-enhanced environment. A lack of infrastructure (e.g. Internet availability, printing facilities) and inadequate technical support caused problems. From one centre (Du) an educator wrote "my lesson plans are falling apart when things are not working – to improvise the whole time does not solve the problem every week".
- Technical problems are common and could cause frustration with learners (Boone, 1995:98). In this case there is a variety of possible technical obstacles because the qualification is technology based and computer technology equipment is used. Educators do not manage the infrastructure well and take for granted that software is loaded, networks operate and that technical support is available.

3.1.4 The facilitator of learning

Sebastian *et al* (1996:150) and Boone (1995:98) emphasise the importance of well-prepared and organized facilitation strategy. In outcome-based learning the learners and the educators become partners in mastering critical cross-field and specific outcomes in a well-prepared and organized scenario. An important aspect of outcome-based learning is that the facilitator of learning must realise that the educator is no longer the single source of information and that the educator and the learners become co-learners.

- Learners from various centres (e.g. Be, DR, Du, KI, Pi, PE) complained in private e-mail and telephone conversations to the co-ordinator that educators are incompetent in facilitating the learning, that they can not answer the learners' questions and that they just read from the manuals. The co-ordinator visited training centres to solve the problems and appease the frustrated learners. The situation was confirmed during the visits of the co-ordinator, who observed educators reading from manuals because they had not internalised the content or constructed their own knowledge. However, this reflects the inability of both educators and learners to make a paradigm shift to become learner-centred and outcome-based partners in the learning environment, i.e. educators must realise that they are co-learners and do not need to know all the answers, and learners have to realise that the educator is only another source of information and not the source of all information.
- In some cases (e.g. CT, Du, Nw, Pi, PE, Tz) the educator prepared PowerPoint slide shows to facilitate learning and cover their incompetence to perform as the facilitator of learning. This resulted in learners copying from the slides as fast as they could and ended in a content-based, teacher-centred situation and a reduction of the content scenario.
- Educators supplied the learners with the references and resources manual for the instructors to give them access to the idea of 'this is what the co-ordinator wants'. Learners copied and pasted this information in the learning tasks thereby confirming that they had not constructed their own knowledge and copyright and authentic assessment became imperative [Chapter 7].
- Another phenomenon was educators who contracted non-educators to facilitate the learning without reporting to or getting permission from the accreditation body (UP). This was against the agreement of the contract between the two parties as the requirements for an educator was that the educator had to have completed the FDE(CAE). The result of this was that learners were exposed to learning material that was not included in the unit standard, primarily not within an authentic context and most of the time too advanced for the requirements of the qualification. In some cases the appointed educator had no educational background and could not facilitate the learners in an outcome-based learning paradigm.
- During 1998 twenty-five educators were trained to become representatives of UP to facilitate learning. After 1998 a number of these educators left the company and were replaced by learners who completed the qualification under the initial group of qualified educators. These educators complained that they were not trained to competency and that they felt inadequate to take the responsibility to do training.

- The replacement educator from PE admitted that “we approached this qualification with the wrong attitude and permanent learning did not take place, I have no knowledge of FrontPage and had to contract it out to an outsider”.
- The replacement educator from Du admits that “my heart misses six beats at a time, and that it may not have been a good idea to have appointed me for this”.

3.1.5 Support to the learner

Learner support is unlimited support to learners during the learning situation. Learners prefer educators who have the characteristics explained in Table 69.

Table 69: Preferences of learners for educators

Characteristic	Application in this study
Warm and friendly	Learners from centre Ra especially complimented the educator for efforts to support and the way in which it was done
Show respect	Learners lost respect when educators were not well prepared and could not manage the learning programme
Avoid embarrassment	Learners were often embarrassed by educators who were not well prepared and could not answer their questions
Give structure to the learning process	The majority of the educators are from a content-based, teacher-centred background and presented well-structured lessons. Well-structured lessons are not always advisable in an outcome-based learning environment and the structure in the latter case lies in the ability of the educator to facilitate the learning process in a structured way
Provide assistance	Educators were always available for learners to support them both synchronously and asynchronously
Treat learners fairly, encourage, praise	In the present situation in South Africa learners quickly complain about unfairness and discrimination. In the majority of cases the learning happens in a second language environment for both educator and learner, where it is unavoidable that there will always be touch of unfairness. It is sometimes difficult to facilitate learners that arrive late for a session and it is unfair to other learners to repeat activities already completed
Create a variety of learning opportunities	Even towards the end of the period that this study reports on, there was a notion to train learners for reproduction of knowledge. This included educators as well as learners
Demonstrate their own commitment to learning	Educators were under the impression that if they completed the FDE(CAE) they were sufficiently qualified to act as educators. The educators who became co-learners and improved their own knowledge performed better than those who depended on the manuals for reproduction of knowledge
An assessor whose assessment is valid, reliable, fair, flexible, sufficient [Chapter 7]	Educators are not trained as assessors and the lack of experience filtered through. This aspect will be addressed in Chapter 7. Learners complained that some educators did not give feedback on assignments (Du), an essential requirement (Hall & Marrett, 1996:93)
An evaluator who develops criteria to judge the evidence	Without a clear indication of assessment it is difficult to become a fair evaluator

3.1.6 Conclusion

Olivier (2000:31) refers to the secure and comfort zone of teachers and educators when teaching and lecturing, because they know their subject and enjoy demonstrating their knowledge. This has to change completely within the outcome-based learning environment.

The educator will have to ask the following questions (Van der Horst & McDonald, 1997:157):

- What outcomes should the learners achieve?
- What learning activities can I plan to make learners achieve these outcomes, i.e. how can I involve learners, how can I create a variety of authentic activities?
- How will I assess that they have actually achieved the outcomes?

If the educator becomes involved in the design, development, management, facilitation and support of the outcome-based learning programme, learning becomes a joyous journey of learning experience for the educator and the learner and not only a factual knowledge destination.

3.2 The Learner

The typical learners in South Africa come from a content-based learning environment where they have been spoon-fed in a stimulus-response situation of transfer of knowledge so that each learner becomes a replica of what the teacher knows. They are used to turning up for lectures and taking notes with little responsibility for their own learning. According to Schroeder (2001) the contemporary learner is under-prepared compared to previous generations and enjoys a measure of autonomy that creates discomfort for the learner, because they are not used to it. Typical expectations and attitudes of these learners are the following:

- Expect to learn everything during the three hour session
- Learners do not own computers or do not have access to computers
- Learners are unwilling to work on their own at home, only dependent on lectures
- The belief that in a content-based learning system what has been lectured must be learnt by heart and reproduced as such
- One fact one mark expectation
- Learners do not produce authentic learning tasks
- Low creativity, short of observation, language and communication skills
- Some learners were hardly contributing anything during contact hours
- Irresponsible and late for classes, then expect the educator to catch up with the work that the learner missed
- Learners do not pay the prescribed fees

Outcome-based learning establishes an environment for creative and thinking learners who will become whole brain-thinkers as a lifestyle and not carbon copies of the educator (Olivier, 2000:72).

3.2.1 Learner profiles

Although the purpose of this study is not an in-depth report of learners' characteristics, it is imperative to remember that a variety of learners with different characteristics are accommodated in an outcome-based learning environment. Schroeder (2001:2) reports on the learning dimensions of learners as represented in Table 70.

Table 70: Learning dimensions of learners

Dimension	Learning style	Implication for learning
Extroversion	Attention toward external world of people and things	Concrete
Introversion	Attention toward the inner world of concepts and ideas	Abstract
Sensing	Person perceiving the world through directly observing the surrounding reality	Direct, concrete, practical, immediate experiences, with linear, sequential learning. Lack of confidence in intellectual abilities and uncomfortable with abstract ideas More dependent on ideas of those in authority Require specific clarity on length of assignments, content of examinations Very specific instruction
Intuition	Person perceiving the world through impressions and imagining possibilities	Global learners, abstract learners who focus on perceptions of imaginative possibilities Concepts, ideas, open-ended instruction Autonomy in learning, diversity of ideas, critical thinking, independence, depth and originality of thought

A combination of these dimensions produces the following learner patterns according to Schroeder (2001:3).

Table 71: Learning patterns of learners

	Sensing (S)	Intuition (N)
Extroversion (E)	ES pattern	EN pattern
	Concrete active	Abstract active
Introversion (I)	IS pattern	IN pattern
	Concrete reflective	Abstract reflective

Learners with a behaviourist approach at the lower cognitive level of Bloom's taxonomy can be categorised as extroverted sensing (ES) or introverted sensing learners (IS) who want to be action oriented realists and learn best when dealing with the factual aspects or when useful applications are obvious (Schroeder, 2001:4). These learners need a great deal of formative assessment and regular feedback (Schroeder, 2001:7).

Learners with constructivist approach at the higher cognitive levels of Bloom's taxonomy can be categorised as extroverted intuitive (EN) or introverted intuitive (IN) learners who are action-oriented, looking for a challenge and are mostly academics (Schroeder, 2001:4).

Analysis and interpretation

The effect of the different types of learners in this study is obvious from the comments from learners themselves on the qualification:

- The majority of learners in this qualification were ES / IS learners who wanted facilitation of learning to be structured and content-based learning. They disliked the sources and resources provided from which they had to make their own analysis and synthesis for learning tasks. They did not like information from the Internet and wanted textbooks with factual knowledge they could reproduce in examinations. They did not understand that learning is a process and not a product. Growing up in a ES / IS supported environment these learners can not be blamed for their attitude. Additional learning is irrelevant and enrichment is non-existent because if the learner encounters something that is not needed in the learning task it is regarded as a waste of time. Most of these learners spent the minimum notional hours of learning on the facilitation of learning as indicated by the reports in Chapter 7.

An example of the ES / IS learner happened during assessment of the competency of the NTG 471 unit standard. In preparation one of the aspects was to construct knowledge of design principles [Chapter 4]. The learners had to search the Internet and find their own information. The learners also designed a Web site for educational purposes of at least five pages with hyperlinks [Chapter 4]. One of the knowledge questions in the assessment test paper was:

“What is the default or universal colour of a hyperlink?”

When one of the learners (Wa) read this question he pushed his chair backwards and remarked: “This is an unfair question, you never told us what is the default or universal colour of a hyperlink!”

Following his example a colleague pushed her chair backwards and added: “I agree! I received my telephone account yesterday. I paid R30.00 for my search on the Internet, I have printouts of this (indicating about 3 cm thick) on Web site design principles and I never discovered what is the default or universal colour of a hyperlink!”

Learners want a list of content they have to learn to reproduce for good marks. They do not understand that in OBE the process is more important than the product. They did not realise that to know where to find the information is more important than the information. They could have only switched to a web site to find the answer!

- The minority of learners who are EN / IN learners flourish on the assignments and the construction of knowledge. Once these learners get the exposure, they go beyond the prescribed materials and cannot stop searching for learning opportunities. Most of these learners spend the maximum notional hours of learning on the facilitation of learning as indicated by the reports in Chapter 7.
- Prior knowledge of the learners is a concern. This is supported by the remark from an educator that "... it is very scary that almost every learner admitted to having very little or no knowledge of the theoretical concepts ... where on earth did they study?" (Du).
- Boone (1995:99) refers to the change in the attitude of learners when the same learner that complained about her telephone account in the previous section made a complete paradigm shift and admitted that "in the beginning it was incredibly confusing, but in the end I had definitely learnt much more about outcome-based learning. I know that I can change my approach in my own classes and be more flexible". The moment a learner's attitude changes, it is subject to the effect of cognitive conflict that occurs in outcome-based learning and the result is remarkable and exceptionally conducive for learning.

3.2.2 Cultural diversity

South Africa is a rainbow nation and therefore education, training and development is inclusive and imperative for all South Africans. This qualification is a popular qualification because it exposes learners to authentic computer technology for which there is a real need.

Analysis and interpretation

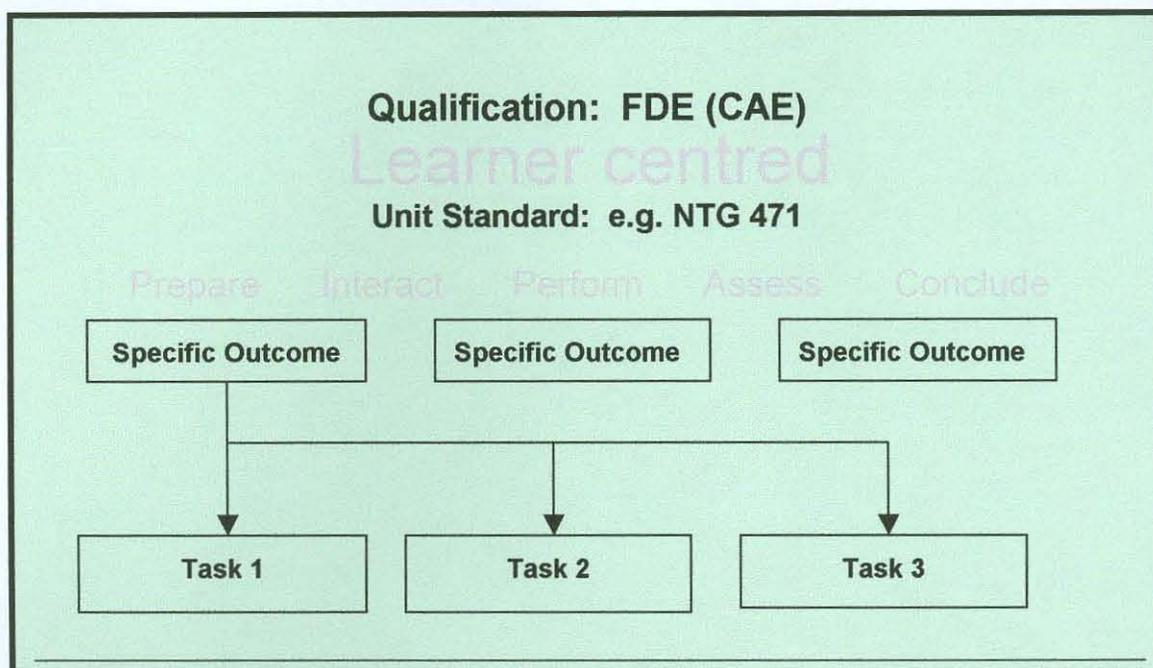
- Language is a major problem in South Africa. With eleven official languages the common denominator is English. It happens sometimes that all the participants in the learning situation are second language users attending a lecture. This often causes misunderstandings, and sometimes people blame one another for using an alternative language which "is not conducive for learning" (Wa learner). Terminology and pronunciation are some of the aspects that make communication complicated.
- Learners experience transport problems and either turn up late for lectures, or do not turn up at all. The expectation is that the educator will repeat to them what they have missed out on. This causes no problem in a content-based learning environment, but in an outcome-based learning environment all learners are actively involved with constructing their own knowledge and interacting with the learning materials and each other and progressing towards a common goal, i.e. the outcome. If the learner is late or does not attend a lecture, the learner becomes an individual without the enrichment of the outcome-based learning environment.
- Learners have a culture of staying away without reason and when they do come to the lecture eventually they produce a variety of excuses. This has a very negative effect on the learning outcomes.
- Learners have financial problems and sometimes have to terminate their learning experience for lack of funds.

- A primary and positive outcome of the cultural diversity is that although some learners are initially reluctant to take responsibility for their own learning, once they have been introduced to the critical cross-field outcomes [Chapter 3] and the excitement of outcome-based learning, they accept the challenge and become divergent thinkers that bring about changes beyond imagination. Two dedicated content-based learners (Wa) changed their attitudes during the facilitation of the learning and eventually became leaders in their community and transformed the staff room at their school into a computer room.
- Another exciting outcome is the mind change that takes place in the learner. When training Paintbrush in the RGB 471 module, the learners are set the task to draw a picture of anything in their learning area. In this situation, the learners cannot transfer this knowledge to their real-life situation and most of them draw a boat with a fish or a house with clouds. The educator asked one learner what her learning area was, to which the learner replied, "Business Economics". The educator asked what she could think of to draw in this learning area, but she could not think of anything. When asked what she was facilitating at the time the learner replied, "Production". The learner was then asked to elaborate and to explain what is production. She could list the processes of production, but could not think of any practical example to illustrate the processes. In a further attempt the learner was asked to describe the production process of a desk, on which she identified the raw materials as "wood, nails and glue". When the educator asked the learner whether she could draw these, she answered: "Yes, I can draw wood and nails, but I cannot draw glue". An experience like this opens the minds of the learners so that they understand the authentic context and creativity required to go beyond what they learn from books for the sake of replication.
- Despite the cultural diversity there developed a group dynamics where learners helped one another spontaneously.

3.3 The learning activities

Outcome-based learning performs according to Figure 12. The qualification consists of five unit standards and the example in this study is the New Technologies (NTG 471). These unit standards are described in specific outcomes, assessment criteria and range statements [Chapter 3, Chapter 4]. To achieve these outcomes tasks and activities are designed as in Chapter 4].

Figure 12: Outcome-based learning performance



3.3.1 Learning tasks

The learner had to prepare, interact, perform, assess and conclude in an authentic environment while being actively involved in his or her own learning process to be competent in the specific outcomes of the qualification (Olivier, 2000:103). The learning activities to be performed included the lectures, the learning tasks, the time-frame and the physical environment. Some observations on the learning tasks were the following:

- Learning tasks were not regarded as authentic, but seem to comply with the requirements to write examination as one learner complains that "it took me two weeks to complete the learning tasks, there are too many learning tasks".
- Learners could not transfer learning tasks to their own environment as a pre-school educator complains about the learning task on "tests". This learner does not realise that a pre-school learner can be tested on perceptual activities.
- Learning tasks were incomplete or learners did not do them at all

3.3.2 The lectures

Cambre, Erdman & Hall (1996:40) state that the following are typical of lectures:

- It takes some practice for educators and learners to adapt effectively to alternative learning strategies to which they had never before been exposed
- Inexperience and ignorance regarding technology and active involvement may lead to less satisfactory results in lecturing
- Changing roles in outcome-based learning causes problems for traditional "teacher" and "learner" roles and educators felt threatened by the questions the learners asked

The traditional content-based lecture is work-orientated, that is characterised by an orderly and quiet atmosphere. A typical outcome-based and learning-orientated lecture will be noisy with a variety of activities (Van der Horst, 1997:92). For learners who are actively involved and apply themselves to the critical cross-field outcomes of analysing in problem solving, information gathering, working and communicating in groups, organising and managing and interacting with technology, it is not possible to learn in a work-orientated environment.

When outcome-based learning was introduced in South Africa educators were afraid that a learning-orientated environment would be without discipline and in a chaotic state. With learners participating responsibly in their own learning, it gives them the opportunity to act as responsible citizens and to perform according to their abilities. This also does not mean that there are no rules to obey, as a structured and organised learning environment is still essential and conducive to learning.

Analysis and interpretation

- As already mentioned in section 3.1, the educators rely on a content-based learning approach because of fear that learners will ask questions that they cannot answer, it takes less preparation and puts the educator in control. Learners also request a content-based learning environment, because they feel safe and secure. However, once the learners have been exposed to an outcome-based learning environment and the paradigm shift has really taken place, the learners admit that they never thought that an outcome-based learning environment could work. Some comments confirm this:

“Thank you very much for a wonderful training session. I have learnt so much and really enjoyed it. It is wonderful that we had to find all the information by ourselves and that we could apply it in our everyday lives. I think that one learns much more doing it that way and we are all excited to start working on our assignments.” (Du)

“I did not believe that co-operative learning could work in a classroom. I have now introduced it in my own classroom and even presented it to the staff during a staff meeting. My colleagues asked many questions and some of them are still not convinced, but I am going to talk to them and prove to them that it works! I have learnt so much and this course is essential for every teacher in outcome-based learning!”

3.3.3 The evaluation of the NTG 471 learning tasks

The learning tasks for NTG 471 are described in Chapter 4 Table 53.

Analysis and interpretation

- As expected from learners from an ES / IS background the learning tasks were regarded as assignments for the sake of the submission of a portfolio and not as authentic learning tasks.
- The learning process was disregarded and the perception prevailed that the product, i.e. the learning tasks, had to be perfect.

3.4 Time frame

Although outcome-based learning is a learner-driven approach, educators cannot permit learners to proceed on their own and an educator can never be replaced (Boone, 1995:95; Hall & Marrett, 1996:91, Olivier, 2000:71). Good educators will always guide and manage learners in the learning activities and there is still a need for a timetable and structured lectures. Within the context of this qualification the following lecturing time is prescribed and explained in Table 72 [Chapter 4].

Table 72: Time allocation for the qualification

Unit Standard	Code	Notional hours	Lecturing time	Self-study time
Computer Use in Teaching	RGB 471	120	22.5	97.5
Computer Use in Teaching	RGB 472	120	22.5	97.5
Theoretical Principles	TBG 471	120	21	99
Computer Assisted Testing	RTS 471	120	21	99
New Technologies	NTG 471	120	21	99

Of the 120 notional hours per module, approximately nineteen percent is face-to-face lecturing time whereas seventy-nine percent is individual learning time for research and assignments. Face-to-face lecturing could be scheduled according to the needs of the learners at the different venues. Some venues scheduled one, two or three full day training sessions (8 hours per day) and some scheduled three hours per week every second week. The learners expressed mixed feelings about the time allocation in which training took place. Some learners complained about the training as being overwhelming on one day and experience a “cognitive overload”. Similar experiences are recorded by Schrum (1996, 251) as “(a)lthough most of the participants agreed they have learned a great deal, the frustration levels may have been lessened with more time for learning”. In the end the majority of learners prefer a schedule of three hours per week as supported by research done by Boone (1995:95).

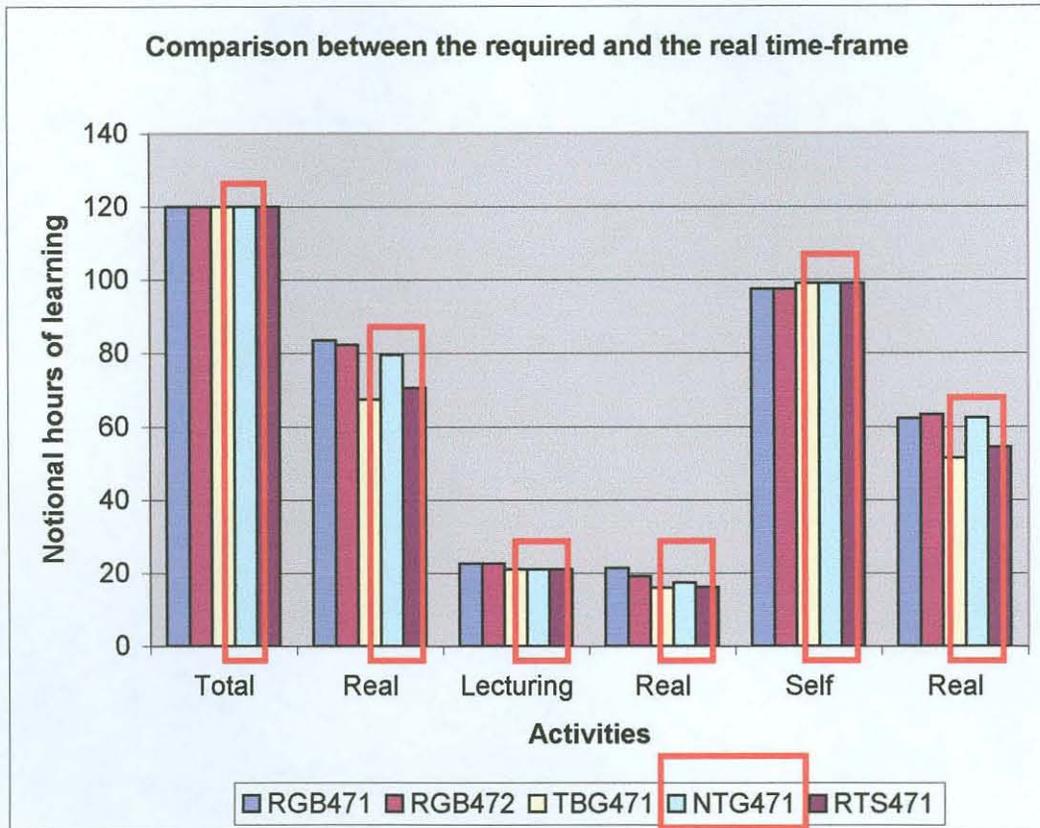
Table 73 represents the time allocation for each unit standard with reference to the required notional hours of learning, lecturing time and self-study time, and the average of the real total hours of learning, the average of the real hours of lecturing as well as the average of the real hours of self-study.

Table 73: The required and the real time frame of this qualification

Code	Notional time (hours)	Total notional time (hours)	Lecturing (hours)	Real lecturing time (hours)	Self study time (hours)	Average self study (hours)
RGB 471	120	83.5	22,5	21.4	97,5	62.1
RGB 472	120	82.3	22,5	19.1	97,5	63.2
TBG 471	120	67.4	21	16.0	99	51.4
RTS 471	120	79.6	21	17.3	99	62.3
NTG 471	120	70.5	21	16.1	99	54.4

Table 73 is graphically presented in Figure 13.

Figure 13: Graphical presentation of the required and the real time frame of this qualification



Analysis and interpretation

- From the information in Figure 13 it is evident that there is a discrepancy between the required time allocation and the real time spent on the learning. This is also reflected in the results of the competent learner where there is a correlation between the mark allocation and the notional hours learning time. It is not clear whether a lack of face-to-face lecturing hours influences the competence of learners, but it is evident that inadequate notional hours of learning can influence the competence of learners [Chapter 7].
- The low average of face-to-face lecturing time is due to learners who mention that they hardly had any contact hours (Ru) and that they had to deliver the modules on their own.
- The slower learners complained that the lecturing time was too little. In the open-ended questionnaire they made remarks like “too much learning in three hours per week”, “little time for lecturing”, “little time during lessons and not enough individual attention” and “speed at which lessons are presented too fast”.
- In contrast with the learners that complained about too little time, other learners reported that the “time allocation is right” or even “it could be completed in one year”.

3.5 The infrastructure

Sebastian *et al* (1996:156) refer to the importance of the support and the infrastructure that the educator must provide. This qualification is a computer technology enhanced qualification and needs unlimited and full access to all hardware and software of a multi-mode learning environment.

Analysis and interpretation

- When this qualification was introduced in 1997 the educators had limited access to computer technology, especially specialised software programmes (e.g. *Microsoft Access* and *Microsoft PowerPoint*) and Internet facilities. In 2002 there were no such problems and it was assumed that all facilities were available at accredited training centres. However, the experience was that some educators tried to facilitate learning without the minimum prescribed infrastructure, e.g. at three centres there was only one computer with Internet access between three or more learners and a well-established network was non-existent. Printing was impossible and some floppy disk drives were out of order.
- In 1997 few learners had their own personal computers. Although it was a prerequisite to either own a computer or have unlimited access to computer facilities, learners did not pay attention to the urgency of this matter and tended to rely on the face-to-face interaction lectures as sufficient to become competent in the specific outcomes of the unit standard. If the educator tried to accommodate the learners by making provision for self-study opportunities at a computer centre, the learners were either late or simply did not turn up at all. One learner expressed frustration when stating that “I do not have facilities at work or at home, e.g. the Internet access. Everything I want to do I must arrange and come to Randburg Futurekids during my spare time and this is how I cope”.

3.6 Assessment

The contribution of assessment to the facilitation of learning will be discussed in chapter 7.

3.7 Partnerships

The qualification could be presented to all learners in South Africa because of a partnership between two stakeholders, i.e. UP and FKSA)[Chapter 4]. Dasher-Alston & Patton (1998:14) refer to the interaction between stakeholders in education at a distance which must consider the following regarding the facilitation of learning:

- Learner outcomes and facilitation strategies should be clearly articulated
- The learning programme guides the development and use of education at a distance
- Effective assessment methodologies must be identified
- A plan must be developed to guide the technology and equipment
- There must always be collaborative inputs between participants
- The quality and integrity of the educational programmes must always be maintained

- The educator should provide access to appropriate sources and resources to facilitate and support instruction
- Workshops support opportunities must be available

Analysis and interpretation

The following aspects affect the partnership between the two stakeholders:

- The difference in philosophical approach has to be taken into account. FKSA uses an international curriculum designed on a template-based system with themes. The educators had difficulty in interpreting an outcome-based learning philosophy from this content-based learning environment and the effect on the assessment was remarkable and contributed to the discrepancy in mark allocation and difficulty in answering outcome-based learning tasks [to be discussed in Chapter 7].
- A turnover in staff contributes to a lack of consistency and progress in training, development and facilitation of learning experiences. If a trained staff member is replaced by an inexperienced staff member training has to be repeated and this puts the programme back to stage one.
- Internal changes affect all stakeholders especially if all stakeholders are not informed about the changes. The impact of these changes can be considerable as far as the organisation, presentation, delivery and implementation of certain applications are concerned. Structural changes within FKSA affected the payments of the educators' fees (e.g. promised payments for the educators that are withdrawn), it changed the attitudes of people (e.g. a change in managerial positions caused unexpected personality differences converting enthusiasm into negative attitudes) and it changed the impact on the deliverables (e.g. from consistent support between the partners to no support at all).
- Payments can become an issue. The contract between the stakeholders determined that the HEI would receive five hundred Rand as registration fee for each learner for the period of two years. The balance of the training fee had to be paid to the educator or representative of the partner who provided the training. A major problem was that one partner presented the qualification to their own employees either for free or at a reduced price. The result of this action was that learners regarded this as an inferior qualification and were surprised at the input required from them to be competent in the specific outcomes of the qualification. This aspect had a major impact on the facilitation of learning as far as the attitude of learners was concerned.
- Marketing is an important aspect of a partnership. The contract determines that FKSA will do the marketing. This partner uses a computer technology approach to the qualification and learners complained that they had been misinformed about the reality what was expected of them. ES /IS learners opposed the facilitation of learning because of the negative attitude as a result of marketing procedure.

3.8 The action research and the facilitation of learning

A cyclic procedure is characteristic of action research [Chapter 2]. Table 74 presents the cyclic events of action research in the context of facilitation of the learning for the NTG 471 unit standard of the FDE(CAE) qualification for 1997.

Table 74: Action research application in this study for 1997

The cyclic, spiral and iterative nature of the action research in this study							
Cycle	Legislative framework and educational concepts in South African education Chapter 3	Learning programme	Facilitation of learning	Evidence of learning: the portfolio Chapter 6	Assessment of learning Chapter 7	Quality assurance Chapter 8	
1997		Chapter 4	Chapter 5				
Idea		Design and develop a curriculum from scratch	Traditional presentation of content-based learning				
Plan		No learning programme exists, a conventional content-based and teacher-centred curriculum with conventional tasks and study guides was developed	Not applicable				
Action / Observe		Unsatisfactory results because of inappropriate reading ability of learners and individual inputs	Unsatisfactory results because of inappropriate and inadequate computer facilities available				
Reflect / Evaluate		Alternative strategies had to be considered	Alternative strategies had to be considered				

This was the first year of the introduction of the qualification in a content-based learning environment with a curriculum and content-based teaching and learning activities prepared for rote learning.

Table 75 represents the contribution of the facilitation of the learning to the action research in 1998.

Table 75: Action research application in this study for 1998

The cyclic, spiral and iterative nature of the action research in this study							
Cycle	Legislative framework and educational concepts in South African education Chapter 3	Learning programme	Facilitation of learning	Evidence of learning: the portfolio Chapter 6	Assessment of learning Chapter 7	Quality assurance Chapter 8	
1998		Chapter 4	Chapter 5				
Idea		Enhancement of the curriculum with appropriate references and resources	To change the approach to outcome-based learning				
Plan		Improvement of references and resources for learners	Introduce outcome-based learning activities				
Action / Observe		Resistance against provided content references and resources	Alternative approach to collect and analyse data, data management by learners				
Reflect / Evaluate		Learners did not understand the variety of references and resources, still in a behaviourist paradigm of "content received is content to be learnt by heart and to be reproduced"	A combination of the facilitation of content-based and outcome-based learning Learners objected to outcome-based facilitation of learning				

Educators were reluctant did not understand, while learners rejected any effort to introduce alternative outcome-based learning methodologies.

Table 76 represents the contribution of the facilitation of the learning to the action research in 1999.

Table 76: Action research application in this study for 1999

The cyclic, spiral and iterative nature of the action research in this study						
Cycle	Legislative framework and educational concepts in South African education Chapter 3	Learning programme	Facilitation of learning	Evidence of learning: the portfolio Chapter 6	Assessment of learning Chapter 7	Quality assurance Chapter 8
1999		Chapter 4	Chapter 5			
Idea		Start with the design and development of a new learning programme	To improve on the previous facilitation of learning and introduce facilitation of real outcome-based learning			
Plan		Design and develop a completely new learning programme	Provide educators with guidelines for outcome-based facilitation of learning			
Action / Observe		Time constraints to fully develop and implement a new learning programme. Unit standards were developed	Introduced the developed unit standards; educators and learners viewed it from a content-based learning perspective			
Reflect / Evaluate		The idea did not become a full reality	Outcome-based facilitation did not become a reality			

Educators and learners still rejected alternative outcome-based methodologies, because they did not understand.

Table 77 represents the contribution of the facilitation of the learning to the action research in 2000.

Table 77: Action research application in this study for 2000

The cyclic, spiral and iterative nature of the action research in this study						
Cycle	Legislative framework and educational concepts in South African education Chapter 3	Learning programme	Facilitation of learning	Evidence of learning: the portfolio Chapter 6	Assessment of learning Chapter 7	Quality assurance Chapter 8
2000		Chapter 4	Chapter 5			
Idea		Start again with the design and development of a new learning programme	To improve on the previous year and implement the learning programme as well			
Plan		Although traditional methodologies were still used, the unit standards were applied and the plan was to introduce a completely new learning programme	Educators and learners used the unit standards and could use their expertise to facilitate their own learning programme			
Action / Observe		The partial introduction of a new learning programme was still confusing because of a lack of understanding of the learning programme and introduction of alternative strategies to content-based learning	There seemed to be a problem with the trainers in that they do not understand how the outcome-based learning programme must be facilitated			
Reflect / Evaluate		More training, participation and activities needed	More communication, training, participation and activities needed			

There is a need for information, communication, training and workshop of ideas.

Table 78 represents the contribution of the facilitation of the learning to the action research in 2001.

Table 78: Action research application in this study for 2001

The cyclic, spiral and iterative nature of the action research in this study						
Cycle	Legislative framework and educational concepts in South African education Chapter 3	Learning programme	Facilitation of learning	Evidence of learning: the portfolio Chapter 6	Assessment of learning Chapter 7	Quality assurance Chapter 8
2001		Chapter 4	Chapter 5			
Idea		A complete developed learning programme for the qualification in outcome-based learning	Educators enabled to facilitate the learning programme in outcome-based learning			
Plan		Introduced educators to the fully developed learning programme for the qualification in outcome-based learning	Organised training workshops to explain the paradigm shift to educators and learners			
Action / Observe		A new learning programme with a full implementation in an outcome-based scenario was still something the educators were unfamiliar with	There seems to be a problem with the trainers in that they do not understand how the outcome-based learning programme must be facilitated			
Reflect / Evaluate		The learning programme was developed and implemented and successes and failures could be reported	The workshops with the learners took place although learners did not take this seriously. Those who attend the workshops understood. Workshops with the educators did not take place			

During this cycle the co-ordinator visited the training centres [Chapter 4] and communicated the legislative framework and educational philosophies with the educators and learners. Some of these did not regard the workshops as serious and did not bother to attend. Those who did attend, were all very positive and impressed with the way the changes positively affected their learning.

Table 79 represents the contribution of the facilitation of the learning to the action research in 2002.

Table 79: Action research application in this study for 2002

The cyclic, spiral and iterative nature of the action research in this study						
Cycle	Legislative framework and educational concepts in South African education Chapter 3	Learning programme	Facilitation of learning	Evidence of learning: the portfolio Chapter 6	Assessment of learning Chapter 7	Quality assurance Chapter 8
2002		Chapter 4	Chapter 5			
Idea		A full development of the learning programme for outcome-based learning adapted and changed as experienced in 2001	A full implementation of the facilitation of learning for outcome-based learning adapted and changed as experienced in 2001			
Plan		No new plans for this qualification because of the termination. However, the experience can be used and built on in future	Organised training workshops to explain the paradigm shift to educators and learners			
Action / Observe		The learning programme for this qualification has been developed and could be implemented	Educators and learners exposed in 2001 are more comfortable and have adapted			
Reflect / Evaluate		Partial success in implementing a learning programme, some educators still have to be addressed to more exposure and experience	Partial success, progress on the implemented facilitation of outcome-based learning; there is still a learning curve and aspects to address			

Although all the data for this cycle is not yet available, the observations are that the educators and learners are in a process of change. Some of these changes are included in the study [e.g. Prologue; Chapter 3: e-mail from learners and SAQA presentation] With sufficient communication, support and motivation the stakeholders will contribute to a better understanding of outcome-based learning.

4 Evaluation of the facilitation of learning

The following summarises the findings on the evaluation of the facilitation of learning of the qualitative data collected with reference to the contributions of the content, the educators, the learners, the physical environment, the time frame and the impact on the assessment of the outcomes against the specific outcomes of the unit standards for the qualification. This is an elaboration on the reflection on the action research as documented in Table 74 and in context of the requirements that all participants must contribute to the facilitation of learning [Chapter 2].

4.1 Content

- The facilitation of learning programme is not always in context of the requirements of outcome-based learning and according to the unit standards. Various comments received on the facilitation of learning support this statement as mentioned in the previous sections.
- Educators did not always implement the correct content in the facilitation of learning, sometimes went beyond and sometimes too little was done with reference to what was expected. This emphasises the initial inability of educators and learners to read and interpret a unit standard and the specific outcomes in outcome-based learning and that they need guidance and training in this regard.

- A general observation was that the learners were outspoken about the fact that they “did not like the learning tasks”, that they sometimes regarded them as “repetitive”, “did not know how to do the learning tasks” or “did not understand what was expected”. This was in accordance with the content-based learning that these learners had been exposed to where the convergent thinking learners were only expected to reproduce the reduction of the content by the teacher for good grading. It was also in accordance with the need for critical cross-field outcomes and the fact that learners had little or no higher order thinking skills and could not analyse a problem, find information and make a synthesis to present a solution in an authentic way [Chapter 2]. It was also interesting that these learners did not like the learning tasks on the database [RGB 472, TBG 471, RTS 471], because mental processing of information relates to database activities.
- The more divergent thinking learners apparently adapted to the learning tasks and “enjoyed the practical learning tasks”, described them as “interesting and nice and I could even help my colleagues”, “could be related directly to teaching”, “it gave me confidence to do the same in my classes” and “ I enjoyed the variety of tasks; and especially to critically evaluate my own lessons”. These learners also enjoyed the tasks on a database and reported with great honesty that they “disliked the database assignments in the beginning, but when we understood what it is about, we realised that it is because of our behaviourist background in which we were brought up as well as in which we were educated”.

4.2 Physical environment

The physical environment included unlimited access to technology and specifically computer technology and the Internet to execute the facilitation of learning. Problems experienced were that learners did not have access to these amenities and did not understand the importance of a technology-integrated facilitation of learning.

A major problem was the inadequate Internet facilities at the training centres and that contributed to a serious waste of time.

Another problem was the fact that the learners did not have access to computers at home. This was no excuse however, because unlimited access to a computer is a prerequisite for the qualification.

4.3 Time frame

The time for facilitation of learning or the time the learners had to complete the qualification.

- Educators and learners could not interpret the time frame of 120 notional hours and as will be indicated in Chapter 7, the learners did not spend adequate time on learning inputs to become competent in the specific outcomes.
- The allocated lecturing time for a module is on average about 21 hours, the self-study time about 98 hours and the total notional hours of learning prescribed 120 hours [Chapter 4]. Although the learners had access to the educator some of them reported that “a lot of time was wasted because the qualification is time intensive and there is not always somebody available to ask for help”.

- This qualification was a part-time course over two years. The following comment summarises various learners' feelings: that they "would have done better if my workload at school was not this much especially this time of the year" (a "time" referred to by different learners and that could be interpreted as the whole year!).
- In a true outcome-based learning environment, the learners not only remarked that "it took time to come to grips with the content and the gathering of information from readings took time", but also that "one should spend more time on gathering information" and "that I would like more time in practice to be able to learn more". This need for learning could be related to learners who would like to become life-long learners [Chapter 2].
- A remarkable commentary from learners was the indication that the outcome-based learning situation also addresses the affective skills of learners as they mention that "it took a lot of time but was worthwhile", "time consuming but great joy" and "the time is restricted but it is satisfying and pleasing" [Chapter 2].
- Learners struggled with the second language situation in South Africa and comments like "the research in English was time consuming" and "terminology that one doesn't understand" were common.

4.4 Co-ordinator

The above-mentioned sections confirm a variety of statements relating to learners' performances with respect to distance learning delivering mode. The co-ordinator made certain incorrect assumptions with reference to the facilitation of learning like the following:

- All educators were well-informed about the changes in South African education, training and development especially because they are attending a variety of departmental in-service workshops on outcome-based learning
- Educators will respond spontaneously to requests for input into the facilitation of learning if asked
- Educators will share their experience in an outcome-based learning fashion, while they were still engaged in a content-based learning paradigm
- Educators are capable of accommodating adult learners (andragogy) even if they were trained to handle children (pedagogy)

It seems as if these assumptions were incorrect and guidance and training are necessary to support educators and learners in the facilitation of outcome-based learning.

4.5 Educators

Hayden & Thompson (1998:63) state that different educators may influence the outcomes. A large number of learners completed the course, some with distinction. The experience of this study emphasises that a major problem with this modus of presenting a qualification is that continuous training and interactive counselling sessions with the educators are essential to update and support educators and get their input into the learning environment and ensure consistency in presenting course content as well as maintaining the quality assurance (Gardner & McNally, 1995:31; Hall & Marrett, 1996:93).

A primary concern is the question how educators that do not have exposure to implementing critical cross-field and specific outcomes themselves are going to facilitate learners in these. If the focus is not on the unit standard and the specific outcomes, the result is confusion as to what is relevant or not in the facilitation of learning.

There was positive educator feedback on the course:

- Educators were positive about the new learning tasks
- Educators were excited about the change in attitude towards their daily duties that this course accomplished
- Educators made paradigm shifts to outcome-based learning for the benefit of the own situation
- Educators found new career opportunities
- Appreciation for educators and feedback on respect for the course

Educators were invited to take part in the discussion of a modus operandi for the facilitation of learning [Chapter 2: Requirement of action research]. However, the following happened with respect to the contributions and interpretation by the educators:

The traditional educator had never been expected to participate and contribute in discussions on the facilitation of learning. They received a curriculum from the Department of Education that was translated into a syllabus. The task of the educator was to break down this syllabus into subdivisions of year, term, week and daily activities and prepare lessons with reference to the content in the prescribed textbook. This referred to a content-based, teacher-centred and passive learner approach. The aim was to deliver learners who could reproduce a replica of what the educator had in mind with reference to the reduction of the content from the textbook.

Dealing with an internationally prescribed and mainly template-based curriculum where educators are not allowed to deviate, the educators from FKSA were trained in a content-based learning environment where little or no creativity was expected from them. Educators were therefore used to be prescribed to and with reference to how they have to facilitate learning and did not understand the freedom of decision-making in the facilitation of learning.

The educators in this study did not really understand the concept 'facilitation of learning' because they had never been exposed to the concept and as it was initially not properly explained to them, they

could not really contribute meaningfully because of distances and time constraints. A learner reported that “the lecturer could not help us because they do not have the knowledge” and another complained that “lectures were a waste of time because it was a process of self-discovery”. It is recommended that in a situation like this, participants will be well informed and prepared to contribute in regular meetings and workshops on the facilitation of learning in outcome-based learning.

4.6 Learners

The learners are in-service educators at different venues in South Africa and represent the General Education and Training Band and the Further Education and Training Band and have been exposed to various in-service training workshops with reference to outcome-based learning.

- It was found that the learners have little or no prior knowledge of SAQA, the NQF or assessment in outcome-based learning or any other content of the changes that are taking place in the approach and in the system and that they are not able to interpret the unit standard in an outcome-based learning fashion.
- This study also emphasises the fact that learners do not read properly and that misinterpretations occurred regularly. In 2001, the co-ordinator visited the centres and explained to the learners the importance of the unit standard as a legal document and the departure point for assessment in outcome-based learning, and then only a positive input was experienced from those who attended the meetings.
- The learners did not contribute as active participants in the action research, because of ignorance as to what is expected.
- Learners enjoyed the co-operative learning opportunities in class discussions and comment that “interacting with other learners and working together was cognitively stimulating”, “the discussions were impressive because we could argue about real matters that take place in our classrooms” and that they “liked the lectures, the interactive groups, the debates and the friendships”. This is in accordance with the critical cross-field outcomes where learners have to work effectively in a group and be able to communicate information.
- Learners support a real facilitation of learning and admitted to the educator that “it was worthwhile and you facilitated the difference in my teaching career”.
- True to the content-based learning environment, learners also passed comments like:
 - “I disliked being handled in a constructivist manner; I am not used to unscrabbling information and constructing new knowledge.”
 - “Coming from a behaviourist environment, it was hard to adjust to constructing my own knowledge and discovering for myself.”
- The overseas learner admitted how the qualification changed her outlook on education
- A learner mentioned that this qualification had a higher standard than that of her children doing an honours degree

- Learners admitted that they have never worked so hard
- There are a number of learners who expressed the urge for life-long learning

4.7 Assessment of outcomes

Assessment of outcomes is different to summative marking of learning tasks and examinations. During the period 1997 to 1999 learners were exposed to these traditional ways of evaluation. The learning changed and introduced a portfolio of evidence. The learners did not understand this approach and this is discussed in detail in Chapter 7. The facilitation of learning is imperative to the assessment of learning.

4.8 Learners with special needs

This study did not include learners with special needs as far they are handicapped with blindness or something similar. However, an investigation is needed to determine whether learners from a very limited content-based environment are not to be regarded as learners with special needs. The facilitation of learning can accommodate these learners as well.

4.9 Cultural diversity

South Africa is a country with a very good example of cultural diversity. Learners tend to feel that are discriminated against all the time. Flexibility and patience accommodated these learners and they changed their minds [Prologue].

5 Summary

The impact of the facilitation of the learning programme on the assessment of learning is inevitable. If the learning programme is not well facilitated the assessment will be affected [Chapter 7, Chapter 8].

This study includes data of a qualification consisting of five unit standards, presented over a period of six years at 17 venues to learners who were registered for the FDE(CAE). Although only one unit standard is selected as an example for discussion in the research, Hayden & Thompson (1998:63) refer to the influence of the nature of the unit standard and confirm that there is a range of different perceptions for different unit standards in the qualification, but that all rate consistent levels of application in spite of variations in conditions.

Chapter 3 is a discussion on the legislative and educational concepts of education, training and development in South African education. Chapter 4 introduces the design and development of the learning programme of one unit standard in the qualification according to the legislative and educational concepts of outcome-based learning and the contribution to develop a better understanding, and providing an holistic overview of outcome-based learning in South African context with special reference to an integrated and generic process of assessment of competence against the national unit standards or qualification. Chapter 5 describes the facilitation of the learning programme introduced in Chapter 4.

Policies at national level require educators to develop and implement the critical outcomes accepted by SAQA and adopt an outcome-based learning approach for all courses. Goode & Thomen (2001:198) claim that educators do not have this expertise and knowledge and that support and training is crucial for the successful transformation of content-based learning to outcome-based learning. This study supports this statement and although there is an observable change there is still a road ahead to reach the outcome expressed by a learner as “personal growth, excitement, opportunities and a great potential”.

The results of this study support the report of Taylor (1998:64) when he states that the evaluation of the pedagogical implications of this programme will lay the foundation for continuous improvement because the indications are that the quality and standard of learning is extremely high and in some respects exceptional. Despite problems, the facilitation of learning was successful in bringing about a change and learners were overwhelmingly positive. The qualification itself had a profound impact on the learners.

Chapter 6 describes the portfolio as the evidence of learning that has been introduced in the learning programme in Chapter 4 and compiled during the facilitation of learning in this chapter.