

# CHAPTER 1

## Introduction to the research project

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*“Assessment of learning is an essential element of outcome-based education. Without valid and reliable assessment procedures you will simply not know whether or not your learners have achieved the learning outcomes that were the focus of the programme, unit or lesson, and neither will the learners know whether they have learnt well.” (Van der Horst & McDonald, 1997:170)*

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### 1 Introduction

This research set out to find practical solutions to the problems associated with the assessment of outcome-based education in South Africa, where a revolution as well as an evolution is currently taking place in education, training and development. It is a revolution because of the resistance to change and an evolution because of the inevitability of the change. Spady (2002) expressed concern that outcome-based education had been introduced in South Africa too fast and without sustainable communication of information and supportive training. In this thesis government policy is regarded as a given. The pragmatic nature of the research puts a critique of the system beyond its scope.

The formal process of change started in 1995. The South African Qualifications Authority Act No 58 of 1995 was accepted by the South African Government in 1995 (SAQA, 1995), introducing a new National Qualifications Framework. It is to be expected that formal research will follow – research that addresses the successful development and implementation of the structures, policies and philosophies towards and including outcome-based education<sup>1,2</sup> in South Africa.

Outcome-based education is education based on outcomes and the most important feature is that all learners are expected to be successful (Killen, 2002:8). South African education identifies critical cross-field and specific outcomes [Chapter 3, Chapter 4]<sup>3</sup>. Critical cross-field outcomes are outcomes to achieve in every learning situation and specific outcomes are content-related outcomes [Chapter 3, Chapter 4]. To determine whether learners are successful, i.e. whether learners know they have learnt well, the learners must be assessed using the assessment criteria of the outcome (Van der Horst & McDonald, 1997:170). Assessment is therefore an integral part of outcome-based education and used to determine whether or not a qualification has been achieved (Norms and Standards for Teacher Education, Training and Development, 1997:115; Van der Horst & McDonald, 1997:170).

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<sup>1</sup> The context of “outcome-based education” is in the conceptualisation of the idea and not in the numeric value of a number of outcomes as “outcomes-based learning” may be interpreted; also used by Spady (2002). Although both concepts “outcomes-based education” and “outcome-based education” are used, this study refers to “outcome-based education”.

<sup>2</sup> Chapter 3 gives a complete discussion on outcome-based education

<sup>3</sup> The use of brackets [ ] refers to more or relevant information on the topic

For reliable information on assessment in outcome-based education all decisions must be based on sound research, and not convention or convenience (Spady, 1994:121). This thesis addresses this need by doing the following [Killen, 2002:6]:

- Develop a better understanding of the legislative policies and educational philosophies of outcome-based education in South Africa [Chapter 3]
- Apply this knowledge to design, develop and facilitate a learning programme for the Further Diploma in Education (Computer Assisted Education) [FDE(CAE)] [Chapter 4, Chapter 5]
- Collect evidence of learning [Chapter 6], assess the evidence against the outcomes [Chapter 7], and ensure quality assurance [Chapter 8]

The research focuses on all the processes and procedures for the calibration of assessment, the design and development of a strategy to plan and conduct standardised assessment, and the interpretation of the results.

As educators we are in a completely different paradigm, and we have to try to see who we are and what we would like to be. The researcher attempts to change the way people think and feel about outcome-based education and the assessment of learning in South African context.

## **2 Rationale for the research**

Since 1995 South Africa has been in a process of making history in the field of education, training and development. The situation has evolved from a primarily content-based education system and a multitude of educational bodies that governed South African education and training with its variety of qualifications and, under certain circumstances, a lack of equity and quality systems, as well as a large number of students who were graduating with very few job skills required to make South Africa internationally competitive (Du Pré, 2000:1; Norms and Standards for Teacher Education Training and Development, 1997:9-22; Olivier, 2000:1).

The above statement does not imply that these past systems did not deliver at all; if this had been the case, the present situation in South Africa would have been intolerable. What matters today is that good education and training has become one of the key aspects of the requirements for development in South Africa in order to provide for the citizens and to become a competitive country. It is too time-consuming for learners to attend academic institutions, get qualifications and then still have to get in-service training to be able to do the job. Therefore, good education and training should not only be of an academic nature, but it should also prepare learners adequately for the workplace and ensure that standards are actually implemented and maintained (Du Pré, 2000:1; HSRC, 1995:147; Meyer, Mabaso & Lancaster, 2001:vii; Norms and Standards for Teacher Education, Training and Development, 1997:10).

The proof of good education and training is in the answer to the question whether learning has really taken place to equip and empower learners to transfer the skills that they have acquired to achieve more abstract levels of thinking skills that will enable them to solve authentic problems in a workplace situation (Du Pré, 2000:1; Johnson, 1995:33; Olivier, 2000:1; Shalem, 2001:57). To determine whether learning has really taken place, the way in which the learning is assessed becomes important (King, 1999; Van der Horst & McDonald, 1997:170).

Until recently, evaluation<sup>4</sup> methodologies in South African education have been mostly content-based, including unilateral behaviourist measurement in the form of formative and summative tests and examinations as the most commonly used measuring tools that emphasise the regurgitation of knowledge and facts, particularly content, on the lower cognitive levels of Bloom's taxonomy of learning (Anon, 2002; Bloom, 1956; HSRC, 1995:49; King, 1999; Nielsen, 1997:293; Norms and Standards for Teacher Education, Training and Development, 1997:136; Olivier, 2000:3,67). Students were graded according to the core academic curriculum and the result was a concentration of knowledge that did not necessarily include the skills and abilities of learners to analyse, to synthesise, to evaluate a situation and propose a meaningful solution for an authentic problem (Norms and Standards for Teacher Education, Training and Development, 1997:22). Johnson (1995:33) regards this as *inert* knowledge that "... refers to knowledge that is not used in new situations and contexts even though it is relevant." In the past learners could get away with this because, after graduation, most individuals joined a company for a lifetime and most probably received specialised in-service training. Moving from one company to another, not even in related field, has now become the norm rather than the exception. Different skills are needed to adapt to these changing scenarios and to enhance the chances of success.

The result of a content-based system of learning and evaluation is very often visible in the following signs (Brennan & Shah, 2000:43; Nielsen, 1997:293; Ruth, 2001:142-145):

- Unreliable indicators of programme quality
- A discrepancy between the differing test and examination marks of learners
- The inability of learners to perform when set a task
- The perception that lecturers 'make' learners pass or fail
- Overall dissatisfaction of learners

South African educators spend a great deal of their time marking examinations and tests. The present challenge is to change this approach and make a paradigm shift towards high quality of assessment practices<sup>5</sup> of knowledge, skills, attitudes and values in an outcome-based education, training and development system.

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<sup>4</sup> The difference between "evaluation" and "assessment" is discussed in Chapter 8

<sup>5</sup> Assessment is not the same as evaluation [Chapter 8]

Outcome-based education and training (OBET) is not a dramatically new idea. There is widespread acceptance of this alternative approach that is gaining momentum (Conway, 1997; Ganser, 1998:63; Van der Horst & McDonald, 1997:19). Educationalists in South Africa also accept an outcome-based education (OBE) approach as an alternative to the content-based education of the past (Mothamaha, 2001:v). The success of this learning system will depend on the development and maintenance of education and training assessment and standards and quality assurance and standardisation will be essential for all South Africans to achieve qualifications that will be recognised nationally as well as internationally (HSRC, 1995:155,165; SAQA, 1995; SAQA 1997:5). The purpose of the assessment processes and procedures is therefore to have all learners emerge from the system as genuinely successful learners that will form an integral part in the eventual delivery of the system (Killen, 2002:8, Meyer & Mokoele, 2001:4; Spady, 1994:8).

Changing focus from a content-based education system to an outcome-based education system is a paradigm shift for all stakeholders involved in education, training and development and cannot be taken for granted.

Since assessment of learner performance in terms of measurable outcomes will become the crucial factor for qualifications accreditation, it needs to be scientifically investigated as an alternative perspective on learning achievements (Berkhout, 2000:67).

It is envisaged that this study will provide an answer when the goals of this study are achieved.

### **3 International and national research on assessment in outcome-based education**

To contextualise this study it is necessary to review what has been done internationally as well as nationally to develop a better understanding, and providing an holistic overview of outcome-based education in the South African context, with special reference to an integrated and generic process of assessment of competence against the unit standards or qualification.

#### **3.1 International research on the policies of assessment in outcome-based education**

The fact that international standards and globalisation<sup>6</sup> are increasingly becoming the norm does not imply equality with other countries (Garbers, 1996:41). However, to be in equilibrium and competitive in the global marketplace and still maintain its own unique character, South Africa will have to consider what has been done internationally in the field of assessment of learning.

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<sup>6</sup> Globalisation is the process by which societies are connected through rapid, large-scale networks of political, social and economic interaction that include factors like the free flow of information, diminishing boundaries, culture, language and knowledge and technology (Gawe & De Kock, 2002:36; Hay & Wilkinson, 2002:41).

Changes have taken place in higher education internationally and nationally over the past ten years. These changes include quality assessment that is regarded as the linkage of the “private micro-world of the institution with the public macro-world of society and politics” (Brennan & Shah, 2000:1). Higher education has become more international, which means greater student and staff mobility as well as internalisation of qualifications through open and distance learning, workplace learning and computer-assisted learning (Brennan & Shah, 2000:22).

Brennan & Shah (2000) report on the policies of quality assessment and learning in fourteen countries and emphasise that many countries are subjected to a dynamic process of change in education, training and development. The summary in Table 1 on the international trends in quality assessment policies in higher education has been synthesized from Brennan & Shah (2000:9-115) and Nielsen (1997:288).

**Table 1: International trends in quality assessment policies in higher education**

Reference	Comment
<b>Conceptualisation</b>	<ul style="list-style-type: none"> <li>▪ Quality assessment is seen as a function of the               <ul style="list-style-type: none"> <li>▪ methods of assessment and</li> <li>▪ national and institutional contexts for their use</li> </ul> </li> </ul>
<b>Differences</b>	<ul style="list-style-type: none"> <li>▪ A significant difference is that in some countries the government is the policy decision maker, whereas in other countries individual higher institutions are the policy decision makers</li> <li>▪ In some countries like Europe there is a general movement away from government authority; in other countries like the United States and Australia there is a movement towards more government authority</li> </ul>
<b>Similarities</b>	<ul style="list-style-type: none"> <li>▪ A noteworthy similarity is that many countries have a quality assessment model consisting of the following:               <ul style="list-style-type: none"> <li>▪ A national co-ordinating body</li> <li>▪ Institutional assessment</li> <li>▪ External assessment by academic peers</li> </ul> </li> <li>▪ Quality assessment could have been maintained while higher education was exclusive to a selective number of learners. As higher education becomes more accessible, expansion and social as well as cultural diversity of learners and institutions are unavoidable and quality assessment becomes a greater concern</li> <li>▪ Greater input from private sector (labour market) into higher education</li> <li>▪ Ongoing disputes about the exercising of authority of decision making between stakeholders, i.e. government and Higher Education Institutions</li> <li>▪ Funding is an overall problem</li> <li>▪ A significant effort for mutual international recognition of qualifications</li> <li>▪ Higher Education Institutions differ in complexity of institutional cultures and these are not easy to change</li> <li>▪ Despite a general increased concern about issues of quality education, there have been relatively few analyses of quality issues related to distance education</li> </ul>
<b>Countries with a national quality system</b>	Countries in Eastern Europe, countries within the European Union, Denmark, France, the Netherlands, Portugal, Finland, Norway, United Kingdom, Australia, Mexico
<b>Countries without a national quality system</b>	Countries outside continental Europe, Germany (Federal System), Italy, United States

The following synopsis can be made from Table 1:

- There is no common denominator on an international level as far as education and quality assessment policies are concerned and although there are still considerable differences between countries, development and changes are taking place
- Mutual recognition of qualifications between different countries is possible, and transparent quality assurance in assessment is established by the principles of “autonomy and independence of the bodies responsible for quality assessment and quality assurance” (Brennan & Shah, 2000:29)

### 3.2 International research on the implementation of assessment in outcome-based education

Table 2 refers to some valuable international trends on assessment practice.

**Table 2: International research on the implementation of assessment practices**

Reference	Comment
Chambers, Erdman & Hall (1993)	Review on oral assessment practices
Conley (2002)	General discussion on assessment practices
Gierl (1998)	Scoring in assessment
Thurlow (2002)	Discussion on assessment implementation
Hayden & Thompson (1996)	Assessment tools
<a href="http://www.aahe.org/assessment/">http://www.aahe.org/assessment/</a>	AAHE Assessment Forum
<a href="http://ericae.net/pare/">http://ericae.net/pare/</a>	Discussions on Practical Assessment, Research and Evaluation An online journal published by ERIC Clearinghouse on Assessment and Evaluation
<a href="http://www2.acs.ncsu.edu/UPA/assmt/resource.htm">http://www2.acs.ncsu.edu/UPA/assmt/resource.htm</a>	Internet Resources for Higher Education Outcomes Assessment

Although there is much that we can learn from these researchers, South Africa has to develop a unique system for our own unique circumstances. This study is not to make a comparison of assessment policies and practices in countries of the world, but to investigate local opportunities.

### 3.3 National and local research on assessment in outcome-based education

Outcome-based education was formally accepted in South African education, training and development in 1995. Major formal research projects and publications are in progress in the different Departments of Education and Higher Education Institutions, but only a few published at the time of the submission of this study. In order to place the research project in context of available research conducted in South Africa, a NEXUS database review was undertaken on 8 July 2002, which identified formal related research projects. Table 3 lists the NEXUS database review on the relevant topics to this study.

**Table 3: National and local research on assessment in outcome-based education**

Researcher / Date / Purpose	Topic
Clark P (2002) Project report	The Psy-ber Place project based on the framework of assessment . Available at: <a href="http://www.und.ac.za/users/clarke/psy98/psy_frame.html">http://www.und.ac.za/users/clarke/psy98/psy_frame.html</a>
Goode & Thomen (2001:194-199) Published Conference Paper	Implementing an outcomes-based approach to University essay writing
Laridon PEJ (1998) Non-qualification	Evaluation and assessment related to the implementation of outcomes-based education in mathematics
Krupanandan DD (1997) Current MSc	Moving teachers towards outcomes-based assessment practices through INSET courses
Cilliers CD (1999) Completed MEd	Dynamic assessment: practical strategy for school educators The emphasis of this study was to use Feuerstein's theory to train teachers to become more learner-centred and self-reflective
Barry DM (1998) Non-qualification	Development of a quality assurance system to monitor educational output

From Table 3 it can be argued that, although this study is to some extent similar to research conducted by these authors, it is unique, because it seeks primarily to give a better understanding and providing an holistic overview of outcome-based education in the South African context with special reference to an integrated and generic process of assessment in outcome-based education of competence of a learner against the unit standards or qualification.

The review on international and national research on assessment in outcome-based education necessitates a formal research project on an integrated and an holistic approach to assessment in outcome-based learning in South African circumstances.

#### **4 The research process**

Research into assessment of learning is important in order to obtain scientific validation that the training delivered the desired competence in the defined learning outcomes. This study process involves the following:

- The aim of the study [section 4.1]
- Value of the study [section 4.2]
- The type of research [section 4.3]
- The research design [section 4.4]
- The subjects of the study [section 4.5]
- The research questions [section 4.6]
- Collect the information, analyse the data, interpret the results and draw conclusions, i.e. answer research questions (data), [section 4.7]

#### **4.1 The aim of this study**

There are several stakeholders who are now involved in assessment in outcome-based education. The aim of this study is to develop a better understanding, and providing an holistic overview of outcome-based education in South African context with special reference to an integrated and generic process of assessment of competence against the unit standards or qualification.

To achieve this, the goals are as follows:

- Change the content-based course material of the FDE(CAE) into an outcome-based education learning programme according to the legislative policies [Chapter 3]
- Use all the accredited educators and all the registered learners for the FDE(CAE) qualification to present the learning programme to [Chapter 4, Chapter 5]
- Collect the evidence of the learning [Chapter 6] and develop a unique demonstration to calibrate and quality assure assessment of learning [Chapter 7, Chapter 8]
- Record the input, reaction and output of all participants
- Evaluate assessment of learning in outcome-based education against the requirements to develop a better understanding and an holistic overview

#### **4.2 Value of the study**

The result of this study will provide the following information.

- A set of educationally sound guidelines for the assessment of learning in South African education:
  - Considering the legislative policy and the educational theories of outcome-based education
  - Designing, developing and facilitating a learning programme in context of these principles
  - Compiling a valid, reliable and educationally sound portfolio of evidence of learning
  - Designing, developing and implementing a valid, reliable and educationally sound process for quality assessment
- Confirmation that the exposure to the integrated and holistic approach of assessment in outcome-based education results in the desired positive changes in the minds of people
- Confirmation that although stakeholders are aware of the changes in South African education, training and development, they are unaware of the underlying principles of the changes
- Problems experienced when interacting with stakeholders to change from a content-based system to an outcome-based system

#### **4.3 Type of research**

The research involved primarily a qualitative study, but quantitative measurements were taken where possible to triangulate data. The process of calibration of assessment involved a non-experimental statistical analysis of data, but the interpretation of data to improve the educational practices involved open-ended data collection instruments. The focus of the study was mainly an exploratory study [Chapter 2].



#### **4.4 The research design**

This study was conducted over a period of six years (1997 – 2002) and is supported by the requirements of action research as described in Chapter 2. According to Kemmis & McTaggart (1997:5) action research is a form of collective and self-reflective enquiry undertaken by participants in **specific situations** in order to **improve** the rationality and justice of their own educational **practices**, as well as their **understanding** of these **practices** and the situations in which these practices are carried out. The research developed horizontally as well as vertically at the same time.

##### **4.4.1 The situation: horizontal development**

The FDE(CAE) is a qualification presented by the University of Pretoria. The researcher initially presented this qualification in 1997 and 1998 in a content-based education system to local students. In 1998 representatives of UP and FKSA signed a contract to promote the presentation of the qualification to include students other than local students. This contributed not only to an increasing number of different training venues in South Africa, but also to the number of accredited educators training on behalf of UP [Chapter 4]. A national co-ordinator (who is the researcher in this study) was appointed to design and develop course content, oversee the presentation of the qualification, set and mark examination papers and report to UP on the quality assurance. The outcomes of the learning seemed to become a major problem because of existing evaluation methodologies.

##### **4.4.2 Improving the practices: horizontal development**

Although an outcome-based system was adopted in South Africa in 1995, it takes time to implement a new system. Higher Education Institutions were allowed to submit existing qualifications for interim registration until the expiry date in 2001. The author realised that this was a good opportunity to experiment with outcome-based education and to try and change the FDE(CAE) into an outcome-based qualification according to the requirements of the South African Qualifications Authority [Chapter 3] and with special focus on changing the assessment of learning. Changing the documentation was straightforward, but the implementation was more complex.

##### **4.4.3 Understanding the practices: vertical development**

The lack of knowledge of the participants made it difficult to implement the new system and the co-ordinator had to think of strategies to make them understand. This was where where the vertical structure of the study evolved into the idea of a documentary of the fundamentals of the legislative framework and educational principles of outcome-based education, training and development in South Africa and the application of these principles in an authentic environment to validate assessment practices within the above-mentioned context. To do this five unit standards were developed for the FDE(CAE) as well as the relevant learning programmes [Chapter 4]. These learning programmes were facilitated and presented at different training centres in South Africa [Chapter 5]. The co-ordinator designed a unique compilation for a portfolio of evidence of learning [Chapter 6] to be used for the quality assessment [Chapter 8] of learning and finally calibrated the assessment against the competence of the learners with reference to a variety of instruments and activities [Chapter 7].

#### 4.5 Participants in this study

The participants in the study were the following:

- Qualified and accredited educators who presented the FDE(CAE) at different venues in the Republic of South Africa
- Learners who were registered for the FDE(CAE) at UP. These are in-service educators across South Africa
- The national co-ordinator for the FDE(CAE)

All participants are included to ensure the validity and reliability of results.

#### 4.6 The research problem

To define the research problem the researcher used the guidelines as proposed by Garbers (1996:293) and as presented in Table 4.

**Table 4: Questions used as guidelines for the research problem**

Question	Answer
<b>What was this study about?</b>	Conducting quality assessment in outcome-based education in South African education, training and development
<b>Who was involved in this study?</b>	<ul style="list-style-type: none"><li>▪ The learners (students) registered for the [FDE(CAE)] at the UP from 1997 until 2002</li><li>▪ The educators who facilitated this qualification</li><li>▪ The national co-ordinator for the qualification on behalf of UP</li></ul>
<b>When was this study conducted?</b>	The research was a longitudinal action research project conducted over a period of six years (January 1997 – September 2002)
<b>Why was research going to be conducted?</b>	The research was an attempt to provide a better understanding of an integrated and generic process of assessment of competence against the unit standards or qualification
<b>How was research conducted?</b>	The research was conducted by action research to achieve: <ul style="list-style-type: none"><li>▪ Identifying the legislative and educational foundation of outcome-based education in South African education, training and development [Chapter 3]</li><li>▪ Constructing an understanding for the design, development and presentation of a qualification in the context of outcome-based education in South Africa [Chapter 4, Chapter 5]</li><li>▪ Identifying a possible solution for assessment of learning in the context of outcome-based education in South African education [Chapter 6, Chapter 7, Chapter 8]</li><li>▪ Reflections, conclusions and recommendations [Chapter 9]</li></ul>

The research question follows from the research problem as stated in the next section.

#### 4.7 The research question

The major research question that evolves from the research problem for this study is:

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What are the issues to consider developing a better understanding, and providing an holistic overview of outcome-based education in the South African context with special reference to an integrated and generic process of calibrated assessment of competence against the unit standards or qualification?

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During the research it became evident that the following sub-questions arise from this major research question.

- The legislative and educational concepts of education in South Africa [Chapter 3]  
What are the implications of the legislative and the educational concepts regarding assessment in outcome-based learning in South African education?
- The learning programme [Chapter 4]  
What does the composition of the learning programme for a registered qualification regarding assessment in South African education entail?
- The facilitation of learning [Chapter 5]  
What does the facilitation of learning for a registered qualification regarding assessment in South African education entail?
- The evidence of learning: the portfolio [Chapter 6]  
What does the portfolio of evidence for a registered qualification regarding assessment in South African education entail?
- The assessment [Chapter 7]  
What does the assessment of learning for a registered qualification in South African education entail?
- The quality assurance [Chapter 8]  
What does the quality assurance for assessment of learning for a registered qualification entail?

#### 4.8 Data collection methods

The data collection methods involved the description of the instruments and a data collection matrix.

##### 4.8.1 Description of the instruments

A variety of instruments were used to collect data for the research as indicated in Table 5.

**Table 5: Description of the instruments**

<b>Instrument</b>	<b>Description</b>
<b>Document analysis</b>	The document analysis covered the relevant legislative policies
<b>Literature review</b>	Interpretation of the relevant legislation, journal articles, books and electronic documents available on the Internet
<b>Interviews</b>	Interviews were conducted with the learners and the assessors and the responses were analysed qualitatively. Interviews were conducted to collect information on the dynamics of the assessment process
<b>Diary</b>	Observations were made by the participants in the study to determine the progress made by learners to achieve competence
<b>Checklists and Questionnaires</b>	Multiple choice questions, fill-in questions and open-ended questions were used to determine whether the specific outcomes according to the unit standards were achieved
<b>Observations</b>	Observation of the presentations of the educators and the assessors was done by the co-ordinator to determine whether the assessment process was fair. Observation checklists were used to determine whether the specific outcomes according to the unit standards had been achieved. Video clips and photos were included as observation examples
<b>Investigate learners' academic results</b>	Results were considered to determine the need for the calibration of assessment
<b>Open-ended survey</b>	Collect data for qualitative analysis similar to research by Boone (1995:95), i.e. for "Comments", "What did you like?", "What did you dislike", etc. [Addendum 1]
<b>Synchronous and asynchronous communication</b>	E-mail, fax facilities, telephone calls, e-learning environment

##### 4.8.2 Data collection matrix

The data collection matrix is presented in Table 6.



#### **4.9 Analysis of data**

The following sequence is used in order to structure each chapter.

- An integrated document analysis and literature review of the relevant conceptual framework, i.e. the integration of theory and practice
- The application of the activities during the investigation
- The analysis and interpretation of the findings from the data collection methodologies in a qualitative or quantitative manner
- The conclusions and recommendations

#### **4.10 Limitations of the study**

Certain limitations were experienced in the research:

- The participants of the study are the learners of the FDE(CAE) qualification in Higher Education; no learners from General Education or Further Education were considered
- Backgrounds and prior experience have not been taken into account
- Time limitations as learners had to accept the prescribed assessment dates
- A final collection of data for 2002

### **5 Description of the product**

The output of this study consists of a description of the product and an overview of the study report.

The end product will be a thesis specifying the issues to consider to develop a better understanding, and providing an holistic overview of outcome-based education in context of South African education, training and development with special reference to an integrated and generic process of assessment of competence against the unit standards or qualification.

The aim was to deliver a product in such a way that the precision of the work and the adequacy of the interpretation will always be evident (Dick, 1993:22).

### **6 Overview of the study report**

To adhere to the process of action research [Chapter 2] the research report is not presented in a conventional format of introduction – research methodology – literature review – project – results – discussion – conclusions, but in a structure that includes an introductory chapter, a chapter on the research methodology, separate chapters on each of the study questions and a final conclusion. Each chapter follows the sequence of introduction – literature review – progression – conclusion. The structure of the study report is summarised in Table 7.

**Table 7: Overview of the study report**

Chapter	Topic	Summary
Chapter 1	Introduction to the research project	The framework within which the problem is situated and involves the discussion of the problem, the research question, the research design and a general overview of the main topics of the thesis
Chapter 2	Research methodology	The description of the type of research, the description of the data collection methods with reference to the description of the instruments and the data collection
Chapter 3	Legislative framework and educational concepts in South African education	An overview of the legislative framework and educational concepts of the South African outcome-based education and the integration of these concepts
Chapter 4	Learning programme	The development of the unit standards and application of the principles in Chapter 3 to execute the training of learners in outcome-based education in South Africa
Chapter 5	Facilitation of learning	The facilitation of learning as described in Chapter 4 and all relevant issues as related to the facilitation of the learning process and assessment
Chapter 6	Evidence of learning: the portfolio	An overview of the portfolio of evidence of learning for assessment
Chapter 7	Assessment of learning	The process and procedures, the design, development and implementation of calibrated outcome-based assessment in South Africa
Chapter 8	Quality assurance	The way in which quality assurance was done
Chapter 9	Conclusions and recommendations	The merging of the results in an attempt to answer the major research question. It draws conclusions and proposes recommendations for further research as well as guidelines for educational institutions with reference to the implementation of assessment in outcome-based education in South African education

## 7 Clarification of concepts

The following concepts are often used and needs contextual clarification for unambiguous interpretation throughout the thesis (Norms and Standards for Teacher Education, Training and Development, 1997:183). Other concepts are conceptualised in the particular context.

- **“Educator”**: Any person who teaches, educates or trains other persons or provides professional therapy at any school, technical college or college of education, or assists in rendering professional services or performs education management services or educational auxiliary services provided by or in the Department of Education and any person who is registered with the Council
- **“Learner”**: A pupil or a student who is taught or trained by an educator as defined above
- **“Stakeholders”**: Anybody who is involved in education and training in South Africa and includes authority figures, community organisations, employers, professional associations, unions, interested observers, educational institutions and practitioners, politicians, customers, parents and the general public
- **“Portfolio of evidence”**: A complete compilation of all evidence required to prove the learner’s competence on the requirements of the specific outcomes of the unit standard

## **8 Summary**

This thesis reports on research undertaken to develop a better understanding, and providing an holistic overview of outcome-based education in South African context with special reference to an integrated and generic process of assessment of competence against the unit standards or qualification.

Chapter 1 provides a framework within which the problem is defined. The research problem does not represent a single or isolated entity for research but is an integrated and holistic approach to learning and the assessment of learning. It is therefore necessary to approach the research problem with an open mind. Chapter 2 sets out to explain the research methodology, and contextualises the research. Chapters 3 to Chapter 8 contribute to the issues to calibrate assessment against the specific outcomes in the unit standards or qualification and Chapter 9 reflects on the findings and provides recommendations.