THE USE OF COOPERATIVE LEARNING IN ECONOMICS IN THE FURTHER EDUCATION AND TRAINING PHASE IN THE FREE STATE PROVINCE

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DEDICATION

To Sarie, my wife and life partner, for her love, prayers and support.

To Michelle and Marilise, who had to sacrifice much and had to relinquish their father and friend.

SOLI DEO GLORIA

DECLARATION

I, the undersigned, declared that the thesis hereby submitted by me for the PHILOSOPHIAE DOCTOR (Ph. D) degree at the University of the Free State is my own, independent work and has not previously been submitted by me at another university. I further cede copyright of this thesis in favour of the University of the Free State.

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Micheal Moos van Wyk

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SUMMARY

THE USE OF COOPERATIVE LEARNING IN ECONOMICS IN THE FURTHER EDUCATION AND TRAINING PHASE IN THE FREE STATE PROVINCE

In recent years, South African teachers were compelled to make an important paradigm shift in education from a teacher-centred approach to a learner-centred approach. Put differently, the emphasis is now on an outcomes-based education (OBE) approach as the key underlying principle of the National Curriculum Statements (NCS). Furthermore this paradigm shift in teaching and learning emphasized an active participation of learners which necessitated Economic teachers to restructure their teaching strategies in terms of the NCS.

The purpose of this study was to design a framework for the implementation of cooperative learning as a teaching strategy for Economics teachers in the Further Education and Training (FET) phase in Free State secondary schools.

A literature study and an empirical research was conducted for structuring of such a framework with different components in the design and implementation of cooperative learning as a teaching strategy for Economics teachers.

To achieve the aforementioned, OBE in general was outlined. Secondly, the elements, principles, different OBE curriculum models were discussed. Thirdly, problem areas and arguments in defence of the implementation thereof in South African schools were explained. Fourthly, a multi paradigm perspective on the OBE approach, the National Qualifications Framework (NQF) and the place of the NCS for the FET phase were interrogated from an OBE curriculum model point of view.

Furthermore Economics as a social science was compared to other sciences and models of economic teaching. Economics as a school subject and the interrelated components to the curriculum were broadly explained.

As reinforcement to the previous mentioned aspects, a historical development as well as viewpoints on cooperative learning were outlined. Subsequently the importance of cooperative learning models, strategies, and group compositions were thoroughly analysed. In conclusion, the perspective on the development of cooperative learning, the rationale thereof, as well as the advantages and disadvantages were scrutinized.

Emanating from the literature review an empirical study was conducted to determine the current status of in-service training amongst Economic teachers and to which extent they apply cooperative learning techniques. Economic teachers and Learning facilitators acted as respondents for obtaining data that was used for the design of a framework for implementation of cooperative learning. Findings of the responses of the questionnaires and interviews revealed that there was a great need for more in-service training especially for both beginner and experienced teachers. Furthermore the majority of respondents indicated a deficiency in the application of cooperative learning in their Economic classes. Thereafter a number of recommendations were made regarding the in-service training and the effective application of cooperative learning as a teaching strategy in Economics teaching.

In summation, the literature study, the findings of the empirical research and recommendations of this study forms the basis for the design of a framework for the implementation of cooperative learning as a teaching strategy for Economics teachers in the Further Education and Training (FET) phase.

OPSOMMING

DIE GEBRUIK VAN KOöPERATIEWE LEER IN EKONOMIE IN DIE VERDERE ONDERWYS EN OPLEIDINGSFASE IN DIE VRYSTAAT PROVINSIE

In onlangse jare, is Suid-Afrikaanse onderwysers genoodsaak om 'n belangrike paradigmaskuif in die onderwys te maak vanaf 'n onderwysergesentreerde na 'n leerdergesentreerde benadering. Die klemverskuiwing as fokus is nou gerig op 'n uitkomsgerigte onderwysbenadering (UGO-benadering) as belangrike onderliggende beginsel van die Nasionale Kurrikulumverklaring (NKV). Verder noodsaak hierdie paradigmaskuif in onderrig en leer 'n aktiewe deelname van leerders waarbinne Ekonomie-onderwysers hul onderrigstrategieë herstruktureer in terme van die NKV.

Die doel met hierdie studie is om 'n raamwerk vir die implementering van koöperatiewe leer as 'n onderrigstrategie vir Ekonomie-onderwysers in die Verdere Onderwys- en Opleidingfase (VOO-fase) in Vrystaatse sekondêre skole te ontwerp.

'n Literatuurstudie en 'n empiriese navorsing is uitgevoer vir die strukturering van so 'n raamwerk met verskillende komponente in die ontwerp en implementering van koöperatiewe leer as 'n onderrigstrategie vir Ekonomie-onderwysers.

Om die voorafgaande te bereik, is uitkomsgerigte-onderwys (UGO) in die algemeen uitgelig. Tweedens is die elemente, beginsels en verskillende UGO-kurrikulummodelle verduidelik. Derdens is probleemareas en argumente ter verdediging van die implementering daarvan in Suid-Afrikaanse skole verduidelik. Vierdens is 'n multiparadigma-perspektief op die UGO-benadering, die Nasionale Kwalifikasieraamwerk (NKR) en die plek van die NKV vir die VOO-

fase vanuit 'n UGO-kurrikulummodel in perspektief gestel.
Verder is Ekonomie as sosiale wetenskap vergelyk met ander wetenskappe en modelle van ekonomiese onderrig. Ekonomie as skoolvak en die verwante komponente tot die kurrikulum is breedvoerig bespreek.

As versterking tot die voorafgaande apsekte is 'n historiese ontwikkeling sowel as die beskouings van koöperatiewe leer uitgelig. Daaropvolgens is die belangrike koöperatiewe leermodelle, strategieë asook groepsamestellings volledig ontleed. In die samevatting is die perspektief op die ontwikkeling van koöperatiewe leer, die rasionaal daarvan, asook die voor- en nadele noukeurig ondersoek.

Voorspruitend uit die literatuurstudie is 'n empiriese studie uitgevoer om te bepaal wat die huidige stand van indiensopleiding van Ekonomie-onderwysers is en tot watter mate hul koöperatiewe leer toepas. Ekonomie-onderwysers en leerfasiliteerders het opgetree as respondente vir die verkryging van inligting wat gebruik is vir die ontwerp van 'n raamwerk vir die implementering van koöperatiewe leer. Bevindinge van response van die vraelyste en onderhoude het aangedui dat daar 'n groot behoefte vir meer indiensopleiding veral vir beide beginner- en ervare onderwysers bestaan. Verder het die meerderheid respondente aangetoon dat hulle onbevoeg is om koöperatiewe leer in hul Ekonomieklasse toe te pas. Daarna is 'n aantal aanbevelings ten opsigte van indiensopleiding en die toepassing van koöperatiewe leer as 'n onderrigstrategie in Ekonomie geformuleer.

Opsommend vorm die literatuurstudie, die bevindinge van die empiriese navorsing en aanbevelings van hierdie studie die basis vir die ontwerp van 'n raamwerk vir die implementering van koöperatiewe leer as 'n onderrigstrategie vir Ekonomie-onderwysers in die VOO-fase.

KEY WORDS

- Cooperative learning
- Economics
- Economic and Management Sciences
- Economics learning facilitators
- Further Education and Training phase
- Framework
- Free State Department of Education
- Free State Province
- National Qualifications Framework
- National Curriculum Statement for Economics
- Outcomes-Based Education
- Teaching strategy
- Training needs

CHAPTER ONE

PROBLEM STATEMENT AND RESEARCH PURPOSE

1.1 INTRODUCTION

From a constructivist perspective, which forms the basis of this study, the primary responsibility of the teacher is to create and maintain a collaborative problem-solving environment where learners are allowed to construct their own knowledge and the teacher acts as a facilitator and guide. Vygotsky's theory of social constructivism, as opposed to Piaget's individualistic approach to constructivism, emphasises learners' interaction with others in terms of cognitive development. His theoretical concept of the zone of proximal development embodies his belief that learning is directly related to social development. "The discrepancy between a child's actual mental age and the level he reaches in solving problems with assistance indicates the zone of his proximal development" (Vygotsky, 1986:187). According to Vygotsky, good instruction can be ensured by determining where each learner is in his or her development and then building on that learner's experiences.

This is congruent with what most constructivists advocate, namely that instructional intervention should not only match but also accelerate learners' cognitive development. According to Copley (1992:56) constructivism requires a teacher to act as a facilitator "whose main function is to help learners become active participants in their learning and make meaningful connections between prior knowledge, new knowledge, and the processes involved in learning". Ormrod (1995) states that teachers can encourage learners' development by presenting tasks that "they can complete only with assistance – that is, within each learner's zone of proximal development".

As described by Cheung and Taylor (1991:23-34), a constructivist learning environment is characterised by (1) shared knowledge among teachers and learners; (2) shared authority and responsibility among teachers and learners; (3) the teacher's new role as guide in instruction; and (4) heterogeneous and small groupings of learners. This description accommodates Johnson and Johnson's principles of a cooperative learning model of instruction.

Resonant with the idea that the teacher is a guide instead of an expert, constructivism instruction has always been likened to an apprenticeship (Collins, Brown & Holum, 1991:22-35; Rogoff, 1990:56-76) in which teachers participate with learners in resolving meaningful and realistic problems. Here the teachers serve as models and guides, showing learners how to reflect on their evolving knowledge and providing direction when the learners are having difficulty. Learning is shared and responsibility for the instruction is shared. The amount of guidance provided by the teacher will depend on the knowledge level and experience of the learners (Newby, Stepich, Lehman & Russell, 1996:12-24).

Brooks and Brooks (1993:124-125) summarise a large segment of the literature on descriptions of "constructivist teachers" and they conceive of a constructivist teacher as someone who will:

- Encourage and accept student autonomy and initiative;
- Use a wide variety of materials, including raw data, primary sources and interactive materials, and encourage students to use them;
- Enquire about students' understanding of concepts before sharing his/her own understanding of those concepts;
- Encourage students to engage in dialogue with the teacher and with one another;
- Encourage student inquiry by asking thoughtful open-ended questions, urging students to put questions to one another, and seeking elaboration of students' initial responses;

- Engage students in experiences that show contradictions to initial understandings and then encourage discussion;
- Allow time for students to construct relationships and create metaphors;
- Assess students' understanding through the application and performance of open-structured tasks.

The researcher contends from a constructivist perspective that the primary responsibility of the teacher is to create and maintain a collaborative problem-solving environment, where students are allowed to construct their own knowledge and the teacher acts as a facilitator and guide.

The act of teaching and learning Economics in the Further Education and Training band (FET phase for grades 10 -12) is deemed important, as the field of Economics focuses on current issues at the heart of modern society. Economic events, be they the challenges of unemployment, inflation, labour relations, international trade agreements or the exchange rate, hold important socio-economic implications for stakeholders such as individuals, businesses, the government sector and foreign role-players in the market (De Bod, 1996:1; McConnell & Bruce, 2005:5-9; Mohr & Fourie, 1995:8-14).

Bisschoff, Fourie, Froneman, Landey, Paxton and Smit (1992:13) hold the view that the teaching of Economics as a school subject focuses on specific overall outcomes: "The main objective of teaching Economics is to acquaint the pupil with the understanding of the South African national economy, the basic economic problems, to participate in economic matters and to interpret statistical data and make informed decisions".

Horton and Weidenaar (Gregory, 1996:221) further emphasise the importance of Economics as a subject in their formulation of an outcome: "The main objective of economics education is to improve our understanding of the world in which we live. Without this understanding we are frequently confused and unable to

identify, analyse and interpret successfully the economic aspects inherent in so much about us". The focal point of this overall outcome is aligned with the principle of attaining high levels of knowledge and skills, articulated in the National Curriculum Statement (NCS) for South African schools (NDE, 2003a:2-15).

This would suggest that knowledge, skills and values in the Economics field are invaluable to both teachers and learners in their pursuit of a better understanding of the functioning of the market environment. Van Niekerk (1992:34) is of the opinion that current teaching practices in Economics do partly meet the expectations of stakeholders who question the levels of literacy among Economics learners emerging from the school system.

In recent years, South Africa has experienced an important paradigm shift in education: a teacher-centred approach has been replaced with a learner-centred approach. Put differently, the emphasis is now on an outcomes-based education (OBE) approach as the key underlying principle of the NCS. The process associated with reviewing and modernising the school curriculum for grades 10 to 12 commenced in the year 2000 and was aimed at restructuring and rewriting the interim syllabi into new, integrated and justified learning programmes. The culmination of the process was the establishment of a curriculum for the FET phase, which is known as the National Curriculum Statement (NDE, 2000:1).

The NCS for South African schools – in particular for Economics (NDE, 2003b:9) – outlines the characteristics and outcomes of the subject as follows:

- To equip learners with the knowledge, skills, values and attitudes that will enable them to adjust, participate and survive in an economically complex society; and
- To empower learners in aspects such as productivity, social justice and environmental sustainability within the economic environment.

According to the National Department of Education (NDE, 1996a:5) the NCS policy envisages learners who will be inspired by values such as respect for democracy, equality, humanity and social justice, as outlined in the Constitution (NDE, 1996a:5).

From this we may deduce that learners who successfully complete the FET phase will demonstrate competence in the following critical outcomes:

- Access to, success in, and experience of lifelong learning;
- The ability to think logically, analytically, holistically and laterally; and
- The transfer of skills from known to unknown situations

(NDE, 2000:7).

The above-mentioned policy of the National Department of Education is consistent with the government's skills development strategy, which has been articulated as the overall aim of the skills development strategy for economic growth and job creation in South Africa (NDL, 1997:9). Given this premise, it has become important to the government that workers are empowered to use specific and appropriate competencies and skills for the workplace. According to the National Department of Education, in order to meet these challenges, learners have to be empowered with the requisite knowledge, skills and values to address the economic and social needs of South Africa and its people (NDE, 2002:2; Van Rooyen & Prinsloo, 2003:4-5).

To achieve the aforementioned objectives, the Economics teacher is required to create a teaching-learning situation in which learners are able to master critical and developmental outcomes (i.e. high levels of knowledge, skills and positive attitudes in the domain). Waspe (1997:22) holds the view that the traditional teaching approach, in which learners' input is limited in practice to a passive role and the reproduction of knowledge, has become redundant. The traditional teaching and learning approach in South African schools, which previously focused only on the mastery of specific learning content (knowledge), has

undergone a paradigm shift in emphasis towards an outcomes-based education approach following the establishment of a new democracy. This paradigm shift in teaching and learning emphasises active classroom participation. The researcher suspects that this shift is in accordance with cooperative learning as a teaching strategy which, along with skills development for the future, are the expectations of the NCS policy of the National Department of Education (NDE, 1996c:37). Both the Revised National Curriculum Statement (RNCS) for the General Education and Training (GET) phase and the NCS for the FET phase establish conditions for transforming teaching and learning in schools. Schools and Economics teachers are in a position to restructure their teaching strategies themselves in terms of the NCS so that they may present subject content efficiently and effectively.

The NCS curriculum for South African schools offers learners and teachers a paradigm shift away from a teacher-centred educational approach towards a dynamic and active learner-centred approach (Closson, 1993:1; Herald, 1995:33; Mackrory, 1999:11; Spady, 1994a:30-31; Van der Horst & McDonald, 1997:7).

Within the NCS curriculum, but specifically in Economics, it is of critical importance that learners learn how to gather relevant information and to transform such information into marketable knowledge; in other words, the learner has to be enabled to identify problems and find solutions to these challenges by means of creative and innovative thinking in real-life situations.

To ensure that the outcomes of Economics teaching are achieved, Economics teachers are compelled to consider different teaching strategies and methods. By pursuing these new strategies and methods, Economics teachers will be enabled to initiate teaching and learning effectively so that knowledge, skills and positive attitudes may be optimised among learners in their response to the economic environment. A large variety of teaching strategies, methods and techniques are available, but this study focuses on cooperative learning, which can be utilised to

immense benefit in the teaching and learning situation (Anderson, 1995:89,137,185; Borich, 1996:238-268; De Bod, 1996:156-160; Killen, 1998:1159; Steyn, 1985:84).

The researcher contends that Economics teachers should strive to present their subject in ways that are meaningful and learner centred. If this can be achieved, learners are engaged effectively in the subject, and an interest in the learning content may be evoked. By establishing excellent modes of teaching, such as cooperative learning, the Economics teacher may create an optimal learning environment to enable learners as workers to transfer knowledge and skills into the workplace.

1.2 COOPERATIVE LEARNING AS A TEACHING STRATEGY FOR ECONOMICS

The rationale for researching and applying cooperative learning as a teaching strategy for Economics in the FET phase emanates from statements by and discussions with teachers during the pilot study, indicating that when learners complete the GET phase, most lack economic literacy and the ability to interpret graphs and economic data.

According to Voigt and Stander (1991:11-27) it appears that students have a perception that Economics is an abstract and particularly difficult subject to study. A critical investigation of cooperative learning as a teaching strategy for Economics in the FET phase is necessary, because cooperative learning, as an active learning principle, has the ability to enhance optimal learning within the NCS curriculum. The rationale for applying this strategy in Economics lies in the fact that it has the ability to:

- Evoke learner interest in the subject matter;

- Promote the process of establishing links between prior knowledge and new subject matter in ways that are efficient and effective;
- Encourage a critical attitude among learners towards the subject matter;
- Promote a process of expanding learners' understanding of their social environment and their active engagement therein; and
- Develop and promote thoroughness, tidiness, and precision within the economic environment (Blythe-Lord, 1991:3-7; Burger, 1991:19; Ellington, 1985:16; Voigt, 1991:1-2).

Should the Economics teacher succeed in establishing a learning environment typical of the above-mentioned aspects, cooperative learning could possibly be highly effective as a teaching strategy in achieving the following outcomes for Economics:

- Developing a culture of lifelong learning;
- Promoting learner involvement;
- Applying, analysing and interpreting financial and management information;
- Applying and developing calculation skills;
- Creating investigative and active-participative learning activity among learners; and
- Promoting accuracy, orderliness and thoroughness (Bisschoff *et al.*, 1992:14-15; Voigt, 1991:18).

1.3 NECESSITY OF THE RESEARCH

As a teaching strategy, cooperative learning is not new, and stakeholder interest in cooperative learning has seen massive growth since the 1990s (Manning & Lucking, 1991:120).

Sapon-Shevin and Schniedewind (1992:32) hold the view that cooperative learning is necessary in any teaching-learning situation, because this particular strategy "...can foster educational excellence for all children regardless of race, class, or gender, and can provide students and teachers with the experience and expectations of active participation in controlling and changing the spheres of their lives".

Adams and Hamm (1996:4,34) state that cooperative learning as a teaching strategy is one of the success stories in the transformation of education over the past decade. Their research has focused on the application of cooperative learning activities in the classroom where students jointly and creatively identify problems and generate practicable solutions.

The researcher contends that this research is necessary because the NCS for Economics requires that the principle of an outcomes-based education approach, which is applicable to this teaching strategy of cooperative learning, is applied in the classroom. One of the critical outcomes of the NSC as curriculum model is that learners must be able to cooperate with other members of a team, group, organisation and community (NDE, 1997c:12). This teaching strategy also applies to Economics teachers. This learner-centred approach requires that learners are not mere passive listeners as in the past. The majority of teachers who have been trained in a teacher-centred teaching approach and who are now required to make a paradigm shift to a learner-centred approach continue to struggle, despite the fact that the Department of Education has arranged several training workshops for them in the implementation of the NCS curriculum.

It appears from the pilot study (cf.1.9.2.1) that Economics teachers are inadequately equipped for their task, and it is for this reason that this study is necessary, so that a model for implementing cooperative learning as a teaching strategy for the FET phase can be developed for Economics teachers in order to empower them to apply this teaching strategy with confidence in the classroom.

1.4 RESEARCH PROBLEM

Economics teachers in the FET phase currently find themselves in a transitional phase between a traditional teaching approach (Interim Curriculum, Report 50/50) and the National Curriculum Statement based on the principles of an outcomes-based education approach. It appears from interviews during the pilot study that Economics teachers are not ready for this transition in education, because they have not been adequately trained in the NCS for Economics and are therefore primarily following the teacher-centred approach as they were trained to do

According to Cooper (1995:99) South Africa requires a large number of well-trained graduates in the Economic and Management Sciences to develop learner knowledge and skills, which are prerequisites for economic growth and sustainable development. From pilot study interviews with subject teachers, it can be deduced that the majority of teachers in this field are generally applying a teacher-centred education approach with reasonable success. The traditional educational approach of the previous educational dispensation is disregarded by proponents of OBE due to inadequate training in different teaching methods, and this has prompted teachers to develop the perception that they have been disempowered and are no longer equipped to perform their task.

Van der Horst and McDonald (1997:6) articulate the criticisms against traditional teaching and learning, stating that the teacher-centred approach:

- Inhibits both teachers' and learners' initiative and innovation;
- Does not promote critical thinking by learners;
- Prompts teachers and learners to pursue examination results;
- Does not develop entrepreneurship in learners; and

- Does not prepare learners for the needs of a challenging workplace (Van der Horst & McDonald, 1997:6).

In 2005 Naledi Pandor, the then National Minister of Education, announced in Parliament that the NCS curriculum model would also be implemented in grade 10 in the FET phase from 2006 onwards (Rapport, 2005:9; Volksblad, 2005c:12). The NCS based on the OBE principle requires different teaching strategies so that teachers no longer teach within the traditional paradigm. The researcher contends that the challenges facing Economics teachers in the FET phase are related to the implementation of the NCS by seeking effective teaching strategies, methods and techniques that will enable them to empower learners by demonstrating the prescribed critical and learning outcomes for Economics.

1.5 AIM OF THIS STUDY

The overall aim of this study is *to design a framework for the use of cooperative learning as a teaching strategy for Economics teachers in the Further Education and Training (FET) phase in Free State secondary schools.*

Secondary aims of this research are:

- To reflect critically what is the nature and components of the National Curriculum Statement (NCS) for the South African schools, with specific reference to the NCS for Economics in the FET phase;
- To determine what is the nature and the field of study of Economics as a subject;
- To analyse the critical components of the teaching-learning process for the NCS for Economics in the Further Education and Training phase;
- To explain cooperative learning as a teaching strategy for Economics;
- To determine what is the current status regarding training of Economics teachers in the National Curriculum Statement in Free State secondary schools;

- To determine to what extent do these teachers apply cooperative learning as a teaching strategy in their classrooms and
- To determine what components should be included in the design of a framework for the use of cooperative learning as a teaching strategy in Economics in the Further Education and Training (FET) phase in Free State secondary schools.

1.6 RESEARCH QUESTION

The primary research question for this study is: *What components should be included in a framework for the use of cooperative learning as a teaching strategy for Economics teachers in the Further Education and Training (FET) phase in Free State secondary schools?*

The following research questions are formulated for purposes of conducting this study to inform the design of a framework for the use of cooperative learning as a teaching strategy for Economics teachers in the Further Education and Training (FET) phase in Free State secondary schools:

- What is the nature and components of the National Curriculum Statement (NCS) for the South African schools, with specific reference to the NCS for Economics in the FET phase?
- What is the nature and field of study of Economics as a subject?
- What are the critical components of the teaching-learning process for the NCS for Economics in the Further Education and Training phase?
- What is the rationale for using cooperative learning as a teaching strategy in Economics?
- What is the current status regarding training of Economics teachers in the National Curriculum Statement in Free State secondary schools?;
- To what extent do these teachers apply cooperative learning as a teaching strategy in their classrooms?

- Which recommendations can be made with regard to training in NCS and the implementation of cooperative learning for Economic teachers in secondary schools in Free State Department of Education?

1.7 DEMARCATING THE FIELD OF STUDY

This investigation is limited to the training of Economics teachers and the teaching situation in the FET phase. The necessity of conducting this investigation reinforces the view that a study of cooperative learning as a teaching strategy in Economics is limited to the training of Economics teachers. Thus, this study focuses on grade 10 Economics teachers, the heads of Economics departments in the FET phase in Free State secondary schools, as well as Economics teaching facilitators who are in the employ of the Free State Department of Education (FSDoE).The geographical area of study is limited only to the FET phase in the Free State Province. Tendencies are investigated in urban and rural secondary schools.

This study is conducted within the Department of Curriculum Studies, lodged in the School of Education in the Faculty of Humanities of the University of the Free State.

1.8 RESEARCH METHODS

Various research methods are employed in this study. The method of investigation includes a literature review and an empirical study. The empirical study consists of quantitative methods of research (see research survey in chapter 5).

1.8.1 Literature study

Relevant literature from primary and secondary sources is consulted. Primary sources include a number of official national and provincial Department of Education policy documents, namely:

- The Revised National Curriculum Statement (RNCS) for the Economic and Management Sciences (GET phase); and
- The National Curriculum Statement (NCS) for Economics (FET phase).

Secondary sources include books, subject journals, newspaper articles, reports and internet searches.

The following aspects are attended to in the literature study:

- An analysis of OBE compared to the South African curriculum model and the NCS for the GET and FET phases, with specific reference to the NCS for Economics in the FET phase;
- An outline of the nature and field of study of Economics in the FET phase, and an explanation of the interrelatedness of the critical components of the curriculum in the teaching of Economics;
- A discussion of cooperative learning as a teaching strategy; and
- The design of a framework for the use of cooperative learning as a teaching strategy in Economics.

1.8.2 Empirical investigation

The researcher undertook an empirical investigation by employing a quantitative methods of research. The quantitative phase of this investigation employed a structured questionnaire to establish the status of pre- and in-service training of Economics teachers in Free State secondary schools.

1.8.2.1 The pilot study

The pilot study was conducted during February 2005 to determine the current status of training of Economics teachers in the NCS, as well as the extent to which these teachers were applying cooperative learning as a teaching strategy in their classrooms. A structured closed questionnaire was designed and delivered to these ten schools and collected one week after completion. A summary of the results of the pilot study identified the following areas for further investigation:

- 70% of respondents indicated that they were inadequately trained in the NCS for Economics;
- 72% of respondents indicated that more in-service training in effective teaching strategies applicable to the teaching of Economics, such as small-group work, group discussions, role-play, simulations and cooperative learning, should be implemented to enhance learner knowledge, skills, values and attitudes; and
- 60% of respondents indicated that training in the design and use of different assessment methods, instruments and strategies applicable to Economics was needed to ensure learner progression.

1.8.2.2 Quantitative method

A structured questionnaire, devised on the basis of an extensive study of the relevant literature, was distributed to 200 Economics teachers in Free State secondary schools. The questionnaire was based on a 4-point Likert scale aimed at determining the status of in-service training of Economics teachers in the NCS in Free State secondary schools. To ensure that the 200 Economics teachers were representative of the Free State, the researcher drew a random sample of respondents. According to the guidelines on sample size, stipulated by Sekaran (see Alexander, 2004:285), at least 132 (66%) of the 200 questionnaires would have had to be returned to meet the validity requirement for the investigation.

The structured questionnaire focused on the following aspects to generate up-to-date information on the training of Economics teachers and the application of cooperative learning as a teaching strategy in the classroom:

- The NCS for Economics in the FET phase;
- The field of study and the critical components of the teaching-learning process for Economics in the FET phase; and
- The use and application of cooperative learning as a teaching strategy in Economics.

Once the quantitative investigations were concluded, the data was processed. Conclusions, recommendations for in-service training, as well as guidelines and recommendations for teaching strategies for the application of cooperative learning as a teaching strategy for Economics teachers were defined on the basis of the findings of this investigation.

1.9 DETAILS OF THE PRELIMINARY STUDY AND THE RESEARCH PLAN

A preliminary study was carried out and followed up with exploratory discussions with Economics teachers and the heads of Economics departments in Free State secondary schools. From exploratory discussions, a problem identified by the researcher was the training of teachers in support of the implementation of the NCS. A comprehensive reading of policy documents on the NCS for Economics, the nature and structure of Economics as a science, as well as cooperative learning, was performed. It was found that adequate literature was available for this study.

This study comprises of chapters:

Chapter 1: Problem statement and Research purpose

Chapter 2: Outcomes-based education and the National Curriculum model for South African schools

Chapter 3: The field of study of Economics and the interrelatedness of the components of the curriculum.

Chapter 4: Cooperative learning as a teaching strategy

Chapter 5: Empirical research design of the study

Chapter 6: Analysis and interpretation of research results

Chapter 7: Summary, findings and recommendations

Chapter 8: Framework for the use of cooperative learning in Economics in the Further Education and Training phase

The above-mentioned demarcation of chapters in this study is presented as a frame of reference for the research design, summarised in table 1.1, which follows:

Table 1.1 Frame of reference for the research design

CHAPTER 1 PROBLEM STATEMENT AND RESEARCH PURPOSE
CHAPTER 2 OUTCOMES-BASED EDUCATION AND THE NATIONAL CURRICULUM MODEL FOR SOUTH AFRICAN SCHOOLS
CHAPTER 3 THE FIELD OF STUDY OF ECONOMICS AND THE INTERRELATEDNESS OF THE COMPONENTS OF THE CURRICULUM
CHAPTER 4 CRITICAL ANALYSIS OF COOPERATIVE LEARNING AS A TEACHING STRATEGY
CHAPTER 5 EMPIRICAL RESEARCH DESIGN OF THE STUDY
CHAPTER 6 ANALYSIS AND INTERPRETATION OF RESEARCH RESULTS
CHAPTER 7 SUMMARY, FINDINGS AND RECOMMENDATIONS
CHAPTER 8 A FRAMEWORK FOR THE USE OF COOPERATIVE LEARNING IN ECONOMICS IN THE FURTHER EDUCATION AND TRAINING PHASE

1.10 TERMS OF REFERENCE

The following concepts require definition, as they are used extensively in this investigation:

1.10.1 Cooperative learning

Adams and Hamm (1996:3) and Johnson, Johnson and Holubec (1994:4) define cooperative learning as "...learning [which] involves working together to

accomplish shared goals that are beneficial to individuals and the group... students are able to learn together and perform alone within an environment that allows them to actively construct knowledge".

Goor and Schwenn (1993:12) define cooperative learning as follows: "...cooperative learning views students as active participants in their own learning and as future citizens who are learning to work together and share responsibilities".

Cooperative learning is a teaching strategy in which learners engage in communal learning in group context to ensure that group members engage in joint learning and achieve group outcomes at the end of the cooperative learning lesson (Adams, Carlson & Hamm, 1990:5; Becker & Watts, 1998:12; Hanekom & Nel, 1991:109-110; Jacobs, Gawe & Vakalisa, 2004:209; Meyer & Steyn, 1989:782-783; Slavin, 1990:2).

1.10.2 Teaching strategy

A teaching strategy refers to a broad plan of action, which includes the selection of teaching activities with the purpose of achieving a specific outcome. A teaching strategy includes methods, procedures, activities and techniques that may assist the teacher in promoting learners' ability to understand learning content (i.e. knowledge) (Fraser, Loubser & Van Rooy, 1996:143-144; Jacobs *et al.*, 2004:122-123).

1.10.3 Economics

Sameulson and Nordhaus (2000:4) define Economics as "...the study of how society uses scarce resources to produce valuable commodities and distribute them among different people". Economics, as a social science, denotes the study of the individual, who by means of engaging in effort and exercising choices, satisfies an infinite number of needs with the scarce resources available so that optimal wealth may be created. All households, businesses, the

government and other stakeholders in the community are required to make informed choices with respect to the scarcity issue and the fact that unlimited resources do not exist to provide goods and services (Baumol & Blinder, 1998:9; McConnell & Bruce, 2005:5; Mohr & Fourie, 1995:8).

1.10.4 Further Education and Training (FET) phase

The FET phase consists of grades 10 – 12 and is subdivided into levels 2, 3 and 4 in terms of the National Qualifications Framework. The structure of learning programmes and qualifications for the FET phase comprises a combination of fundamental, core and elective learning (NDE, 2003b:6). The FET curriculum was reviewed and the framework expounded in the *Education White Paper 4: Provision for the Twenty-First Century by means of Education and Training and Work* (1998), which was intended to transform the FET phase.

1.10.5 Outcomes-based education (OBE)

Outcomes-based education (OBE) refers to an approach in which curriculum development occurs in a retrospective sense, starting with the required learning outcomes and working back to the anticipated learning experience. It is a learner-centred, results-oriented system based on the belief that all individuals are able to learn. The requirement is that learners must be able to demonstrate or apply specific knowledge, skills and values at the end of the learning process, which has consistently pursued the required outcomes. Learning programmes are developed to assist learners by means of specific learning processes to master the requisite knowledge, skills and attitudes. The NCS curriculum is an example of an OBE curriculum (Boschee & Baron, 1994:193; NDE, 1997c:6; Towers, 1992:1).

1.11 VALUE OF THE INVESTIGATION

This study can be of great value to Economics teachers, because its aim is to stipulate guidelines for applying cooperative learning as a teaching strategy in the classroom. These guidelines may also be applied with great benefit to the teaching of other subjects, because cooperative learning, as a teaching strategy, is discussed comprehensively. Economics teachers should therefore be better equipped for their task than otherwise.

These guidelines can also be used by Economics subject facilitators when teachers are trained and equipped for their task.
The researcher contends that learners will benefit from the investigation, because they will learn by means of cooperative learning as a teaching strategy to function effectively in small groups. Not only will this strategy improve their social skills, but their communication skills should also improve. In this way, critical and developmental outcomes of the NCS in South African classrooms will be addressed by means of this teaching strategy.

1.12 CONCLUDING COMMENTS

This introductory chapter focuses attention on curriculum change in the context of an OBE curriculum model and the NCS for South African schools. Since the nature and scope of this curriculum change is enormous and comprehensive, it is imperative that school principals, teachers, learners, Department of Education officials, parents and the community make a paradigm shift in adjusting to the OBE curriculum. This is valid not only for the GET phase, but also for implementation in the FET phase. Teachers of Economics in grade 10 are compelled as from 2006 onwards to make this paradigm shift in implementing an OBE curriculum. OBE promotes cooperative learning as a teaching strategy for Economics in the NCS. For this reason, it is necessary to investigate the teaching of Economics and the in-service training of Economics teachers, and

also to devise guidelines for Economics teachers to successfully implement cooperative learning as a teaching strategy for Economics teaching in Free State secondary schools.

In this chapter, the researcher formulated the problem statement and research objectives of the investigation. The researcher also indicated how he went about achieving specific objectives, as well as the framework within which the study is presented. Moreover, the researcher pointed out the value of the study and, in sum, defined the terms used in this chapter and the study as a whole.

In chapter 2, the researcher considers the interface and similarities between an outcomes-based education approach versus the NCS curriculum model for South African schools. Moreover, the place of Economics in the NCS for the FET phase is discussed.

CHAPTER 2

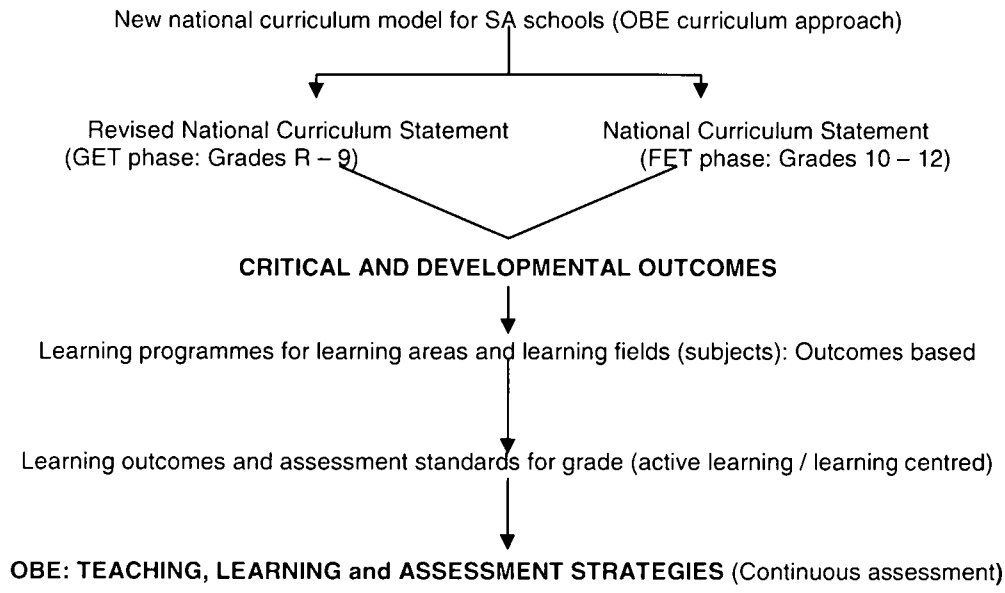
OUTCOMES-BASED EDUCATION AND THE NATIONAL CURRICULUM MODEL FOR SOUTH AFRICAN SCHOOLS

2.1 INTRODUCTION

Over the past decade, South African education has been characterised by an unprecedented transformation process. The outcomes-based education (OBE) curriculum model, the Revised National Curriculum Statement (RNCS), as well as the National Curriculum Statement (NCS) for the Further Education and Training (FET) phase implemented in schools involve not only a new curriculum, but also a new teaching and learning approach.

The NCS for the FET phase in an OBE curriculum model is seen as the solution to the problem being experienced in education with regard to knowledge, skills, attitudes and teaching methods. With the implementation of this OBE curriculum model for South African schools, it is essential that it is studied critically, especially in terms of the application of cooperative learning as a teaching strategy in Economics in the FET phase. In the new NCS, the issue is not only **what** is taught, but also **how** it is taught. These two aspects are, however, so intimately intertwined that they can only be **differentiated from each other** with difficulty, and not actually separated – especially when teachers have to implement the curriculum successfully in practice and also facilitate OBE. Figure 2.1 depicts a graphic representation of an OBE curriculum model for South African schools.

Figure 2.1 Graphic depiction of the new South African teaching model (Dreyer & Booyse, 2004:114)



The purpose of this chapter is to investigate the assumptions and approaches of an OBE curriculum model for South African schools and in this way determine whether the new curriculum model has the potential to bring about meaningful changes in the teaching-learning process of Economics. In achieving this aim, the study makes use of the contributions made by Jacobs *et al.* (2004), Spady (1994a) and Wilkinson (1997) to the knowledge surrounding OBE curriculum models. The specific purpose of this study is largely limited to the OBE curriculum model for South African schools with reference to the NCS for Economics and not the OBE curriculum approach in general.

Firstly, an attempt is made to focus on a definition and description of OBE in general. Secondly, the elements and principles of the OBE approach are discussed. Thirdly, the different OBE curriculum models are explained, and problem areas and arguments in defence of the implementation thereof in South African schools are explained. In this regard, William Spady's demonstration

mountain and the shortcomings of the OBE curriculum model are also discussed in more detail. Fourthly, a multiparadigm perspective on the OBE approach is discussed. Lastly, the National Qualifications Framework (NQF) and the place of the NCS for the FET phase are discussed from an OBE curriculum model point of view.

2.2 DEFINITION OF THE TERM "OBE"

Spady and Marshall (1994:68) describe the OBE approach as "a collaborative, flexible, transdisciplinary, outcome-based, open-system, empowerment-orientated approach to schooling". According to Spady (1994a:30-31) OBE is a means of focusing and organising everything in an education system around that which learners must be able to do at the end of their learning experience, in view of achieving certain outcomes. According to Van Rensburg (1998:8) the definition of OBE depends on whether the term "OBE approach" is simply adopted and then applied to the South African education setup with a similar character. Jacobs *et al.* (2004:102) subscribe to the opinion that OBE is a curriculum approach to teaching and learning where the teacher moves away from a focus on syllabus to OBE learning outcomes. According to Boschee and Baron (1994:193) and Towers (1992:1) OBE is a learner-centred, results-driven approach that maintains the view that all learners can learn. In terms of the OBE approach:

- That which students must learn is clearly formulated;
- The learner's progress is based on the demonstration of different achievements;
- The needs of each learner are accommodated by means of a variety of teaching and assessment methods and techniques; and
- Each learner is given the opportunity to achieve learning outcomes within a given time according to his/her own potential.

Worldwide, OBE is seen as an approach whereby prevailing problems in education are addressed so that success can be ensured for all learners. Various authors (Boschee & Baron, 1994:193-194; Chion-Kennedy, 1994:10; Coetzee & Le Roux, 1997:127; Geyser, 1997a:325; Kudlas, 1994:32; Spady & Marshall, 1994:67; Spady & Schlebusch, 1999:38) emphasise the following basic points of departure upon which the OBE approach is based:

- All learners can learn and achieve success, while the rate and degree of success can differ from learner to learner.
- What and if learners learn successfully is more important than when, how and from whom learners learn.
- Successful learning forms the basis of further success in learning.
- Schools, especially Economics teachers, can control the conditions under which successful learning takes place.
- The community, parents, learners and teachers are all responsible for the successful implementation of learning outcomes.
- The Economics teacher must equip students with the knowledge, skills and values necessary for success within a competitive labour market.

2.3 ELEMENTS OF AN OBE CURRICULUM MODEL

2.3.1 OBE paradigm shift

Spady (1994b) is of the opinion that what and if learners learn effectively is more important than when and how they learn. With an OBE approach, it is important that all learners master, through lifelong learning, the necessary knowledge, skills and values or attitudes to fulfil certain roles both in and out of school context. This paradigm shift is aimed at establishing an integrated approach to teaching and education. The culmination is a citizen with a problem-solving approach to life and who is empowered to help build a positive future for South Africa (NDE, 1997a:3). Van der Horst and McDonald (1997:6) provide the following

explanation for a paradigm shift from a traditional teaching approach to an OBE approach:

- The focus point is on the learner and his/her needs;
- Human differences are acknowledged and accommodated;
- Participatory and democratic decision-making is accommodated in education;
- The emphasis is on responsibility (collective and individual); and
- All learners can and must reach their full potential.

In table 2.1 below, paragraph 2.3.1 is tabulated in respect of the OBE paradigm shift:

Table 2.1 Characteristics of learners within an OBE approach

Characteristic of learner	Description of characteristic
Learning outcomes	Learning outcomes clearly and unambiguously establish what the learner must learn. Such learning outcomes are: • future oriented • learner oriented • focused on knowledge, skills, and attitudes/values • characterised by high expectations of all learners • a basis for further instructional decision-making
Learner's progress	The learner's progress is based on demonstrated achievements. The learner must: • be able to use the learned knowledge, skills and values rather than merely absorb content • be promoted on the grounds of a demonstration of the relevant skills needed for independence and future success
Learner's needs	Each learner's needs are met on the basis of a variety of instructional strategies and assessment methods.
Assistance to learner	Each learner is given sufficient time and assistance to fulfil his/her potential.

2.3.2 Objectives of OBE

The OBE approach expects teachers as well as learners to focus on the following aspects:

- The primary focus is on the end results of each learning process, i.e. the outcomes to be achieved;

- The secondary focus in OBE is on the learning processes that lead to the outcomes, with the teacher using the learning outcomes to plan the learning process (Van der Horst & McDonald, 1997:8).

From the above, it can be deduced that the viewpoint behind the OBE curriculum model is that all individual learners must be allowed to learn to their maximum potential. This means that both teachers and learners must have high expectations of the learning process. Success breeds success – in other words, each instance of success improves the learner's academic self-image and consequently leads to more success. Positive, constructive and continuous assessment is extremely important.

The learning environment also influences the learning performance of learners. The teacher must therefore create a learning environment that is free, challenging and motivating, i.e. the learning environment must promote a learning culture for Economics.

2.3.3 Point of departure of OBE

The two objectives of OBE reflected in paragraph 2.3.2 are based on the three so-called points of departure, namely:

- All learners can learn and achieve success, but not within the same period of time and in the same way;
- Successful learning leads to successful learning; and
- Schools control the conditions that can influence successful learning (Capper & Jamison, 1993:429; Killen, 1996:2; McKernan, 1993:345; Spady, 1994b:22; Spady & Marshall, 1994:67). These points of view are strongly supported and promoted, especially with regard to the teaching of Economics, as learners must be able to perform a more practical application of exercises, role-play and simulations.

According to Fitzpatrick (1991:21) there are three descriptive characteristics that can be seen as critical conditions for an OBE curriculum model that is also applicable to Economics:

- **Uniformity**
  Within an OBE curriculum, learning outcomes are based on the vision of a well-educated learner in terms of interdisciplinary learning, such as problem-solving, cooperative learning (group work) and communication skills. Economics refutes this critical condition of the objectives of an OBE approach.

- **Congruence**
  An OBE curriculum demands that curriculum development, the design of teaching strategies and learning activities, as well as the assessment system, must be brought into line with the learning outcomes. Here the Economics teacher can successfully implement the NCS in order to achieve critical outcomes.

- **Association with learner success**
  The learning outcomes are seen as constants, while the time available for learning, the type of learning strategy, learning activities and methods of assessment are seen as variables within the teaching-learning situation. OBE is excellently suited to the teaching of Economics, and both teacher and learner can benefit enormously.

2.3.4 Operational principles of OBE

According to Wilkinson (1997:173) Spady is of the opinion that the successful application of OBE by the teacher involves the following principles:

2.3.4.1 Focus on culminant outcomes

Dreyer and Booyse (2004:115) and Spady (1994b) see the learning design of culminant outcomes as being essential to the critical development of any curriculum model for OBE learning programme design. The new OBE curriculum model focuses on the learner and what the learner must demonstrate at the end of the learning process. This principle gives an indication of what the teacher expects of the learners when it comes to achieving a specific level of performance according to the learning outcomes. The critical and developmental outcomes provide each teacher with a clear focus point that the learner must achieve once he/she has successfully completed the learning process (Brandt, 1993:66; Spady, 1994b; Spady & Marshall, 1994:70; Van der Horst & McDonald, 1997:21).

2.3.4.2 Opportunities and support to ensure learner success

According to this principle, the teacher must purposely give learners more than one opportunity to learn and to demonstrate that learning has taken place successfully. Teachers will have to change their teaching methods and strategies to adapt to this new OBE curriculum so as to ensure that each learner achieves the critical and developmental outcomes. All learners will have to be exposed to a variety of resources, teaching-learning qualities, and extended learning opportunities (Brandt, 1993:66; Spady, 1994b:21; Spady, 1988:7; Spady & Marshall, 1994:70; Van der Horst & McDonald, 1997:22).

2.3.4.3 High expectations for all learners to be successful

Learners must be exposed to challenges when it comes to attaining higher levels of learning that will also raise the standard of learning outcomes. All learners must be expected to meet these challenges and achieve the expected levels of performance. Recognition must be given to learners as soon as they meet these high standards (Brandt, 1993:66; Spady, 1994b:18; Spady, 1988:7; Spady &

Marshall, 1994:70; Van der Horst & McDonald, 1997:22). High standards must not hinder learners in their pursuit of success, but should rather serve as motivation to cultivate high expectations of successful learning. Criterion-based assessment must be applied, whereby the learner has to perform well to achieve the learning outcomes.

2.3.4.4 Designing down the curriculum from eventual outcomes

In the design of a learning experience, the teacher starts with culminant outcomes that must be achieved and then works backwards towards the discrete outcome, which is no less important. Teachers start with the critical outcomes according to the principles of the NCS for the FET phase. The critical outcomes are the generic and cross-curricular aspects that serve as foundation for the learning outcomes of learning experiences. The next step is the specific learning outcomes and the lesson outcomes designed for the learning experience process. Lastly, the developmental outcomes are used to determine and support the achievements during the learning process for the eventual achievement of outcomes. According to Spady (1988:4) designing down the curriculum is focused on the fact that "specific content and skills are important in OBE because the golden rules of design down require that educators build into their curricula both knowledge and competence bases that are critical for learners to develop and ultimately apply".

The application of this principle means that curriculum setters start the curriculum design process at the point where they wish learners to eventually find themselves.

The NCS for Economics is a curriculum that is fully determined and oriented by learning outcomes and assessment standards. The intended outcomes determine the curriculum, the teaching strategy, the assessment of learners, and their progress.

2.4 FUNDAMENTAL-THEORETICAL FOUNDATION FOR THE DEVELOPMENT OF OBE

OBE is not a "new" discovery of the 21st century. According to Spady (1994a:30), as well as Venter (1997:13), OBE can be traced back to the "craft guilds of the Middle Ages in Europe". Here, knowledge, skills and values were developed for excellence in craftsmanship and skill. Over the past few decades, OBE has undergone an unprecedented renewal and development in the field of research, with a new form of transformational OBE taking root amongst curriculum designers.

OBE is founded on the under-mentioned fundamental-theoretical principles of educational goals and learning outcomes, criterion-based assessment, mastery of learning, accountability for the standardisation framework, and proficiency-based education.

Each of these principles is briefly discussed so as to put OBE into perspective.

2.4.1 Teaching-learning outcomes

In fundamental-theoretical terms, OBE can be traced back to Ralph Tyler's 1949 publication, Basic Principles of Curriculum and Instruction, which emphasised the importance of goals as points of departure in the curriculum process (Brady, 1997:58). In this publication, fundamental aspects of curriculum development and design, such as educational objectives, learning content, the organisation of learning content and evaluation, are discussed. Tyler's curriculum model is basically known as the objectives model, the rational model, or the "middle-objective" model and is considered to be the curriculum model that has had the greatest impact on the field of curriculum design. Kelly (1989:83) refers to the Tyler model as the product model, because it expresses the learning product in

the form of specific objectives. Several foreign curriculum experts such as Taba (1962), Nicholls (1978) and Wheeler (1967), as well as South African curriculum experts such as Calitz (1982), Cawood (1986), Kruger (1980) and Steyn (1992) (see Calitz, Du Plessis & Steyn, 1982), have tried to make adjustments and formulate their own models, which have not differed much from Tyler's model.

The development of taxonomies by Bloom (1956), Krathwohl (1964) and Simpson (1966), as well as Gardner (1992), for cognitive, affective, psychomotor and interpersonal objectives respectively (see Calitz *et al.*, 1982:27-28) and Mager's (1962) work on behavioural objectives, have provided the framework for the behaviouristic orientation of curriculum planning (see also King & Evans, 1991:74; Schwartz & Cavener, 1994:1).

The concept "outcomes" has changed over time, with a distinction being drawn between three outcomes, namely knowledge, skills, and value orientation (Spady, 1994b). According to Spady (1982:123) there are different ways to describe outcomes, i.e. by focusing on content, time, curriculum, jurisdiction, skill and function. Brandt (1993:66-71) refers to different types of outcomes, namely empowerment outcomes and culminant outcomes, where exit-culminant outcomes refer to the fundamental life roles and career roles to be played by learners.

O'Neil (1994a:9) describes three positive elements of outcomes, namely (i) knowledge of the subject content, (ii) the skill with which the learner demonstrates the outcomes, and (iii) the requirements in terms of which the outcomes are demonstrated.

In the OBE curriculum model for South African schools, the fundamental life roles are embodied in the seven critical and five developmental outcomes (NDE, 1997b:10), while the career roles are embodied in the seven teaching roles identified by the National Department of Education (NDE, 2000:13-14).

2.4.2 Criterion-based assessment

In terms of this principle, assessment of the learner takes place through a clear shift in focus from norm-based evaluation to criterion-based and self-directed evaluation (Watkins, 1997:164; Wilkinson, 1997:151). With criterion-based assessment, the learner's proficiency is displayed on a continuum, which extends from "no proficiency" to "perfect execution" (Wilkinson, 1997:152).

A number of learning outcomes at different levels are defined within an OBE model, and a learner's progress is measured by means of a predetermined criterion assessment (NDE, 1998a:152). Teachers are obliged to transparently present learners with the criteria according to which they will be assessed, before any assessment can take place. In other words, learners are aware of WHAT and HOW they must demonstrate that, according to certain criteria, they have achieved the learning outcomes according to the policy documents of the National Department of Education (NDE, 1996c:25-26).

2.4.3 Mastery learning

The purpose of this principle is to ensure that learners are given the opportunity to successfully complete the specific learning tasks. Success in mastery learning lies in the choices that a learner has in respect of the type of learning he/she prefers. Guskey (1994:36) describes mastery learning as the classification of learning content into learning-teaching units, according to which learners will be assessed on the basis of certain aspects at the end of the learning experience. This type of assessment highlights clear shortcomings for the learner and can be rectified at a later stage by means of the mastery of learning units.

A number of authors are of the opinion that mastery learning can be seen as an integral part of OBE. Although only the conceptual and theoretical are linked,

they differ in respect of focus points (Burns, 1987:12; King & Evans, 1991; Spady, 1994b:18-19).

The South African curriculum model – the NCS – supports the principle of mastery learning, because certain elements come to the fore. Curriculum planning principles such as learner centeredness, differentiation, flexibility and progress are manifested in the RNCS and the NCS policy documentation (NDE, 1996a:16-21; NDE, 2003c:12-15). Learning outcomes for Economics can be achieved by applying cooperative learning as a teaching strategy by means of the following (Burkhardt, 1976:6-7):

- Developing a culture of lifelong learning amongst learners;
- Promoting learning involvement;
- Enhancing Economics skills such as calculation, processing, interpretation and analysis of economic indicators;
- Promoting neatness, carefulness, accuracy and thoroughness; and
- Cultivating a love of Economics.

2.4.4 Accountability for the standardisation framework

The current interest in the OBE approach to curriculum development in countries such as the United States of America, the United Kingdom, Australia and New Zealand is to a large extent the result of pressure from the community for accountability by various role-players in education (Killen, 1996:2; Killen, 1998:4). The reason behind these actions was the lack of basic academic and social skills amongst disconcertingly large numbers of learners exiting the education system (Capper & Jamison, 1993:428; Hargis, 1995:21-25). Communities in these countries started demanding that schools be held increasingly accountable for what learners ultimately achieve: "Schools should be accountable for demonstrating that students have mastered important outcomes" (O'Neil, 1994:7). Spady and Marshall (1994:70) go on to specifically ask schools the question as to what type of learner should be developed to achieve the exit

outcomes, namely: "What do schools want for their students? Individual teams describe these role-grounded exit outcomes: involved citizen, collaborative contributor, adaptable problem solver, perceptive thinker".

According to the NCS policy document of the National Department of Education (NDE, 1996a:7), accountability and transparency apply as principles for the development of the OBE curriculum model, particularly for Economics. Statutory institutions that accept accountability when it comes to monitoring all norms and standards for qualifications, as set by SAQA, are the National Qualifications Framework (NQF) and UMALUSI (National Certification Board), which approves the external evaluation of grade 9 and grade 12 examination results at schools (NDE, 2003c:9).

2.4.5 Proficiency-based education movement

According to Wilkinson (1997:5) the proficiency-based education movement in the USA was the precursor to OBE. This approach was aimed at improving the ability of schools to prepare all learners for life roles in society (see 2.4.4). Spady believes that proficiency-based education is aimed at integrating outcome objectives and applying teaching strategies and appropriate evaluation methods (King & Evans, 1991:74; Wilkinson, 1997:54).

According to Spady (in Brandt, 1993:67) during the 1970s there was a problem with regard to the meaning of the term "proficiency". Various proficiency experts referred to "true proficiency", while others referred to "minimum proficiency". Spady believes that true proficiency emphasises a number of related skills that are integrated, while minimum proficiency refers merely to the mastery of basic skills.

According to Van der Horst and McDonald (1997:10-11) proficiency-based education focuses only on specific proficiencies that include only a particular skill,

while OBE focuses on outcomes that include knowledge, skills, attitudes and values. Van der Horst and McDonald (1997) refer to the nature of proficiency-based education as the integration of outcomes and specific skills, namely:

(1) The outcomes in terms of specific skills;
(2) The outcomes being taught by means of instructional experience;
(3) Different assessment strategies being used to determine whether the learners have indeed mastered the outcomes;
(4) Certification once the desired outcomes have been achieved;
(5) Adaptable training programmes managed in a sensitive way to provide optimal guidance to the learner.

None of the various official curriculum development policy documents of the National Department of Education make any mention of proficiency-based education – only skills that learners must master after having completed the learning experiences.

In conclusion, what can be discussed is in line with the four operational principles described in paragraphs 2.3.4.1 – 2.3.4.4 and the five fundamental-theoretical foundations of the development of an OBE curriculum model discussed in paragraphs 2.4.1 – 2.4.4. Spady (1998:8; 1994b:18-22) identifies aspects to be included in a model or systems framework for OBE, namely culminant, meaningful outcomes for all learners; a structure for curriculum content and articulation; a structure for teaching interaction and technology; as well as a structure for performance-based assessment and certification of learners. These tangencies and similarities strongly underlie the NCS for the FET phase.

2.5 MULTIPARADIGM PERSPECTIVE ON THE OBE APPROACH

Spady, who is considered to be the groundbreaker when it comes to the OBE approach, as well as other proponents of this approach, see it as a drastic breakaway from the current traditional practices and a means whereby

successful learning can be guaranteed for all learners. A multiparadigm perspective on the organisation and sub-administration of OBE highlights clear contradictions. Schwartz and Cavener (1994:327-328) differentiate between two different philosophies of educational reform, namely:

(i) The structural-functional paradigm, which is founded on objectives and controls; and

(ii) The constructivist approach, which treats learners and teachers as independent makers – and not only users – of knowledge.

According to Wilkinson (1997:172) conflict arises because the OBE model embraces both paradigms. Conflict intensifies when OBE reforms are considered from the critical-theoretical and post-structuralism point of view (Schwartz & Cavener, 1994:327-328).

2.5.1 Structural-functional paradigm

Many facets of OBE are founded in the structural-functional approach, aimed at regulating and maintaining the prevailing social order (Capper & Jamison, 1993:437; Steyn & Wilkinson, 1998:204; Wilkinson, 1997:172). In this way, things are learned and not structured; the teacher is in control of the learning process; and there is an ideal sequence in which subject matter is presented, while teaching techniques determine the success of the learning action to a certain extent. Curriculum development, control over the teaching process, and acceptable teaching techniques are carefully prescribed within this paradigm.

According to Schwartz and Cavener (1994:327-328) and Wilkinson (1997:172), Mager's criticism of OBE is also levelled at the functional foundation: "... it reduces education, teaching, and learning to forms of human engineering and quasi-scientific planning procedures, procedures that view education as an instrumental means to specific ends. This model, which many educators find

unacceptable, amounts to moulding students through behavior modification" (McKernan, 1994:343).

Schwartz and Cavener (1994:327-328) state that complex systems offer resistance against the type of standardisation inherent to OBE, with its roots in a positivist-behaviouristic philosophy, which espouses predictability, uniformity and certainty. The OBE approach ignores the complexity of schools, while the standardised prescriptions for reform are based on the power of hierarchical structures – a powerful bureaucracy that ensures implementation: "People are subject to a reform agenda in which they may have little ownership, and they may well feel insulted or brainwashed", and "... the language of OBE is itself the language of instrumental rationality, and enlists language that requires extensive in-service training from outside experts...a language machinery and control" (Schwartz & Cavener, 1994:327-328).

In South Africa, according to Van Tonder (2000:334) and Wilkinson (1997:173), there are also clear signs of a power struggle with its own agenda when it comes to the choice of OBE curriculum model for schools. Thus Kahn (1995:450) remarks that, "The Reconstruction and Development Programme has been driven by the trade union movement, and has injected into education the concepts of modularization and outcomes-based learning as part of a National Qualifications Framework". The control over the new teaching model lies in the fact that the setting of critical outcomes that the learner must achieve is decisive in securing greater control over education. These overarching outcomes must precisely reflect the South African perspective on transformation and have maximum impact on the learning process and the field of learning (NDE, 1996b:8). Other control measures applied by the NQF and SAQA are the registration of standards, evaluations and prescriptions, and the moderation of evaluation procedures (Nieuwoudt, 1997:14; Wilkinson, 1997:173). Wilkinson (1997:173) questions whether the OBE curriculum model does indeed offer the freedoms it claims to. This is doubtful, especially in the FET phase.

2.5.2 Holistic-constructivist approach

Schwartz (1994:88) sees OBE as a more constructivist teaching philosophy. The proponents of the transformational OBE approach claim that this approach, as characterised by cooperative learning and formed by cooperating structures, gives an indication of the holistic-constructivist viewpoint of the interpretative paradigm (Capper & Jamison, 1993:437). In the South African educational policy documents, the RNC and the NCS for the NQF are also clear signs of the support of this paradigm in the new OBE curriculum model (Wilkinson, 1997:173).

The point of departure is then also that this new means of knowledge production and the pursuit of social reform underlie any national learning programme, and this through the establishment of critical outcomes. A clearly constructivist approach to teaching and learning is supported (NDE, 1996b:6,13-16; Steyn & Wilkinson, 1998:204).

Schwartz and Cavener (1994:327-328) underwrite this point of view and are of the opinion that, despite claims of autonomy, learners are the most non-empowered group in outcomes-based educational reform: "They come to school with varying family backgrounds, experiences, and interests. Yet, select adults decide what all children need to know to become good workers...It is not surprising if students look on OBE as a new school game; they procrastinate or manipulate. No-one has asked them what school should be like. No-one has asked what school might be for beyond producing good citizen-workers. The emphasis is on clarity of set outcomes and organizing students to learn the same thing at the same time, not on personal and sometimes serendipitous learning. The reductive approach Spady describes requires acquiescence, not critical thinking" (see also Kudlas, 1994:33).

2.6 DIFFERENT ASPECTS OF AN OBE APPROACH

According to Spady and Marshall (1994:67) teaching must be organised in such a way that predetermined outcomes will be achieved: "...our educational system needs a new theoretical and operating paradigm...the new paradigm must be success-based in philosophy and outcome-based in practica". Spady's point of view regarding outcomes basically comes down to the fact that it is the school's responsibility and most important function to prepare learners to take their place in the business world and in society (Spady, 1988:4-5; Spady & Marshall, 1994:69-71).

The implementation of an OBE curriculum approach focuses on three phases, namely (i) the identification of new learning outcomes, (ii) the formation of the curriculum around learning outcomes, and (iii) the alignment of identified learning outcomes (Berry, 1995:39). According to Wilkinson (1997:155) curriculum models are already being designed in such a way as to deliberately develop exit (achieved) outcomes for learners so that they can successfully demonstrate such outcomes in reality.

Spady (1988:5) emphasises that OBE is not merely a programme to be followed, "but a way of designing, developing, delivering and documenting instruction in terms of its intended goals and outcomes".

In light of this point of view, the next paragraph studies the different types of OBE curriculum approaches in more detail.

Each of the following curriculum models is discussed individually so as to ensure greater clarity regarding an OBE approach for South African schools.

2.6.1 Types of OBE curriculum approaches

Spady and Marshall (1994:68-71) refer to three types of OBE curriculum models, namely (i) the traditional curriculum approach, (ii) the transitional curriculum approach, and (iii) the transformational curriculum approach.

2.6.1.1 Traditional curriculum approach

Spady and Marshall (1994:69) consider this model to be more curriculum based than outcomes based. This model is applied at school level in the USA, where curriculum experts had to investigate the existing learning contents and curriculum structure to establish relevant elements that would be considered important for learners (see figure 2.2: Spady's demonstration mountain). According to Spady, the relevant elements in the setting of the new curriculum model, namely learning content, teaching techniques, subject-matter selection and evaluation, are made possible as components of an OBE curriculum model. This type of approach correlates with the current South African high-school interim syllabus for grades 10-12, namely "Report 550 (2001/08): A Résumé of Instructional Programmes in Schools" (NDE, 1997b:17).

Spady criticises this curriculum approach on the following grounds:

- The outcomes in this model focus on traditional subject-matter-based classifications that do not keep pace with the realities of the business world and social structures.
- This approach is aimed at academically proficient learners.
- The model poses no challenge to the traditional nature of the current school setup, particularly time-bound and relevant learning content aspects and certification standards for skills development.

From this we can deduce that despite problem areas such as time and organisational limitations, the traditional curriculum approach succeeds in bringing about successful learning amongst certain learners. The context of learning takes place only within the classroom and school. This approach

focuses on a framework of inherent aspects rather than exit outcomes to be achieved by learners.

2.6.1.2 Transitional curriculum approach

This model addresses higher order proficiency (see figure 2.3), which is important for all learning and the fulfilment of life tasks. Aspects that come to the fore are particular characteristics, namely (i) higher-order proficiency and (ii) complex, unstructured fulfilment of tasks that each learner must achieve if such a model is implemented in South African schools. Schools thus emphasise broad attitude-based, affective and motivational qualities. Spady and Marshall (1994:69-71) see the transitional model as a viable approach to be applied in schools that wish to achieve their vision and meaningful outcomes. According to Wilkinson (1997:174) this approach promotes critical levels of thought, effective communication skills, technological application possibilities, and complex problem-solving skills and proficiencies during teaching and learning situations.

Spady and Marshall (1994:70) identify clear developmental phases in the transitional approach. These phases can briefly be described as follows:

- More advanced content-based skills are required;
- Integration and interdisciplinary cooperation are needed; and
- Specific exit outcomes are determined in advance as points of departure.

2.6.1.3 Transformational curriculum approach

According to LaHaye (1994:28) Spady strongly recommends this transformational curriculum approach as being the right one: "...it completely restructures education as we know it". Spady is a proponent of the transformational curriculum model, because the current educational system and syllabi hamper development and change within schools and do not meet the expectations of communities and learners: "...they do not help learners to

develop the attitudes, knowledge and skills that will enable them to participate completely in society" (NDE, 1997e:19).

The transformational curriculum approach is also the basis of the South African National Curriculum Model (NDE, 1997d:22; Wilkinson, 1997:158). From this we can deduce that this approach would be used as a basis to support the social and economic changes in a democratic dispensation – especially in a South African context with the restructuring of traditional education to an OBE approach. The recognised foundation for the development of an OBE curriculum is discussed in more detail in paragraphs 2.6.1.3 & 2.6.2.3 and in figure 2.3.

Below is an explanation of Spady's demonstration mountain.

2.6.2 William Spady's demonstration mountain model

Spady (1994b:19-22; 1994c:61-65) presents the so-called demonstration mountain as a means of classifying outcomes at different levels of complexity, as schematically illustrated in figure 2.2. The demonstration model presents six different forms of learner achievement or proficiency, each of which is discussed briefly.

2.6.2.1 Traditional level

The simplest form of outcomes, according to the demonstration mountain, is the traditional zone. Spady refers to these outcomes as discrete content skills, as they are primarily related to the specific subject content. The existing curriculum, rather than clear and relevant learning outcomes, serves as point of departure. The discrete subject-matter skills can be described as specific objectives in subject fields and constitute an inherent part of the content. The second level within the traditional zone is the structured task-fulfilment component. This structured task-fulfilment component presents the daily classroom activities. According to Spady and Schlebusch (1999:48) the teacher prescribes the

elements and structures of the learning task in respect of cognitive processing suitable for the grade. The learner's task is limited to the accurate execution of instructions – "quite straightforward and basic".

2.6.2.2 Transitional level

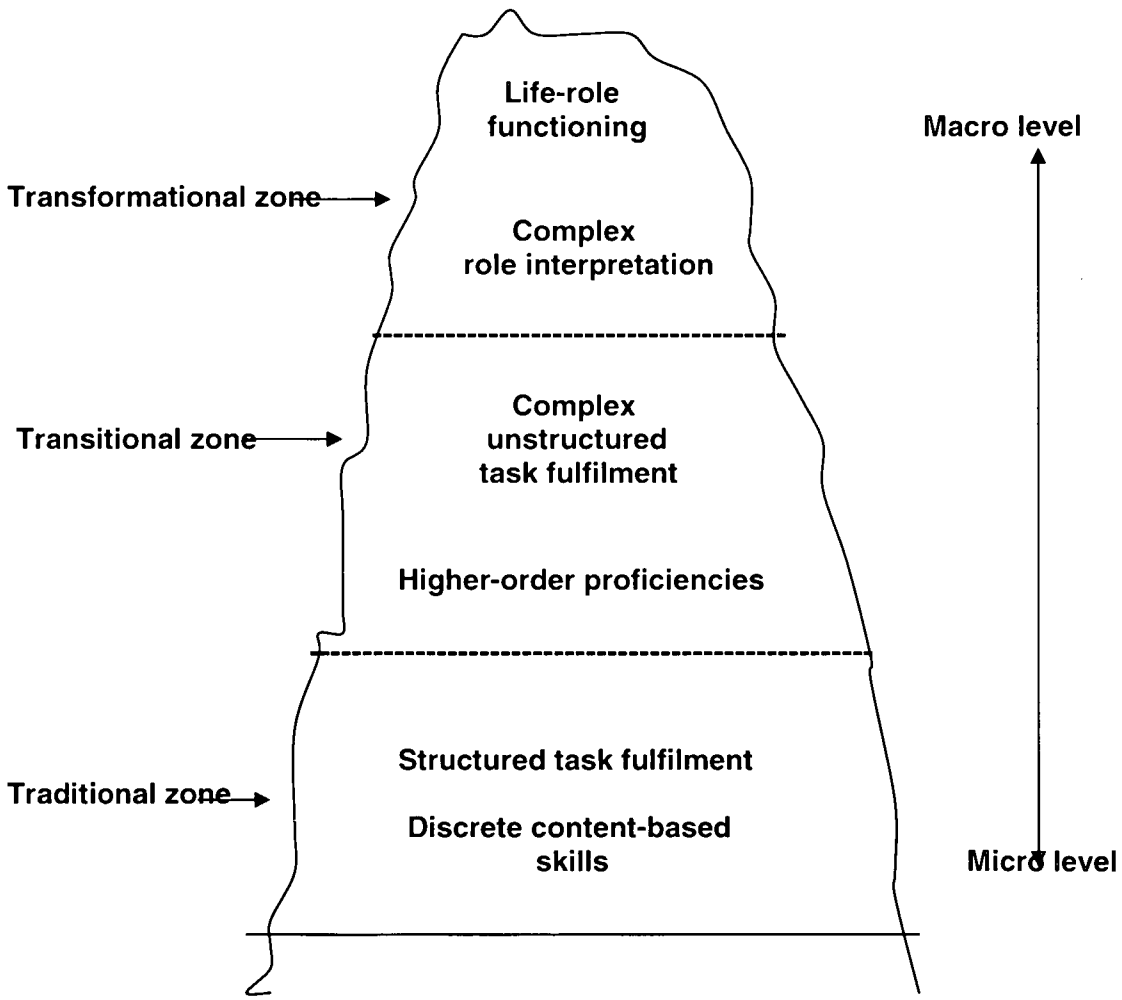
In the transitional zone, the higher-order proficiencies are illustrated with reference to the analysis of principles and their interrelatedness, critical thought, technological applications and complex problem-solving, as well as effective communication. This zone is generally applicable to different subject areas and can be applied in different situations where higher-order skills would be required of the learner. The subject-matter skills and the structured fulfilment of tasks serve as basis for this transitional zone.Within the same zone and on the second level, namely complex unstructured task fulfilment, the emphasis starts to fall on personal ownership and independent thought. In this zone, learners create their own projects and demonstrate their skills in independent research and suitable higher-level projects. An advanced degree of integration and functional application is required (Spady, 1994b:20), without predetermined parameters set by the teacher, within which the task fulfilment must take place (Spady & Schlebusch, 1999:49).

2.6.2.3 Transformational level

In this zone of the demonstration mountain, demonstrations demand the highest (macro) level of ownership, integration, synthesis, and the functional use of prior knowledge (Van Tonder, 2000:275). Here the most complex forms of learner performance are preferred, namely the transformational outcomes. The demonstrations required by these outcomes demand the highest degree of ownership – that is, the transformational zone involving complex role interpretation by the learner. Learners must be able to function in complex and life-relevant contexts. The aim is to equip learners with knowledge, skills and values necessary to achieve success in real life (Spady, 1994b:19-21; Spady & Marshall, 1994:70; Spady & Schlebusch, 1999:49). Complex task fulfilment

evolves into life-role functioning, which is the highest level of role interpretation. Of course, this will eventually enable learners to successfully fulfil all the roles they have to fulfil as adults (Spady, 1994b:21-22; Van Tonder, 2000:273).

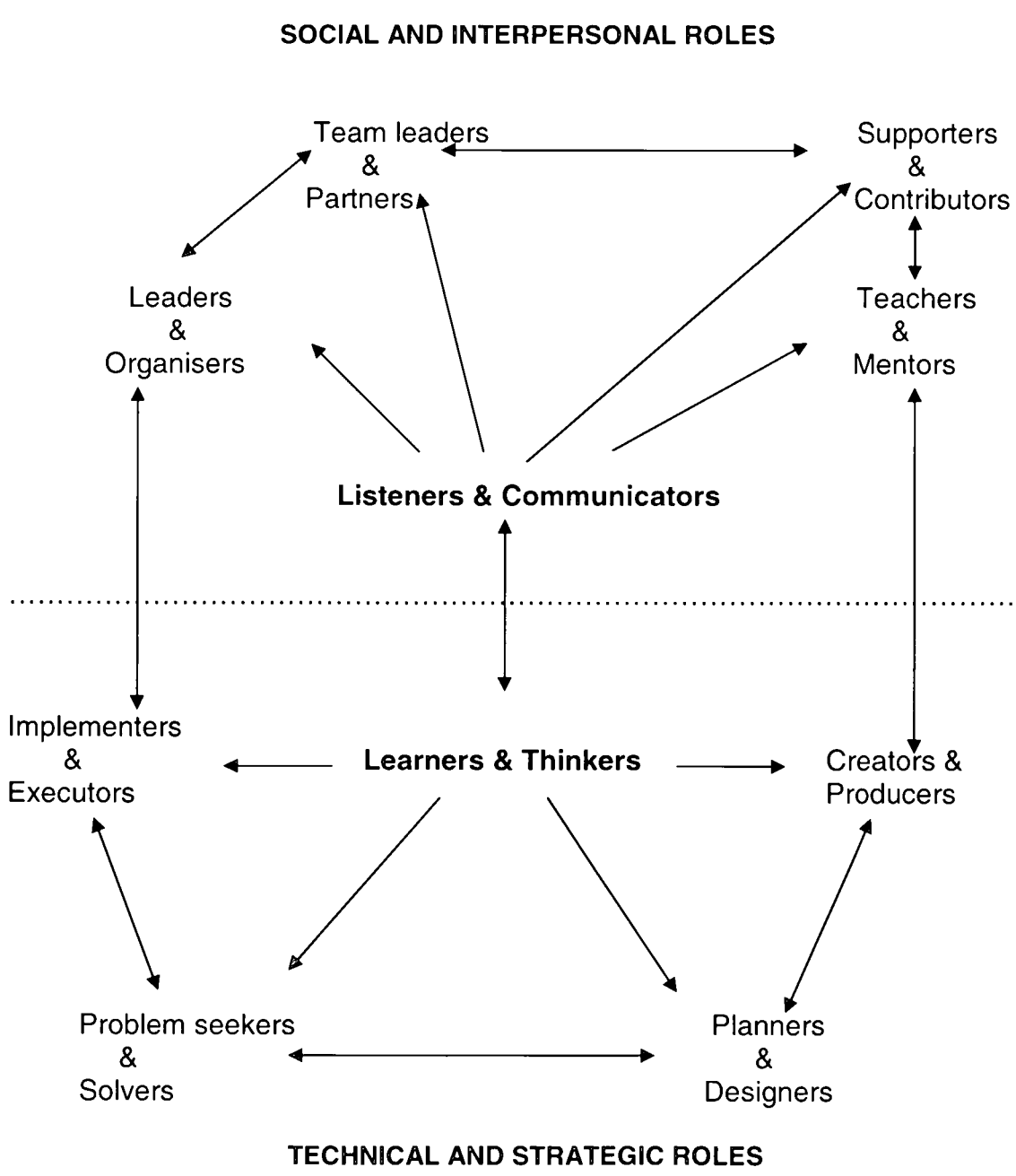
Figure 2.2 Spady's demonstration mountain (Spady, 1994b:20)



Within this zone, Spady (1994b:21) uses a diagrammatic representation of fundamental life interpretation roles (see figure 2.3). Here, ten fundamental life interpretation roles are proposed that the learner, at the end of his/her school career, must interpret as citizen, employer, employee, parent, or community leader. The lower half of the schematic diagram refers to technical and strategic

life interpretation roles, while the upper half refers to social and interpersonal roles (Spady, 1994b:21; 1994c:68-69).

Figure 2.3 Spady's fundamental life interpretation roles (Spady & Marshall, 1994:69)



2.6.3 Curriculum development in the OBE model

Spady (Spady & Marshall, 1994:70; Spady & Schlebusch, 1999:30) emphasises four key principles in the development of the transformational OBE approach (see 2.6.1.3 & 2.6.2.3):

- Meaningful outcomes as focal point;
- Development of downward exit outcomes;
- Emphasis on high expectations in the success-for-all approach;
- Offering of adequate opportunity for support in order to be successful.

Subsequently, the process development of outcomes, the development of an OBE model and the life interpretation roles and success-for-all approach are briefly discussed.

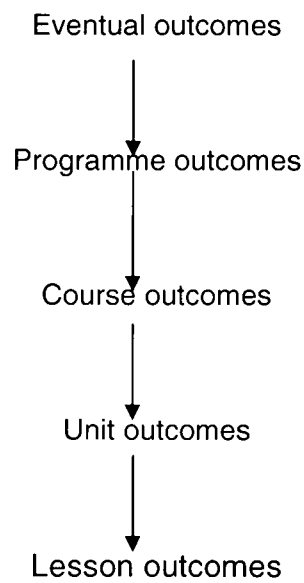
2.6.3.1 Process development of outcomes

Wilkinson (1997:159) illustrates the process development sequence in an OBE model, as reflected in figure 2.4. Outcomes can be classified in terms of different curriculum levels. According to the sequence of downward design for OBE, thematic programme outcomes can be developed in support of the eventual outcomes. Once the appropriate segments of the programme outcomes have been achieved, the course or grade levels or the course outcomes are developed. This process can then be continued through the formulation of the unit outcomes for each course or module and lesson outcomes for each learning unit.

Hence, it is clear that all other levels of outcomes in a system are developed downward and directly in line with the exit outcomes. The vision for a specific learning programme (e.g. Economics) must be directly deduced from, and have the same vision as, the exit outcomes; so too the course outcomes (for example, grade 10 Economics), the unit outcomes (as the subject matter is classified, e.g.

Learning Outcomes: Macro Economics), and the specific learning outcomes (e.g. Economics as a science).

Figure 2.4 Process development sequence for OBE approach (Wilkinson, 1997:159)

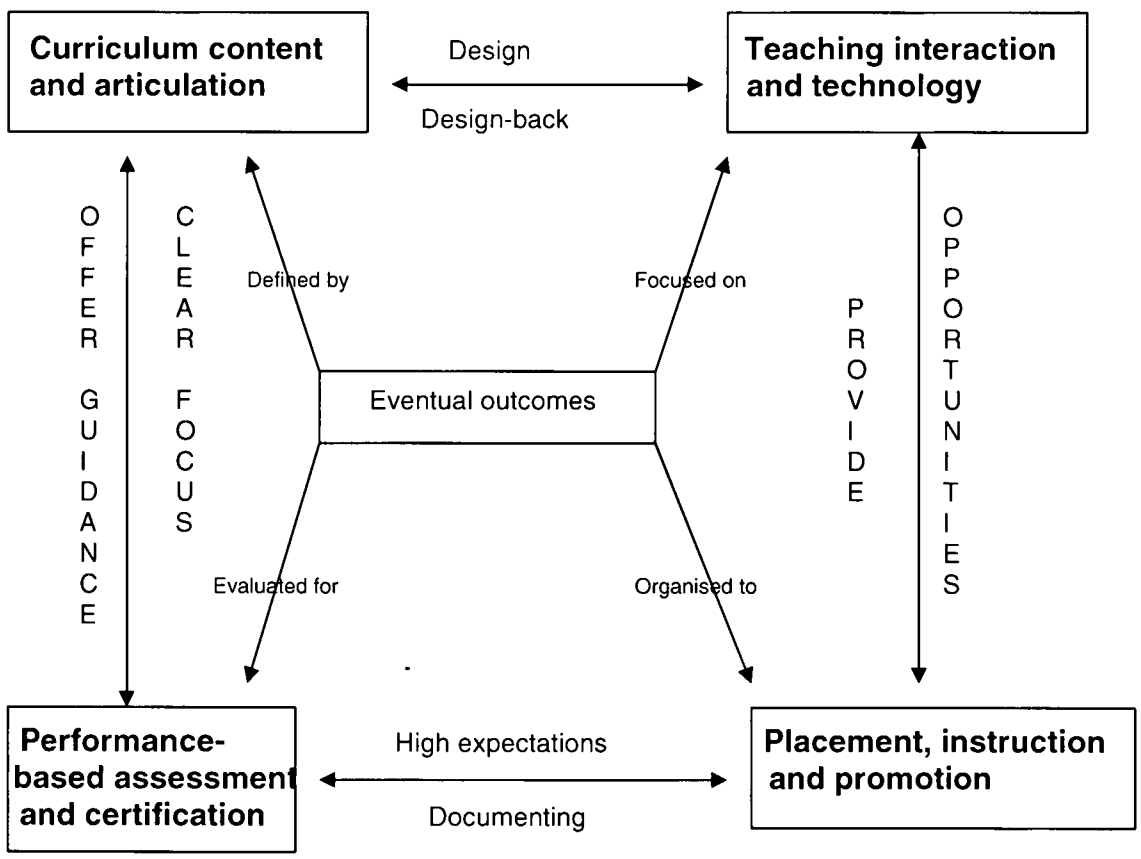


2.6.3.2 Systems framework for curriculum development of an OBE model

The development process as systems framework for the transformational OBE model, according to Spady (1988:8), is depicted in figure 2.5. The OBE model, like the other educational systems, consists of the same four operational components (see 2.3.4), namely curriculum content and structure, teaching methods, testing and certification of learners, and the placement and promotion of learners (Wilkinson, 1997:160). Spady emphasises that the development of an OBE approach can only succeed if it does not break away from a time-bound, curriculum-based point of departure (Brandt, 1993:66-70). Wilkinson (1997:161) sees the current South African OBE curriculum model mainly as a transformational model, as corresponding characteristics are present. The

overarching critical and developmental outcomes that guide all education on all levels and according to which learning outcomes and assessment standards for learning areas (GET phase) and subjects (FET) are developed, but are also regarded as a radical deviation from the transformational model. The learning programme guidelines of the FET phase have already been refined and there is still a sense of uncertainty with regard to the assessment of learners. It seems that the South African educational model will to a large extent retain its focus on the transitional model as point of departure before it will focus on full-scale implementation of the transformational model. Figure 2.5 below depicts the systems framework for the development of an OBE model.

Figure 2.5 Systems framework for the development of an OBE model (Spady, 1988:8)



2.6.3.3 Spady's fundamental life interpretation roles

The discussion of meaningful outcomes provides valuable perspectives on the philosophy underlying OBE, namely the vision of the achievement of outcomes at which all curriculum development is aimed. In this regard, reference can be made to the overarching critical and developmental outcomes that are the basis for all education and training in South Africa and which reflect the vision of the country's constitution. As such, school education will have to be directed in terms of Spady's vision of life interpretation roles so as to give form to the creative, responsible and sensitive problem solvers, team leaders, creators and teachers (see figure 2.3) of the future (Wilkinson, 1997:166). The ideal for learners in Economics is to work towards a vision that investigative, thinking economists who, as responsible and sensitive citizens of the country, will search in an analytical way for solutions to economic and financial problems in the community.

Schwartz and Cavener (1994:327) emphasise the significant responsibility of the school, particularly subject teaching, when it comes to ensuring success for all learners. Waspe (1997:22) summarises the success-for-all approach in a few basic principles, namely:

(i) All learners must have the opportunity to be successful in their own time, at their own pace, and in their own way;
(ii) Learners must achieve the same outcomes in different ways;
(iii) The different abilities of learners must be assessed; and
(iv) Learners must now WHAT they are learning and WHY they are learning it.

According to Vickery (1988:53) the sequence and way in which subject matter is presented is extremely important, so that groups can consist of learners who will be able to master the subject matter at the same pace.

The success-for-all approach is strongly emphasised in the South African OBE curriculum model in that the principles of learner centeredness, integration of learning programmes, development of lifelong learning, support of learners and promotion of learners are pursued in the effort to achieve success. This approach emphasises the need for an active-investigative approach, i.e. cooperative as well as individual learning environments (NDE, 1996b:44-49). These aspects are discussed in more detail in chapter 4 in the section dealing with cooperative learning as teaching strategy for Economics.

2.6.4 Shortcomings in the OBE curriculum model

Although the new South African OBE curriculum model is seen as the key to problem-solving in the restructuring of education, a number of educators and curriculum experts have expressed their concern regarding certain aspects of the new curriculum model and have highlighted several shortcomings in the teaching-learning model (Glatthorn, 1993:1-9; McGhan, 1994:70-71; Pienaar, 1998:23). Some of these problem areas are briefly discussed below.

2.6.4.1 Curriculum development

Glatthorn (1993:6-7), as well as Schwartz and Cavener (1994:328), refer to the major demands facing teachers with regard to the process of curriculum development. Glatthorn's thoughts revolve around the quality of the curriculum material being designed, which does not meet the quality standards for an OBE curriculum model. If the outcomes-based curriculum model is adapted to local conditions, it can be applied effectively and deliver a useable product.

According to Dreyer and Booyse (2004:114-115) South African teachers have, until recently, been trained to teach in the traditional, more content-based curriculum within a content-based teaching model. The authors suggest that

current teachers be retrained in teaching the NCS curriculum for the FET phase. Those providing teacher training will definitely have to look into the needs within the curriculum. In terms of the NCS, South African schools are obligated to adapt to this new radical paradigm shift in respect of teaching and cooperative learning as a teaching strategy.

2.6.4.2 Empowerment and in-service retraining of teachers and student teachers

Spady, the groundbreaker behind the transformational OBE teaching model, makes the following statements in response to a question about the role and possible retraining of teachers and student teachers in an OBE curriculum model (Brandt, 1993:70): "... implementing authentic OBE is an evolutionary process and no one should try to drop it on them", and also: "You cannot mandate outcome-based education and hope to have it successfully implemented".

Due to the unique nature of the RNCS and the NCS (GET and FET phases) and the OBE teaching approach, qualified teachers will have to be retrained. Moreover, student teachers currently receiving initial teacher training will have to be specifically trained to present the curriculum. Teacher training providers will thus have to adapt their training programmes to the new demands if they want to train teachers who can practise successfully within the new education dispensation (Dreyer & Booyse, 2004:115). Wilkinson (1997:171) asks whether education experts, curriculum developers and educational institutions are not making the exact same mistakes against which Spady warned. According to Greyling (1999:28) it is true that no heed is being paid to Spady's statement, because the teacher must drastically adjust his/her teaching style and perceptions, teaching strategy and methods in order to feel an affinity with a paradigm shift towards an OBE curriculum model. Baron and Boschee (1996:574) remark that "OBE has emerged from the restructuring movement as one of the most promising, yet controversial, school reforms efforts".

2.7 CONCLUSION

Spady's demonstration mountain model identifies aspects to be included in a model or systems framework for OBE, namely culminant, meaningful outcomes for all learners; a structure for curriculum content and articulation; a structure for teaching interaction and technology; as well as a structure for performance-based assessment and certification of learners. These concurrences and similarities strongly underlie the NCS for the FET phase. Hence, the transformational curriculum approach is also the basis underlying the South African national curriculum model (NDE, 1997d:22; Wilkinson, 1997:158). From this it can be deduced that this approach could be used as a basis to support the social and economic changes in a democratic dispensation, particularly in the South African context with the restructuring of traditional education to an OBE approach, namely the RNCS and the NCS. Subsequently, the NQF and the NCS the FET phase are discussed in more detail.

2.8 NATIONAL CURRICULUM MODEL FOR THE FURTHER EDUCATION AND TRAINING PHASE

2.8.1 Introductory remarks

In the past, education was seen as the area in which knowledge was gained, and training as the area in which skills were acquired (NDE, 1997c:5). The NQF reconciles these two areas. Learners are intensely involved in mastering and integrating knowledge, skills and values. Consequently, the run-up to a new curriculum model for South African schools, a structural policy framework, different tracks and the phases within the NQF are explained in full, with the FET phase's National Curriculum Statement (NCS) receiving particular attention.

2.8.2 Run-up to a new curriculum model for South African schools

During April 1994 a task group was established, consisting of members of the National Training Board (NTB), the business sector, organised labour, the government, as well as providers of education and training. This group drew up a discussion document titled *A National Training Strategy Initiative*, and their recommendation was the establishment of the NQF. One year later, the policy document of the NQF was ratified, with SAQA being ratified as law in terms of legislation. The establishment of the NQF resulted in a new curriculum model for compulsory schooling in South Africa.

2.8.3 Underlying principles of the national curriculum model for South African schools

NDE (1996a:52-55) and NDE (1996c:16-21) differentiate between two types of basic principles underlying the NQF for the GET phase and the FET phase (see also EIC, 1996:15-21 and NDE, 1997a:13).

(i) Basic objectives of the national curriculum model for South African schools

- **Human resource development**

The education and training system must be focused on preparing learners who can achieve critical outcomes by the end of their school career, who can meet the expected high levels of knowledge and skills required by the community, and who:

- Have a sound foundation in general education;
- Have the need and ability to pursue sustained, lifelong learning and to develop new knowledge, skills and technology;
- Are mobile between different occupations;
- Can accept responsibility with proficiency;

- Can set and achieve standards; and
- Can operate cooperatively.

- **Learner centeredness**

Learners and their needs must be the focal point of the curriculum development process. Different styles and paces of learning must be taken into account and be accommodated in both the learning situation and the earning of qualifications. Learners must be motivated through the provision of positive learning experiences, as well as respect for cultural diversity. Learners must be encouraged to think about their own learning progress and to master skills on their own through multimedia learning programmes and distance education.

- **Recognition of prior learning**

Curriculum development and the recognition of prior learning must be acknowledged, as these principles are beneficial to the self-worth and proficiency of learners.

- **Relevance and adaptability**

The curriculum must be relevant and adaptable so as to meet the current and future needs of individuals, the community, trade and industry. Adaptability in learning programmes must be structured in such a way as to maximise learning opportunities and to offer learners choices as to what will be learned and at what pace. Relevance also means that basic information and know-how with regard to drug abuse, AIDS, human rights and the labour market must be included in curriculum development.

- **Nation-building and non-discrimination**

Nation-building and non-discrimination are the cornerstones of the new curriculum development model in the effort to build a national identity.

Learning programmes must uphold basic human rights and mutual respect, irrespective of gender, race, class, religion or age.

- **Development of critical and creative thought**

Learning programmes must develop learners' ability to think logically, analytically, holistically and laterally. Learners must be active participants in the developmental process.

- **Creditworthiness and quality assurance**

The education system must be comparable with the rest of the global community in order to remain competitive. The community must consider the learning programmes to be of high quality, certified by SAQA.

(ii) The second objective of the national curriculum model is the process of curriculum development

- Integration of theory and practice;
- Participation and ownership;
- Accountability and transparency;
- Affordability and capacity building; and
- Coherence with the NQF.

2.8.4 Organisational framework of the NCS for the GET phase

Important components highlighted here are curriculum development, programme development, learning areas, learning fields with different subject groupings (table 2.1), learning outcomes, and assessment standards.

2.8.4.1 Curriculum development for an OBE curriculum model

Key phases in the curriculum development process involve:

(i) Identifying outcomes based on the needs of the community, particularly the learners, where high levels of knowledge, skills and values are required;

(ii) Curriculum design, involving the design and development of outcomes, as well as the selection of learning content;

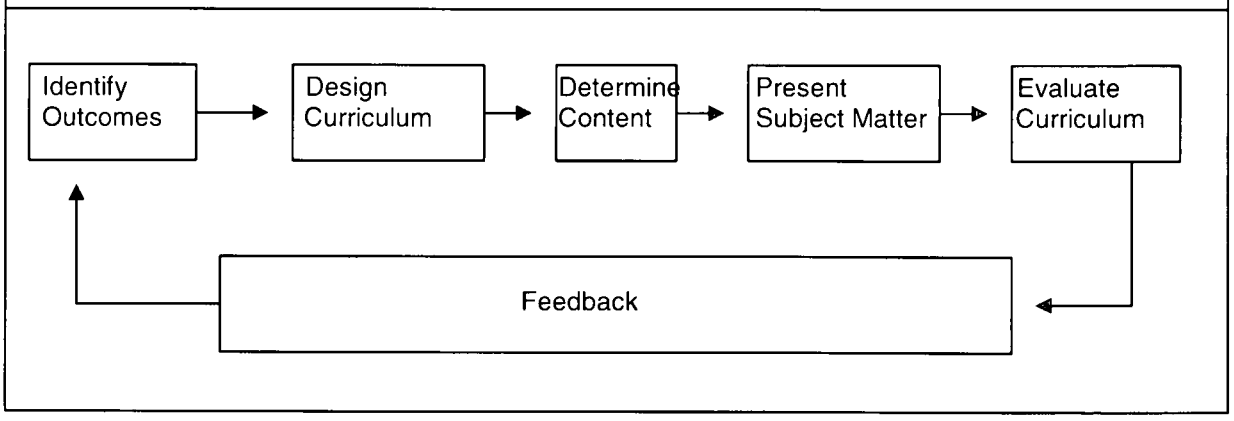
(iii) Determining the subject matter, learning outcomes and assessment standards in conjunction with the required learning outcomes and development levels of learners;

(iv) Delivering subject matter in terms of the implementation of outcomes-based learning and teaching activities; and

(v) Evaluating learning programmes.

Figure 2.6 depicts the relationship between the different curriculum development phases.

Figure 2.6 Phases of the curriculum development process (NDE, 1998b:19)



2.8.4.2 Phases of the curriculum development process

Unit standards consist of logically cohesive skills, both within and across subjects. Learning programmes are aimed at directing the learners' and teachers' activities in such a way that the predetermined goals or outcomes are achieved. Programmes are developed to direct learners' activities in such a way

that they achieve specific learning outcomes. The following steps can be taken in the development of learning programmes:

Step 1	Decide on the objectives and learning outcomes of the programme.
Step 2	Design the programme.
Step 3	Identify the subject matter for the unit standard.
Step 4	Set specific lesson outcomes to achieve programme outcomes.
Step 5	Select the most suitable teaching model and techniques.
Step 6	Decide on pre-knowledge, skills and values/attitudes.
Step 7	Decide on the methods and types of assessment strategies.
Step 8	Plan resources and teaching aids for the learning programme.

2.8.4.3 Learning areas and learning fields

The GET phase consists of eight learning areas with learning outcomes and assessment standards, derived from the SAQA policy document (NDE, 1997b:12). The RNCS focuses on eight learning areas that incorporate existing subjects, with Economics, Business Economics and Accounting as the new learning area: Economic and Management Sciences (NDE, 1997a:14-15; RSA, 1997). The eight learning areas are as follows:

- Language (Fundamental)
- Natural Sciences
- Human and Social Sciences
- Economic and Management Sciences
- Mathematical Sciences
- Art and Culture
- Technology
- Life Orientation

The FET phase consists of twelve learning fields and subject combinations. The twelve organisational fields of the FET phase are (NDE, 2003b):

- Agriculture and Nature Conservation
- Art and Culture
- Business Studies, Commercial Studies and Management Studies
- Communication Studies and Language
- Education and Training
- Manufacturing, Engineering and Technology
- Human and Social Studies
- Law, Military Sciences and Security
- Health Sciences and Social Services
- Physical, Mathematical, Computer and Life Sciences
- Service Studies
- Physical Planning and Construction

2.8.4.4 Unit standards within the NQF

A qualification at each level of learning within the NQF is composed from the so-called unit standards for which credits can be earned. According to the NQF policy document, it is "a nationally registered statement of desired education and training and their associated performance". A credit is an acknowledgement of a unit standard achieved. Credits can be accumulated until all the requirements for the awarding of a qualification have been met (NDE, 1998b:17).

2.8.4.5 Components of qualifications according to SAQA

In the policy document titled *Green Paper on General and Further Education and Training*, the National Department of Education states that qualifications and learning programmes are developed and provided for the two phases. The GET

phase entails a broad spectrum of learning programmes and qualifications (NDE, 1998a:36-38).

SAQA defines a qualification as follows (NDE, 1997a:58-59; NDE, 1998a:37-38):

- A particular combination of learning outcomes aimed at equipping learners with added skills and a foundation for further learning;
- Something that adds to the value of a learner in terms of personal enrichment, status, recognition, licensing, employment, and marketability of skills;
- Something that brings about increased economic and social productivity and the supply of professional and proficient persons for the labour market;
- Something that sets critical and developmental outcomes that promote learning;
- Something that is in line with the different NQF levels for the enhancement of the quality of teaching and learning; and
- Something that is internationally competitive.

The new qualification that can be earned in the FET phase consists of:

- The general FET phase, which consists of the NCS for grades 10 to 12 (schools and colleges);
- The general vocational band, to be presented by FET technical schools and colleges by means of vocational training;
- The trade professions and vocational band, to be presented by colleges and industry-based providers.

All qualifications, according to SAQA, consist of three components – namely fundamental learning, core learning, and selected learning – depicted in table 2.3. In order to qualify for the National Senior Certificate (NSC) in grade 12, learners must earn 130 credits at NQF level 4. These credits must be earned in

the following combinations within the FET phase (NDE, 2003c:15; Rapport, 2005:16):

- Fundamental learning components consisting of:
  - Two languages, one of which must be the home language 20 x 2 = 40 credits
  - Mathematical Literacy or Mathematics = 20 credits
  - Life Orientation = 10 credits

- Core learning components, consisting of at least two subjects chosen from one learning field
  20 x 2
  = 40 credits

- A selected learning component, consisting of one subject chosen from any learning field = 20 credits

The structuring of learning programmes and qualifications in the FET phase is made up of the development and registration of qualifications, unit standards, the NCS, learning programmes for subjects and subject matter by the accredited SAQA bodies, namely the National Standards Bodies (NSBs) and the Standards-Generating Bodies (SGBs), according to the NDE (NDE, 1998a:41-44; Volksblad, 2005a:2; Volksblad, 2005c:11).

2.8.4.6 Certification of qualifications

Assessment is mainly the task and responsibility of the FET-phase institutions. Credit-based certificates are issued by the providers of education or training until such time as the learner has accumulated sufficient credits according to NQF

level 4, at which point the National Department of Education then issues the learner with a national certificate accredited by SAQA (Volksblad, 2005a:2).

2.8.5 Elements of the NCS in the FET phase

The following characteristics of the NCS as a national curriculum model are discussed briefly: Critical outcomes and developmental outcomes.

2.8.5.1 Critical and developmental outcomes

Critical outcomes are described as the broad, generic and cross-curricular outcomes that will ensure that learners acquire the necessary knowledge, skills and values that will help them to ensure the success of themselves, their family, community and nation. These outcomes are generally applicable to all learning areas and learning fields, with related subject areas pursuing critical outcomes (EIC, 1996:9-11; NDE, 1997c:10-12; NDE, 1997d:3-4; NDE, 1998a:35).

SAQA has accepted and proposed seven critical outcomes and five developmental outcomes (see table 2.2). These seven critical outcomes, which include a wide variety of skills, represent the highest demands to be met by a learner when leaving school.

Table 2.2 Critical and developmental outcomes (NDE, 1998a:35)

CRITICAL OUTCOMES

1. PROBLEM-SOLVING SKILLS
Identifying and solving problems by means of critical and creative thought in order to make responsible decisions.

2. GROUP WORK AND COOPERATIVE LEARNING
Effective cooperation with others as a member of a group, organisation and community.

3. ACCEPTING RESPONSIBILITY
Organising and managing activities in a responsible way.

4. RESEARCH SKILLS
Gathering, organising, analysing, and critically evaluating information.

5. COMMUNICATION SKILLS
Effective communication by means of mathematical, visual and/or linguistic skills, making use of verbal and non-verbal presentations.

6. TECHNOLOGICAL AND ENVIRONMENTAL LITERACY
Effective and critical use of science and technology, taking into account responsibility towards the environment and the health of others.

7. DEVELOPMENT OF MACRO VISION
Demonstrating an understanding of the existence of the world as part of a set of related systems by acknowledging that problem-solving does not exit in isolation.

DEVELOPMENTAL OUTCOMES

1. LEARNING SKILLS
Considering and exploring a variety of strategies that can give rise to effective learning.

2. CITIZENSHIP
Participating as a responsible citizen in the life and activities of the local, national and international community.

3. CULTURAL AND AESTHETIC COMPREHENSION
Cultural and aesthetic sensitivity in a broad social context.

4. PROFESSIONAL SKILLS
Exploring educational and career opportunities.

5. ENTREPRENEURSHIP
Developing entrepreneurial skills.

2.8.5.2 Structural policy framework of the NQF

The NQF can be described as a single framework on which all standards, learning areas, subject fields and qualifications are registered with the aim of acquiring national recognition (NDE, 1996a:57).

The main purpose of the NQF is to arrange standardisation and transferability of credits and qualifications. All standards are prescribed nationally by the NQF. In practice, this means that the NQF prescribes the required standards, but that schools and provincial departments can decide for themselves how learners are supported in order to achieve these standards (Malan, 1997).

The NQF takes a new approach to teaching and learning, which is described as being outcomes based. According to Van Tonder (2000:165-166) OBE is focused on the achievement of clearly defined outcomes instead of subject matter. In the NQF, outcomes are expressed as balanced and integrated national standards requiring the holistic development of proficiency (knowledge, skills and values) (NDE, 1996c:30).

Table 2.3 depicts a diagrammatic representation of the NQF (EIC, 1996:24; NDE, 1996c:30; NDE, 1996d:48-49; NDE, 1997a:30; NDE, 1997b:3; NDE, 1997c:9; NDE, 1997e:9; NDE, 1998a:4).

2.8.5.2.1 *Different phases within the NQF*

The different bands refer to the three main groupings of education and training in South Africa.

The lowest qualification level of the NQF, namely level 1, represents the **General Education and Training (GET) phase**. The GET phase consists of the preschool phase, the foundation phase, the intermediary phase, and the senior

phase (grades R - 0), as well as Adult Basic Education and Training (ABET). On completion of the GET phase, a **GET certificate** is issued once the learner has achieved the learning outcomes.

The **Further Education and Training (FET) phase** encompasses levels 2, 3 and 4 of the NQF. These levels represent grades 10, 11 and 12 of formal school education, as well as education at other educational institutions in the private sector that offer education and training. On completion of level 4, the **National Senior Certificate** is issued.

The **Higher Education and Training (HET) phase** of the NQF represents all learning relating to national diplomas, degrees, postgraduate qualifications, professional qualifications and professional certificates. This includes levels 5 to 8 of the NQF, encompassing all tertiary and research institutions, professional institutions such as universities, colleges and universities of technology, as well as workplace training.

2.8.5.2.2 *Bodies involved in the implementation of the NQF*

Different bodies have been established to ensure that the implementation of the NQF takes place as rapidly as possible:

- SAQA approves and registers all standards and qualifications.
- National Standards Bodies are responsible for setting national standards.
- The Education and Training Quality Assurance Body specifically sees to it that education and training remain of high quality (EIC, 1996:33).

Table 2.3 National Qualifications Framework

NQF LEVEL	National Curriculum Statement (NCS)	** Adult Basic Education and Training (ABET)	*** National Senior Certificate (Vocational)
Level 1	Grade 9	ABET Level 4	Grade 9/ABET level 4
Level 2	Grade 10		NCS (V) Level 2
Level 3	Grade 11		NCS (V) Level 3
Level 4	Grade 12		NCS (V) Level 4
	Undergraduate		
	Qualification	**Example**	
Level 5	Higher Certificate	Higher Certificate in tourism-H.Cert.(Tourism)	
Level 6	Advance Certificate Diploma	Advance Certificate in Real Estate-Adv. Cert. (Real Estate) Diploma in Management – Dip. Management	
Level 7	Advance dipoma Bachelor's Degree	Advance Diploma in Taxation – Adv. Dip. (Taxation) B.Ed or BA or Bcom or BAgric., ect	
	Postgraduate		
Level 8	* Professional Bachelor's Degree (4+ years) Postgraduate Diploma Bachelor's honours Degree	LLB. MBChB, ect Postgraduate Diploma in Organisational and Management Studies- PG Dip (Organisational ...) Bachelor of Science honours in Microbiology; BScHons (Microbiology),BComHons (Economics)	
Level 9	Master's Degree	Master of Arts in linguistics: MA (Linguistic); Master of Education (MEd)	
Level 10	Doctoral Degree	Ph.D; DPhil. Ded	

* A Professional Bachelor's Degree exits on Level 8, needs at least 96 credits and leads directly to a Masters' Degree

** Adult basic education means all learning and training programmed for adults from Levels 1 to 4 where Level 4 equivalent to Grade 9 in public schools or at NQF Level 1 as contemplated by South Afrcan Qualifications Authority Act (SA, 1996)

*** As from January 2007, the National Certificate(vocational replaced the old NATED courses (N1-N3) at FET colleges and will be introduced at FET colleges at NQF Level 2 in 2007, Level 3 in 2008 and Level 4 in 2009

Source: Government Gazette,no.30353, 5 October 2007

2.8.6 NQF for the FET phase

The curriculum framework for the FET phase serves as guideline for the following (NDE, 2003b:2-7):

- Different learning fields with specific subject areas;
- Learning outcomes and assessment standards;
- Learning programme guidelines for the development of learning material and resources;
- Organisation of teaching and learning outcomes; and
- Framework for the assessment of learning outcomes.

The expected outcome of the FET phase is the provision of high-quality education and training in a wide variety of learning situations that will equip learners with knowledge, skills and values that may be required in the competitive labour market and in society (NDE, 1996b:1; NDE, 2000:3).

2.8.6.1 Organisational framework of the structure of NCS for the FET phase

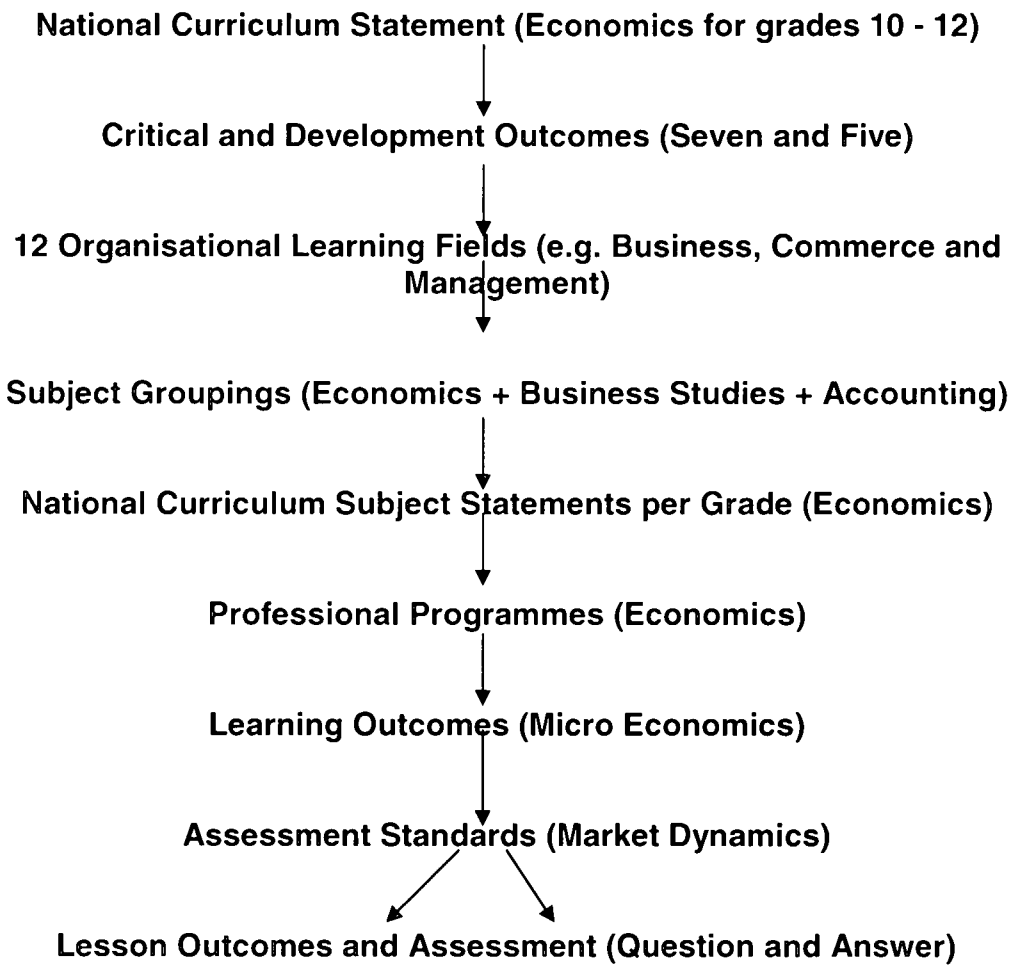
The NCS provides the organisational framework for the development of the NCS as an integrated FET phase that will ensure, amongst other things:

- The national recognition of outcomes;
- A single qualification system within SAQA;
- Mobility between education and training in different sectors;
- The accumulation and transferability of credits; and
- The recognition of prior learning in the earning of credits.

Figure 2.7 depicts the structure of the NCS for the FET phase in terms of the 12 organisational learning fields with different subject statements for the NCS for grades 10 to 12. It also consists of principles that focus on the critical and

developmental outcomes leading to learning outcomes and assessment standards.

Figure 2.7 Structure of the NCS for Economics in the FET phase (NDE, 2000:5I NDE, 2003b:2-7)



2.8.6.1.1 *Different fields of learning*

Learning fields are linked to occupational categories and are organised in groups, thereby making subject combinations possible. There are 7 FET fields with different subject combinations, set out as follows (NDE, 2003c:3):

- Languages
- Art and Culture
- Business, Commerce and Management
- Manufacturing, Engineering and Technology
- Human and Social Studies and Languages
- Physical, Mathematical, Computer, and Life & Agricultural Sciences
- Service Studies

The seven NCS subjects have certain minimum requirements, such as the requirement that in two languages (at least one of which must be a home language and the other at least on a first additional level), the learner must achieve at least 40% in the required language at home-language level and at least 30% in the other language on at least first-additional-language level); in Mathematics or Mathematical Literacy the learner must achieve at least 40%; in Life Orientation the learner must achieve at least 40%; and in any three optional NCS subjects the learner must achieve at least 40% in one optional subject and at least 30% in the other two optional subjects (Rapport, 2005:16). Economics is one of designted subjects for university admission.

2.8.7 Assessment and the NCS

The role played by assessment is one of critical importance if the objectives of an OBE curriculum model are to be achieved. The concepts 'assessment' and 'evaluation' are closely related when it comes to discussing the renewal of education in South Africa. Assessment is a natural aspect of the learning process. Assessment is the measuring instrument that determines whether or not the learner has achieved the learning outcomes. Assessment is one of the most important processes in education. The management of assessment consists of three stages:

- The gathering of evidence;
- The recording of assessment; and

- Reporting.

2.8.7.1 Evaluation versus assessment

The concepts 'evaluation' and 'assessment' are closely related when it comes to discussing the renewal of education in South Africa.

Scriven (1991:60) alleges that the concept of assessment originated in an attempt to break away from the narrow view of evaluation and to emphasise the processes and methods not focused only on measurement. According to Steyn (1985:102) measurement in an educational context involves the application of a measuring instrument to gather information on learning proficiency and to qualify it and then express it numerically or symbolically.

Evaluation, on the other hand, is a complex and often subjective action that includes concept measurement, testing and examination in which various factors, including points of view and skills, are present (Piek, 1984:95; Scriven, 1991:139; Steyn, 1985:103).

The National Department of Education (NDE, 1997d:28-30) defines evaluation and assessment in an OBE curriculum approach as follows: "Assessment involves the process of collecting and interpreting evidence of learning achievement", while evaluation is described as the "process whereby information obtained through assessment is interpreted to make judgements about a learner's competence".

The importance of assessment cannot be overemphasised, and it is considered an integral part of teaching and learning in an OBE curriculum approach. In addition, teaching, learning and assessment are not seen as separate components of the didactic situation, but rather as being interdependent (NDE, 1998b:31).

2.8.7.2 Purpose of assessment

The overarching purpose of assessment is to determine whether the learner has indeed achieved the predetermined outcomes.

Assessment has two related objectives, namely:

(i) Macro level: Assessment provides employers and institutions in the HET band with valuable information on the learner's learning proficiency and skills.

(ii) Micro level: Assessment provides learners with information and guidelines with regard to their learning efforts.

Assessment as a measuring instrument allows the teacher to determine the following:

- Which learners are experiencing problems or have not yet achieved the outcomes;
- When to diagnose remediation or adjust the teaching approach to help learners achieve the outcomes;
- Which learners are doing well, are on track to achieving the outcomes, or have already achieved the outcomes;
- How learners are progressing;
- Whether there is a problem with the learning material or curriculum that could be preventing learners from achieving the outcomes; and
- Whether there is a communication problem between the teacher and the learners.

Assessment also affords the learner a means of measuring:

- The learning areas or subject area of a learning field in which learning is progressing well;
- The learning areas or subject area of a learning field in which problems are being experienced;

- What could possibly be done to improve performance in weaker learning areas and subject fields.

2.8.7.3 Types of assessment

There are different types of assessment that the teacher can use to assess learner performance. The type of assessment the teacher chooses depends on which aspects of learning are to be assessed. Assessment is continuous and formative in that information on the learning process is gathered. This information is then used by the teacher to identify problem areas in the learning process. Assessment is not norm directed, but rather criterion directed. Learners must achieve certain criteria in order to demonstrate successful mastery of outcomes (EIC, 1996:27; NDE, 1996b:20-21; NDE, 1997a:19; NDE, 1998a:46; NDE, 1998b:31-32; NDE, 2003b:22).

The National Department of Education recommends two assessment methods when assessment is applied within an OBE learning situation, namely informal assessment and formal assessment.

- **Observation-based assessment:** The teacher observes how learners behave during the teaching-learning situation. The evidence gathered includes the presentation of posters, transparencies displayed on an overhead projector, formal debate, demonstration of a particular aspect of a lesson, role-play by means of group work, and a speech delivered by a learner.
- **Test-based assessment:** All learners are exposed in the same manner to a particular aspect of the subject matter by writing a test or examination.
- **Task-based assessment:** Learners' skills, knowledge and group-work abilities are assessed by means of case studies, projects, worksheets, investigations and practical work (NDE, 2003b:24-25).

In summary, it can be said that OBE assessment is a continuous, formative process that constitutes an integral part of teaching and learning and which makes use of a variety of supplementary assessment criteria in order to determine whether the learner has achieved the expected outcomes.

2.9 CONCLUSION

Van Tonder (2000) and Wilkinson (1997), on the basis of the aforementioned perspectives, came to the conclusion that although there are facets of OBE reform that do point to the empowerment of learners and teachers, they function to a large extent within a controlled, structured framework.

In order to achieve the outcomes of a success-for-all dream, it is essential that learners, parents and the community – within their social and cultural diversity – are involved in the curriculum development process.

Cortie and Cortie (1997:348) state that much has been said about the importance of the training of learners so that they can compete globally. It is of cardinal importance that all role-players are involved in the creation and development of a new curriculum approach. Posthumus (1998:83) suggests that more consultation with teachers would be an effective approach: "Education-system devisers need to listen to the people down here, who know exactly what the problems and challenges are".

Valuable lessons can be learned from the implementation of OBE in the USA. These aspects must be kept in mind during the planning and implementation of the national OBE curriculum model for South African schools.

Finally, the focus falls on the underlying principles for the application of a new OBE curriculum model for South African schools. The NQF is discussed with specific reference to the FET phase, while certain characteristics and principles

of the OBE model, as applicable to the FET, are explained (see 2.7 and 2.8). From the above it can be concluded that radical paradigm shifts by all role-players in the education setup will be necessary in order to ensure the successful implementation of OBE.

Chapter 3 discusses the nature and being of Economics. Knowledge of the nature and being of Economics within the NCS for the FET phase will enable the Economics teacher to plan the learning outcomes and assessment standards in terms of the various teaching principles and to successfully implement the assessment of learners in Economics.

CHAPTER 3

THE FIELD OF STUDY OF ECONOMICS AND THE INTERRELATEDNESS OF THE COMPONENTS OF THE CURRICULUM

3.1 INTRODUCTION

The transformation of education, but particularly for the Further Education and Training (FET) phase after 1994, posed a challenge to policymakers, departmental officials, education professionals and teachers – that is, all role-players in education and training. In light of the inequalities, poor resources, high learner-teacher ratios, and the fragmentation of subjects and programmes offered by different institutions, the teaching dispensation was facing even greater challenges. Some of these challenges facing the developers of a new OBE curriculum for the FET phase were the following:

- No clear learning outcomes for the curriculum;
- Many unrelated topics;
- The inability of the learning experience to meet the needs of learners; and
- Little mobility or portability of qualifications.

In order to put these challenges into perspective, the National Department of Education inherited a Senior Certificate curriculum consisting of 264 subjects on higher, standard and lower grades – many of which were obsolete. An urgent intervention for the revision of the curriculum for the FET phase was essential (NDE, 2003a:1-3).

Curriculum change in post-apartheid South Africa began in 1994, with an overview by the Department of Education focused on the structure of the curriculum, qualifications, topics and teachers. In the White Paper on Education and Training, the government provided a policy framework document for the development of a new OBE curriculum. In 1995 the then Minister of Education, Professor Bengu, established the National Education and Training Forum (NETF). This forum created the interim syllabi for the provincial education departments, known as the Résumé of Teaching Programmes in Schools, Report 550 (2001/08), which is currently being implemented in grades 11 and 12 (NDE, 1997b:17).

The purpose of this chapter is to analyse, via the elementals of Economics, the economic truths of the principles according to which humans function in the economic reality as part of the total reality. This chapter briefly explains the nature of the Economics learning field as a science. Secondly, Economics as school subject is discussed within the framework of the NCS policy documents. Thirdly, the teaching principles applicable to Economics are discussed. A discussion of the above-mentioned aspects within this chapter follows.

3.2 NATURE AND LEARNING FIELD OF ECONOMICS

In the subsequent paragraphs the nature and learning field of Economics, as well as the National Curriculum Statement (NCS) for Economics and the respective components of the curriculum during the teaching process, are discussed. Firstly, Economics is explained as a social science within the context of a science and is compared to other sciences and economic models. Secondly, the learning field of Economics is described and defined. Thirdly, Economics as school subject within the NCS is highlighted. Lastly, the respective components of the curriculum during the teaching process are broadly explained.

3.2.1 Economics as a social science

The field of Economics is a peculiar aspect of reality. De Klerk, Duvenhage and Van Wyk (1972:266) are of the opinion that a science is the study of the systematic and verified knowledge of reality. They believe that scientific knowledge is overall valid, timeless and logical knowledge that is researched within the science. Lombard, Stadler and Haasbroek (1985:38) believe that a science purposefully searches for scientific knowledge of reality. Economics is the subject science that studies the economic aspect of reality (Hanson, 1979:148). Economics is a science, and like any other science it involves a systematic effort to determine uniform patterns of behaviour. These patterns of behaviour are used to explain what is busy happening, to predict what could possibly happen, and to help policymakers develop the most suitable policy (Mohr & Fourie, 1999:17). Moreover, Economics is also a social science, because it is directed at human behaviour. Experts agree that Economics is a science in its own right and that there is no doubt regarding the analytical core content of Economics (Mohr, 1990:68; Mohr & Fourie, 1999:17). The scientific knowledge of Economics is contained in the form of economic concepts, principles, theories and models (Barkley, 1977:17).

3.2.2 Economic theories and models

Economics studies the economic activities of man in a reality that functions continuously. According to Gwartney (1976:9-10) controlled experiments are not possible, because from time to time changes take place in society's economic circumstances, for example changes in food prices, employment and technology, which can be investigated scientifically.

With the study of human behaviour in respect of economic activities, a scientific approach is taken to finding the cause-and-effect relationship in the economic reality. The cause-and-effect relationship is summarised in economic principles,

theories and models (Gwartney, 1976:12). Barkley (1977:17) refers to an economic theory as a simplified definition of the economic reality, which shows how variables in the economic reality are related to one another and how changes in one or more variables can influence certain other variables. Economic theories are the basic "tools" of economic science. Through the application of an economic theory, economic activities are given meaning and order, and the economic consequences of certain events can be predicted (Krugell, 1992:23; Lipsey & Steiner, 1975:22).

3.2.3 Learning field of Economics

The economic reality formed by the learning field of Economics has several branches (see figure 3.1, par. 3.2.5). Economics has to do with the production, distribution and use of goods and services, and includes a number of economic concepts and sub-sciences. To be able to make goods and services available for use, man must combine production agents in the form of elements, labour, capital and entrepreneurship in order to produce goods and services (Gwartney, 1976:4-5; Schiller, 1991:5). Three economic activities of production, distribution, and use of goods and services (see figure 3.2) form the basis of man's economic activities. Economic concepts that occur in the economic reality and which also play an important role in the practice of Economics as profession (Schiller, 1991:8) form the essence of economic reality.

The key principles are economic scarcity, the economic option issue, the distribution issue, and rationality (Baumol & Blinder, 1998:12; Gwartney, 1976:3-9; McConnell & Bruce, 2005:6-9; Mohr, 1990:69; Schiller, 1991:7-9). These economic concepts are related and intertwined. Each of the economic concepts forms an extended learning field within the borders of economic science. It would be impossible within the scope of this study to discuss each of these concepts in detail, and consequently the concepts are discussed briefly in order to highlight the importance of each.

3.2.3.1 Scarcity issue

In everyday life, man is confronted with the fact that his needs are unlimited while the resources that must meet these unlimited needs are limited. This leads to an economic scarcity issue – a principle defined by both Mohr and Fourie (1999:17) and Morton and Reinke (1990:85) as the fundamental economic concept. Economic scarcity is experienced as the fact that people always need more goods and services than can be produced. Economic scarcity describes a condition where the production factors available to man are insufficient to meet all human needs (McConnell & Bruce, 2005:12; Mohr & Fourie, 1999:18; Schiller, 1991:6).

According to Gwartney (1976:5) and McConnell and Bruce (2005:13) economic scarcity is an unavoidable part of human existence that affects every individual in every community.

3.2.3.2 Option issue (Production issue)

As a result of economic scarcity, man is unable to satisfy certain needs. As production means have alternative application possibilities, man can choose which means of production he will use to produce specific goods and services. When choices are made, man assigns a value to the different needs, which are arranged according to priority (Barkley, 1998:7; Lombard *et al.*, 1985:3; Schiller, 1991:6). In economics it is said that the cost of a certain commodity can be measured by the alternative application or spending possibilities that we forfeit by making a particular choice. Making choices is fundamental and subjacent to all economic activities (Gwartney, 1976:5; Mohr & Fourie, 1999:18; McConnell & Bruce, 2005:13).

The option issue has become so important that some definitions in Economics have followed. An example of this is given by Hanson (1979:147): "Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses". The essence of economic thought is

the fact that people must consciously take alternative actions to exercise that choice (Mohr & Fourie, 1999:13; Morton & Reinke, 1990:84-85).

3.2.3.3 Occasional cost (Distribution issue)

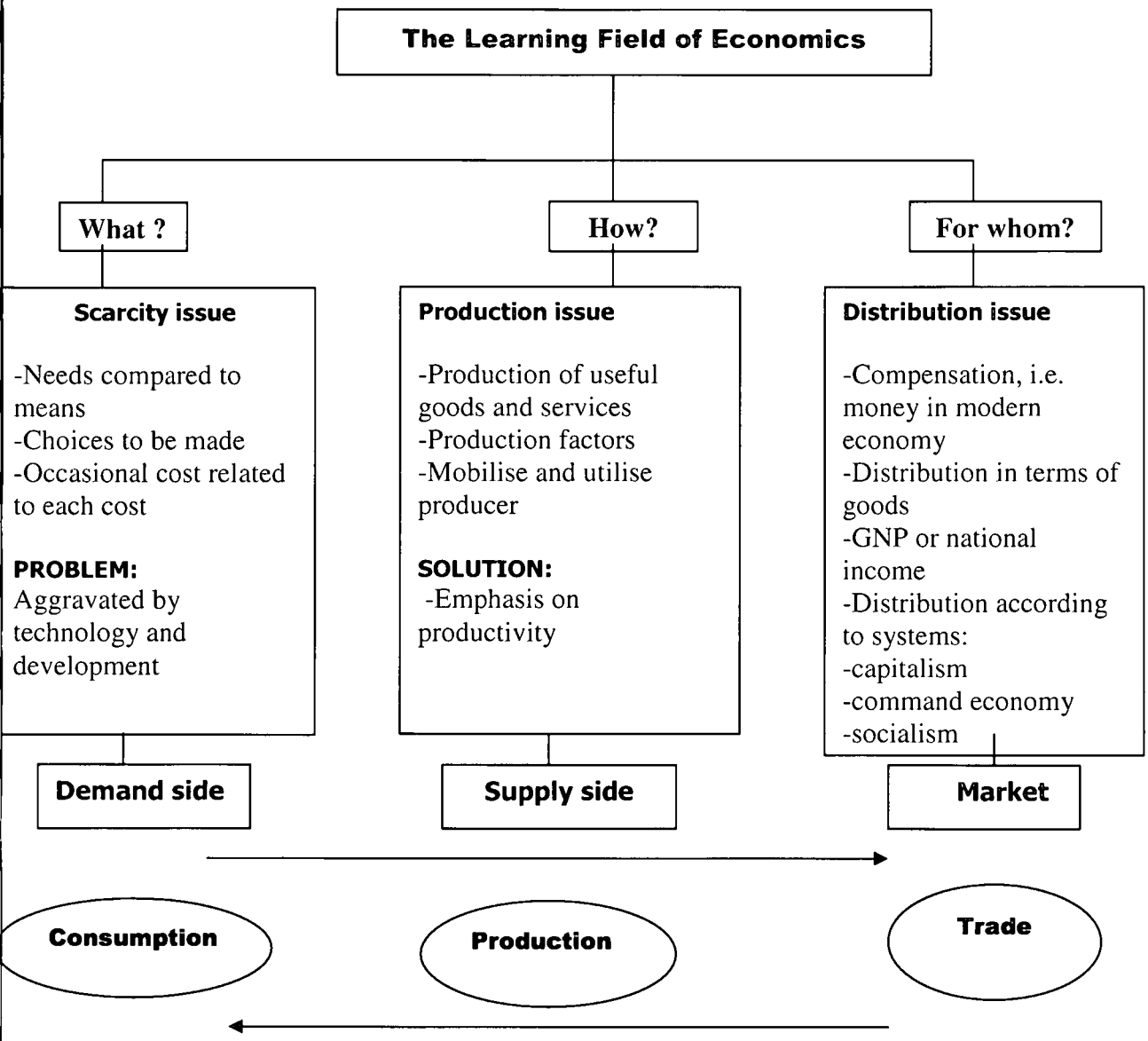
The concept of occasional cost arises from the economic scarcity issue (see 3.2.3.1). Due to the fact that means with which to satisfy needs are scarce, a specific choice must be made. Economists approach choice from the perspective of occasional cost (see 3.2.3.2). McConnell and Bruce (2005:16-17) and Mohr and Fourie (1999:14) view occasional cost as one of the most important aspects in economics, as it summarises the core of the economic problem of scarcity and choice.

3.2.3.4 Rationality (Decision-making aspect)

The concept of rationality is directed at the individual in the economy. The individual is the most important component of the economy, as it is the individual who requires goods and services. According to McKenzie and Tullock (1978:17) the economic conduct of any group in the economy is determined by the individuals comprising that group.

The economically meaningful decisions made by individuals are in effect choices relating to the utilisation of scarce means (Lombard *et al.*, 1985:17). According to Schiller (1991:431) man acts in an economically rational way when he approaches things in such a way that he maximises his welfare. Rationality means that he calculates the benefits and the costs of all the alternatives and then selects those alternatives that will ensure him the greatest net benefit (Lombard *et al.*, 1986:10; McConnell & Bruce, 2005:23).

Figure 3.1 Learning field of Economics



3.2.4 Definition of Economics as professional science

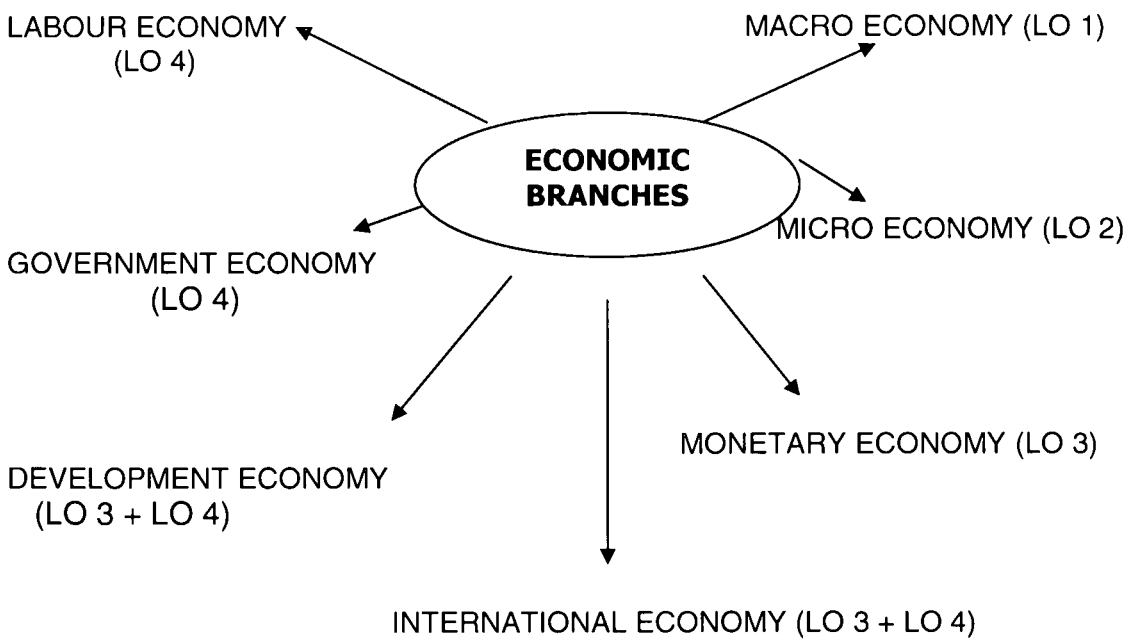
Sameulson and Nordhaus (2000:4) define Economics as: "...the study of how society uses scare resources to produce valuable commodities and distribute them among different people". Economics as a social science is the study of how an individual, through effort and choice, satisfies his/her immeasurable needs using the scarce means at his/her disposal in order to derive maximum

benefit. All households, businesses, governments and other role-players in the community are required to make informed decisions regarding the scarcity issue and limited resources in order to provide goods and services (Baumol & Blinder, 1998:9; Botha & Ross, 1995:7; McConnell & Bruce, 2005:5; Mohr & Fourie, 1995:8).

3.2.5 Branches of Economics

Economics is a social science consisting of a number of economic branches that jointly and separately address the key issue, namely the problem of scarcity. These branches represent the subsections of Economics that are studied, which are aligned with Learning outcomes 1 to 4 of NCS, and are schematically represented in figure 3.2.

Figure 3.2 Economic branches (FET Learning outcomes)



3.3 NATIONAL CURRICULUM STATEMENT FOR ECONOMICS IN THE FURTHER EDUCATION AND TRAINING PHASE

With regard to this study, the emphasis falls mainly on cooperative learning as teaching strategy for Economics teachers in the FET phase (grades 10 to 12) in Free State secondary schools. As the General Education and Training (GET) phase (grades R to 9) forms the basis (Economic and Management Sciences learning field) for the FET phase, this study focuses only on Economics in the FET phase. In the FET phase for the NCS the rationale, place and focus of Economics in the FET phase are discussed. Each is briefly discussed below.

3.3.1 Rationale for Economics in the Further Education and Training phase

Economics, Business Studies and Accounting form part of the learning area of Business, Commercial and Management Studies for the FET phase (NDE, 2003a:8-10). The learning field forms an integrated curriculum for the FET phase (grades 10 to 12). The rationale behind this learning field can be summarised as follows: "South Africa needs to have a sustainable economic plan in order to survive. This learning field prepares citizens to understand the importance of reconstruction, development and economic growth for the future. Furthermore, it promotes active participation amongst all our people by equipping them with knowledge and understanding of economics, management skills and wealth creation" (NDE, 1997a:14; NDE, 2003a:16).

The knowledge, skills, attitudes and values gained will enable learners to improve and promote the standard of living, welfare, human resource development, basic conditions of service, fair labour practices, and productivity (NDE, 1997b:2-6).

The approach to Economics as focus in the FET phase is described as follows: "A social science that investigates how the individual, through exertion and choice, satisfies a multitude of needs, using limited resources to achieve maximum prosperity" (NDE, 1997a:5). It appears from this approach that Economics has a strong theoretical and scientific impact. The approach to the presentation of the subject, as prescribed in the NCS, is that Economics should not only be viewed as a purely abstract subject, but that it must be relevant to practice (NDE, 1995b:4).

It is important for the Economics teacher, taking into account the outcomes to be achieved, to keep in mind aspects of reconstruction, development and economic growth in view of achieving the outcomes, such as skills, attitudes and knowledge. Only the essential subject matter needed to achieve the set outcomes must be selected and presented to learners.

3.3.2 Place of Economics in the FET phase

Within the National Qualifications Framework (NQF), Economics forms part of the Business, Commerce and Management Studies learning field in the FET phase (grades 10 to 12) (NDE, 1997a:4; NDE, 1997c:193-218; NDE, 2003a:12-15). The interim learning plan for Economics (higher grade and standard grade) of the Free State Department of Education is used as the foundation in grades 11 and 12, but in grade 10 the NCS is implemented (NDE, 2003a:2-17; Rapport, 2005:14; Volksblad, 2005b:12).

The restructuring of Economics in the FET phase includes three fields of study (see 2.8.4.3, 2.8.6.1 & figure 2.7). Economics is an optional subject falling within the Business, Commerce and Management Studies field.

Currently Economics is being offered as focus subject in the FET phase in academic high schools (including trade schools and technical colleges) and can

be taken as from grade 10. Economics is presently an optional subject falling within group E subjects and can be taken on either higher or standard grade (NDE, 1995b:2-45). Table 3.1 depicts the similarities and differences between the interim learning plan and the NCS for Economics. The NCS for Economics in grades 10 to 12 is based on learning outcomes 1 to 4 and consists of mutual assessment standards for each learning outcome (see table 3.1), but the degree of depth of the inherent components differs according to the learner's progress from one grade to another. The interim learning plan for Economics differs from the NCS, and modules are prescribed per specific grade, as depicted in the table. There is also some overlapping of the modules of the interim learning plan in terms of the learning outcomes and assessment standards for grades.

It is important that the Economics teacher, taking into account the place of the Economics learning focus within the NQF, remembers that Economics forms part of the Business, Commerce and Management Studies learning field in the FET phase (grades 10 to 12). The NCS for Economics in grades 10 to 12 is based on learning outcomes 1 to 4 and consists of mutual assessment standards for each learning outcome (see table 3.1), but the degree of depth of inherent components differs according to the learner's progress from one grade to the next, and teachers must make provision for this in the teaching of Economics. The Economics teacher must study the assessment standards thoroughly to determine the depth for the grade in question, i.e. the learning experiences and actions will differ from teacher to teacher.

3.3.3 Learning plan for Economics

The subject matter of the interim learning plan for Economics on higher grade (NDE, 1995b:2-42) and Economics on standard grade (NDE, 1995b:2-42) is currently applied to the FET phase, but as from 2006 Economics teachers are obliged to apply the NCS in grade 10. Tables 3.1 and 3.2 summarise the interim and NCS plans for Economics in grades 10 to 12. There is some overlapping

and also some differences in the subject matter per grade in both the interim learning plan and the NCS for the FET phase. The difference between the interim learning plan and the NCS is that the interim learning plan consists of higher grade and standard grade subject matter, while the NCS learning plan consists of learning outcomes and assessment standards.

Table 3.1 Interim learning plan for Economics in the FET phase (Report 50/50)

Grade 10
o Nature and field of study of Economics
o Steps in economic development
o Development of the South African economy
o Participants in the economy
Grade 11
o Methods and processes in the production of economic goods
o Economic systems
o Current economic structure of the RSA
o Monetary economy
Grade 12
o National incomes
o Micro economics: Price mechanism
o Economic development, regional development, urbanisation, and the informal sector
o International economy
o The state
o Productivity and unemployment
o Inflation
o Labour relations
o Strategic resources

Table 3.2 Economics for the FET phase (NCS for grades 10-12)

Grades 10 to 12 : Learning outcome 1: Macro-economics *The learner is able to demonstrate knowledge, critical understanding and application of the principles , processes and practices of the economy*
o Economic methods, relation to other sciences, career prospects
o Economic problems and environmental aspects
o Participants in the economy and economic flow
o Business cycles
Grades 10 to 12 : Learning outcome 2: Micro economy *The learner is able to demonstrate knowledge, critical understanding and the appropriate skills in analysing the dynamics of markets*
o Markets and market mechanism
o Production possibility curves
o Government interference in the economy
Grades 10 to 12 : Learning outcome 3: Economic development *The learner is able to demonstrate knowledge, understanding and critical awareness of the policies and practices underpinning the improvement of the standard of living*
o Steps in economic development
o Current economic structure of the RSA
o Monetary economy : money and banking
o RSA population and labour forces
Grades 10 to 12 : Learning outcome 4: Contemporary economic issues *The learner is able to demonstrate knowledge, understanding and critical awareness, and apply a range of skills in dealing with contemporary economic issues*
o Unemployment
o Labour relations
o Reconstruction of the economy
o Contemporary economic affairs

Source :NDE, 2003a:1-24

3.3.4 Lesson plan design for Economics

This section discusses the design of a lesson plan for Economics. Figure 3.3 depicts a schematic diagram of the steps to be followed in designing a lesson plan for Economics. The National Department of Education (NDE, 2005a:3-5) provides the following guidelines for teachers to follow when designing lesson plans:

3.3.4.1 Identifying learning outcomes and assessment standards from the NCS

An important point of departure in any lesson plan design is the question: What outcomes must learners have covered at the end of the planned learning period, and which assessment standards must learners have met to prove that they have achieved the outcomes? Any learning opportunity must be designed by starting with what learners must know (knowledge), do (skill) and produce (values and attitude) at the end of the learning experience.

Another important design aspect when it comes to a learning plan is how the Economics teacher plans to assess and report on the outcomes and assessment standards. Economics teachers must ensure that they are familiar with the schedules and means of reporting when it comes to assessment.

Finally, Economics teachers must also include the critical outcomes in their planning (NDE, 2003a:13).

3.3.4.2 Identifying the evidence required

Economics teachers plan the teaching and assessment programmes. The lesson plan must afford learners the opportunity to produce evidence that they have achieved particular learning outcomes and assessment standards for the

NCS in the FET phase. The Economics teacher will have to plan the following in this regard:

- What knowledge the learners will learn and have to understand;
- What skills the learners will have to learn and demonstrate; and
- What issues will help learners to develop and assess attitudes and values (NDE, 2003a:15).

3.3.4.3 Creating a detailed lesson plan with teaching techniques and methods

The Economics teacher plans the overall learning and assessment programmes, which also include the continuous assessment (CASS) of every learner. The Economics teacher draws up a year plan with all learning and assessment programmes for a particular grade. The year plan must be divided up into four terms that include learning activities, periods, and assessment activities. The Economics teacher's planning includes:

- Different learning activities and teaching techniques;
- Different aspects of the learning experience;
- Which teaching techniques will be used;
- Time management and resources for each learning activity.

3.3.4.4 Design each learning experience and assessment activity

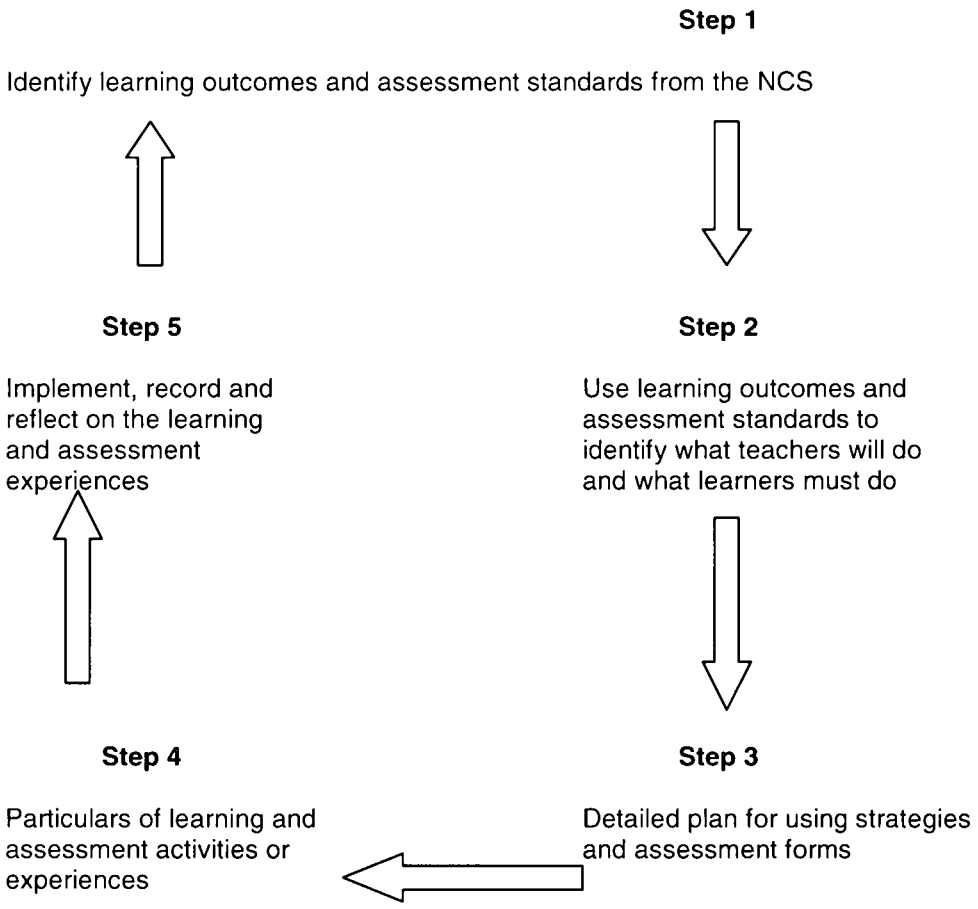
The Economics teacher must focus on the following aspects when deciding on the design of learning experiences:

- The Economics teacher must plan, design and develop detailed learning and assessment activities.
- Activities must be flexible and driven by need due to the different learning styles of learners.
- Team planning is of cardinal importance, and teachers of other subjects must plan learning activities together.

3.3.4.5 Implementing learning experiences and assessment

Once the Economics teacher has applied the learning experiences and assessment activities, he/she can determine whether the learners have achieved the outcomes. Economics teachers must adopt a project research approach and consider effectiveness and the related learner materials and resources used during the activities.

Figure 3.3 Lesson plan design cycle



3.4 DEVELOPMENT OF A LEARNING PROGRAMME FOR THE TEACHING OF ECONOMICS

One of the basic assumptions in education is that a change in the teaching method can completely change the course of the lesson and can thus also determine the outcomes of the teaching-learning experience accordingly. In the current transformational process within which education and training currently finds itself, it is an obsolete perspective that learners represent only an input in the system approach of passive learner training. The paradigm shift from a teacher-centred teaching approach to a learner-centred learning approach (Herald, 1995:33), as well as an OBE approach, is characteristic of the transformation process currently underway in South African education. This paradigm shift influences the teaching method in that a shift in emphasis takes place in the didactic criteria that characterise the course of the lesson. The OBE curriculum approach is learner centred, results oriented, and founded on the assumption that all learners can learn (read: have the ability to learn) (Geyser, 1997b:324; NDE, 2005:2-42).

The traditional curriculation process emphasised the subject matter. The OBE curriculum emphasises the eventual outcomes to be achieved, namely being able to demonstrate that effective learning has taken place. The emphasis falls on the learners and the facilitation of learning. "Outcomes-based education attempts to break from (the) traditional approach and focus clearly and deliberately on student learning" (Killen, 1997:28). This emphasis on learning also changes the function of teaching. Teaching is no longer described as the transfer of knowledge – it is rather seen as the process of helping learners to understand and transform this information as part of their own personal knowledge (Killen, 1997:28). Keeping this changing function of teaching in mind, the didactic determinants influencing teaching are now described in more detail.

3.4.1 Definition of the term "learning programme development"

According to Killen (1997:28) the development of a learning outcome programme involves merely the organisation of teaching in order to achieve predetermined outcomes. It starts with a clear specification of what learners must know, what they must be capable of doing, and which values and attitudes are desirable at the end of the programme. "In outcomes-based education... you develop the curriculum from the outcomes you want students to demonstrate, rather than writing objectives for the curriculum you already have" (Spady, 1988:6). Guided by these outcomes, the programme is constructed so as to give all learners the opportunity to achieve every outcome. All learners must demonstrate success. Indeed, it is this very success-for-all approach that determines the subject matter, learning opportunities, time and purpose of the teaching offered to learners (Killen, 1997:28).

3.4.2 General principles of learning programme development

Curriculum documents are drawn up in broad terms and not for specific groups, schools or learners. Consequently, teachers must develop the curriculum as the basis for specific teaching-learning programmes in order to guide day-to-day learning activities. Each of these programmes can be seen as an interpretation of the syllabus and is described as "sets of plans that guide individual teachers in their selection of objectives, content, teaching strategies, resources and assessment procedures" (Killen, 1997:2).

According to Killen (1997:27) and NDE (2005:2-6), each programme must consist of the following elements:

- A rationale explaining why the programme exists;
- A learning outcome to explain what the programme will achieve;
- Lesson outcomes to explain what the learner must learn;

- Content statements in order to indicate the broad areas of subject matter to be used;
- Teaching strategies to demonstrate how learning activities will be organised; and
- Assessment guidelines to show how the predetermined outcomes will be evaluated.

Killen (1997:27) acknowledges that all forms of learning programme development address the above aspects. However, a shift in emphasis within the different learning programmes leads to three styles of learning programme development: content-based programme development where the selection of subject matter precedes the goals and teaching strategies; activity-based programme development where the selection of learning opportunities precedes other decisions; and the development of learning programmes where the focus falls on that which the learner will learn and ultimately be able to do on completion of the programme.

If teachers wish to see effective learning taking place so that all learners can achieve the predetermined outcomes, there are certain instructional procedures to be followed (Killen, 1997:29):

- Teachers must prepare learners sufficiently to enable them to achieve success.
- Teachers must create a positive learning environment in which learners know they can receive assistance.
- Teachers must help their learners to understand what they must learn, why they must learn it, and what they will know once they have mastered the lesson.
- Teachers must apply a variety of teaching strategies adapted to the learning styles of the different learners so that each learner can learn optimally.

- Learners must be given sufficient opportunity to put their new knowledge and skills into practice.
- Learners must be helped to fully master every learning opportunity so that they are aware of what they have learned and where this is taking them.

In order to programme effectively, teachers must consider short-term as well as long-term outcomes so that the daily knowledge, skills and attitudes acquired by learners will eventually integrate into the desired long-term outcomes. It is also important that planning starts with the desired long-term outcomes and works back towards the short-term outcomes that guide lesson planning (Killen, 1997:29).

The assessment of learners is an essential element of the OBE approach. Consequently it must form an integral part of programme development. Without reliable assessment methods, teachers and learners will not know whether or not the desired outcomes have actually been achieved. Assessment must take place on the basis of predetermined standards and must clearly show what learners are learning (Killen, 1997:29).

OBE proposes teaching strategies that differ from those used in content-based teaching (Killen, 1997:29; NDE, 2005:6-7). OBE emphasises "active modelling, expecting success, intensive engagement, diagnostic assessment and frequent feedback to students about their performance" (Spady, 1988:5). The key idea behind an OBE curriculum approach is a clear statement of what learners must learn and how this should be learned in order to achieve the predetermined outcomes.

Most teachers are to a greater or lesser extent familiar with the terms used in describing the intention of teaching, namely objectives and goals. In the literature there is intense debate surrounding the differences in the meaning and use of the concepts (see Calitz *et al.*, 1982:25; Davies, 1978:29; De Corte,

Geerligs, Lagerweij, Peters & Van der Berghe, 1976:39; Gronlund, 1985:40; Krugell, 1992:27; Kruger & Muller, 1987:39-41; Steyn, 1985:54; Strydom, 1981:39; Stuart, 1985:36; Van der Stoep & Louw, 1984:242; Wheeler, 1979:32). Killen (1997:26) draws the conclusion that the actual difference in meaning lies in the degree of specificity: "Objectives are usually more specific statements than are aims and goals. The real issue is that statements of goals, aims or objectives describe the intent of some educational process. If these intentions are realised, the end product of the educational process can be referred to as an educational outcome. It is this link between intentions and results that is the heart of outcomes-based education."

As soon as teaching is aimed at the actualisation of specific outcomes, it is necessary to take into account aspects like knowledge, skills, attitudes and suppositions possessed by learners before teaching can take place. Aspects such as the learner's level of development, the teacher's skills and knowledge, the relationship amongst the various outcomes, the available resources and other limiting factors – e.g. social and political aspects – must be kept in mind. "Once the teacher has a clear picture of all these things, it should be possible to plan an initial period of instruction" (Killen, 1997:30).

3.4.3 Proposed model for the development of a learning programme

In the literature, different approaches are taken to the development of OBE learning programmes (see Brown, 1988:12; Burns, 1987; Burns & Squires, 1987:1-9; Fitzpatrick, 1991:18-22; Marzano, 1994:44-50; NDE, 2005:2-9; Nyland, 1991:29-35; Pollock, 1992:52-53; Smith, 1991:52-56; Spady, 1988:4-8.) However, according to Killen (1997:30), all these models strongly emphasise "student learning".

Figure 3.4 proposes a specific approach to learning programme development. This model, described by Killen (1997) and adapted by the National Department

of Education (NDE, 2005), can be used to organise the total school curriculum or the curriculum of a specific subject (learning area) (Killen, 1997:30; NDE, 2005:25-32). The mid-point of the model is the outcomes to be achieved by the learners. The specificity of the outcomes is determined by the scope of the curriculum, which is represented by the model. In the case of Economics an outcome, such as the assessment of a tax system on the basis of certain criteria, can be valid. As soon as the outcome has been defined, it influences the other components of the curriculum. According to Killen (1997:30) the effect of the specified outcome(s) on the other components of the curriculum can be summarised as follows:

- Outcomes determine the extent and structure of the knowledge, skills and values defined by the outcome(s).
- Outcomes focus the teaching method so that every learning activity has a specific purpose.
- Outcomes determine the way in which learner placement and progress is organised.
- Outcomes determine how learning is evaluated.
- Outcomes focus attention on the learning environment necessary to achieve the desired outcome(s).

From the above it seems clear that the starting point of learning programme development is the definition of clear desired outcome(s) with an indication of the priority of the outcome(s). Consequently the knowledge, skills and preparations to be developed by the learner in order to achieve the desired outcome(s) must be described in detail. Prior knowledge, skills and attitudes possessed by learners must be stated explicitly to allow learners to master the new knowledge, skills and attitudes. When the aspect of teaching methods and learning opportunities come under scrutiny, a variety of alternatives must be considered to enable every learner to achieve the desired outcome(s). For instance, it should be kept in mind that not all learners learn at the same pace or possess the same

abilities. Killen (1997:30) states that "planning becomes a process of anticipating possible activities, rather than predetermining specific activities". Content must be seen as a supportive basis for facilitating the achievement of outcomes. A clear description of the means of determining the degree and capacity within which learners achieve outcomes provides the assessment methods to be applied to individual learners and the recording of their progress. Overarching this is the organisation of the learning environment in order to facilitate learning. Killen (1997:31) suggests that any learner-centred techniques can be applied productively.

If the approach to learning is to be successful, learners must be prepared to accept difficult objectives and strive to achieve them. This, according to Killen (1997:31), will happen if:

- Lesson outcomes are fair;
- Achievement of the lesson outcomes will lead to a desired outcome; and
- Learners have high self-esteem and a prior record of success.

Effective learning for all learners is both the starting point and the foundation of outcomes-based planning (Killen, 1997:31). For this reason, all teaching decisions must take into account the best method of supporting learners' efforts in order to support the desired seven-step approach, which, according to him, can be implemented successfully as follows:

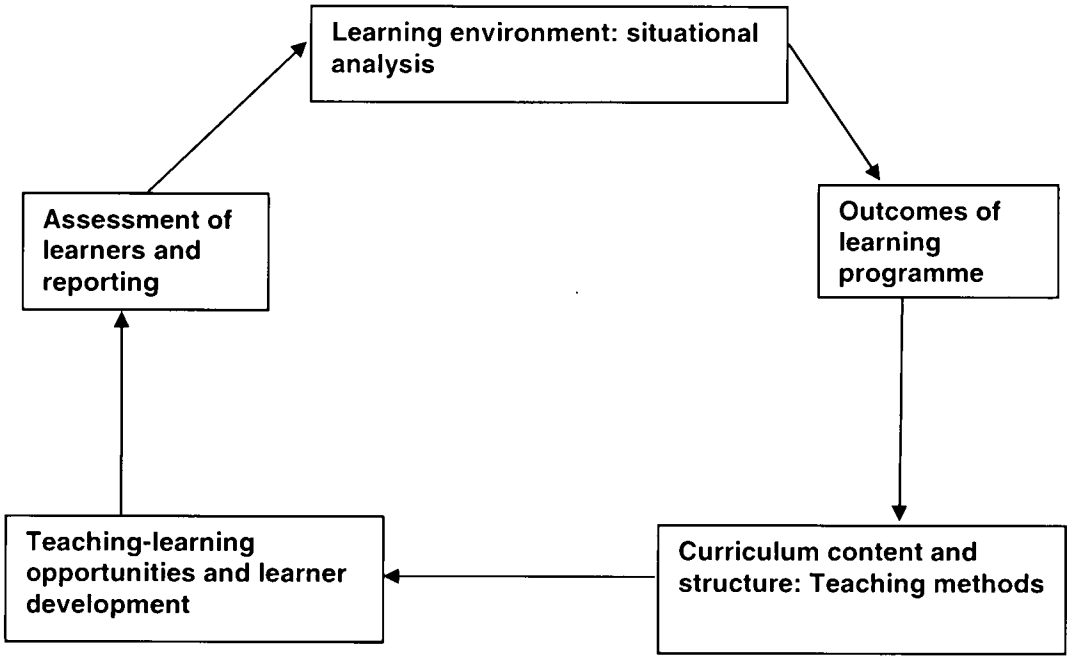
- Start by determining the prior knowledge of the learners. If this prior knowledge is insufficient, revision or teaching must take place.
- The learning unit's outcomes must be defined and learners must be given an explanation of what they must do upon completion of the learning unit. Each outcome must therefore be placed into context.
- The teaching method that offers the entire group the best possible chance of mastering the lesson must be used.

- Guided exercises must be provided so that the learner can be evaluated informally and can be given feedback in order to enhance his/her learning.
- A formative test, based on the learning unit's outcomes, must be written.
- Learners who have mastered the learning unit go on to work on enrichment activities, while those learners who have not yet mastered the learning unit receive additional teaching and exercises.
- All learners are subject to a summative assessment. Learners not able to demonstrate mastery receive an "incomplete" score, which they can change into an "assessment" score by means of additional efforts.

Killen (1997:31) subscribes to the general approach of Vickery (1988), but extends on it by accommodating certain learning areas and/or groups of learners.

- A "minimum set of outcomes" must be provided. Achieving the outcomes would be of greatest value to the learner.
- "Suitably graded extension outcomes" must be provided for learners who progress beyond the minimum outcomes.
- A detailed specification must be given of the essential prerequisites that learners must master before they attempt to master new outcomes.
- Learning outcomes must be formulated in a language that the learner can understand, and examples must be given of what they will be able to do as soon as the outcomes have been achieved.
- Different teaching strategies to achieve the desired learning outcomes must be explored.
- Guided practice sessions during which learners can receive feedback on their progress must be held.
- A variety of tests giving feedback to both learner and teacher must be administered.
- Additional sources and teaching techniques must be used to assist learners not able to achieve the desired outcomes so rapidly.

Figure 3.4 Proposed development of a learning programme (Killen, 1997:30; NDE, 2005:2-6)



3.4.4 Conclusion

The OBE curriculum model for South African schools focuses on learner success. The emphasis thus falls on effective learning. The development of learning programmes renders teaching meaningful and systematic "while still allowing students to discover, to follow their interests, to take responsibility for their own learning, and to develop both personally and academically" (Killen, 1997:32). This process does not take place in a disorganised manner – suitable and meaningful learning opportunities and experiences must be created. Alessi (1991:14) states that if teachers wish to achieve success with OBE, they must accept the following approach: "There is no such thing as failure, only feedback and results...success depends on how well we process the feedback we get regarding our efforts". Both teacher and learner must adopt this approach in pursuit of meaningful and valuable outcomes.

3.5 CRITICAL COMPONENTS OF THE TEACHING-LEARNING PROCESS FOR ECONOMICS

Kotze (1999:31) states that teaching according to an OBE approach consists of four basic elements or components, namely goals and objectives, subject matter, teaching strategies, and assessment. De Bod (1996:160-161) shows that certain elements are important in the teaching of Economics – namely the teaching-learning situation, goal-setting, teaching methods, educational media, and assessment – which can also be applied to Economics. Both these viewpoints correspond with the findings of Killen (1997). In light of the above, the conclusion can be drawn that the following components are important for the effective teaching of Economics using an OBE approach: (i) determining outcomes, (ii) subject matter, (iii) teaching method, and (iv) assessment. Subsequently, each of these components is discussed in more detail.

3.5.1 Didactic principles for the teaching of Economics

3.5.1.1 Introduction

The overarching purpose of each lesson is the planning of each teaching-learning situation so that the planned lesson outcomes can be achieved in the most purposeful manner possible. To be able to make a responsible choice in respect of the teaching methods and strategies, the educational media and assessment techniques, the teacher must have sound knowledge of the fundamental didactic principles that apply to the teaching of Economics. According to Coetzee (1973:267) these principles generally describe the true educational procedure, and any deviation from this can pose an obstacle to teaching. Duminy, Dreyer & Steyn (1990:19) see principles as "foundations, as points of departure which are fundamental and original". They describe didactic principles as "general universally-valid fundamentals underlying the most basic and essential thoughts and considerations about teaching and learning".

From the literature dealing with the universally valid didactic principles, it appears that several classifications of the most important didactic principles exist (compare Bevelander, Fokkema & Nieuwenhuis, 1985; Butler, 1966). Van Loggerenberg and Jooste (1970:153-183), for instance, draw up a classification based on the foundations arising from the principles, namely the philosophical, psychological, sociological and educational foundations. However, the various principles are closely related. A discussion of any one of the principles therefore also encompasses one or more of the others. According to Duminy *et al.* (1990:19) didactic principles are universal in nature in the sense that they can be found in all teaching-learning situations, in all subjects, and at all levels of teaching. Consequently the didactic principles are not studied in terms of a classifying framework, but rather each principle that is important in the teaching of Economics is studied individually. Simultaneously, the demands that each principle makes of the teaching of Economics are also discussed.

3.5.1.2 Principle of purposefulness

The principle that each action in teaching must be purposeful primarily follows from particular orders and life purpose with which God created man upon earth (Coetzee, 1973:209). This principle thus applies to the teaching of Economics from a Christian perspective.

The principle of purposefulness does not only involve the formulation of certain outcomes (i.e. aims) with a particular lesson. Preller (1971:125-133) and Van der Stoep and Louw (1984:12-15) mention that it affects education as a whole. Aspects such as the choice of subject matter, lesson planning, teaching methods, educational media, assessment, discipline, administration, and organisation of the educational institution must take place purposefully (i.e. with specific outcomes in mind). Of interest to this study is the implementation of this principle in the teaching-learning situation of Economics.

Purposefulness in the teaching of Economics means firstly that the teacher must know exactly what he/she wants to achieve with his/her presentation of the subject as a whole (i.e. the eventual outcomes). Secondly, the teacher must pursue specific outcomes. According to the OBE approach, it is important that programme outcomes (i.e. the teaching of Economics), course outcomes (i.e. grade 10), unit outcomes (e.g. micro economics) and specific lesson outcomes (e.g. the effect of change in demand) are derived directly from the eventual outcomes. Thirdly, the principle of purposefulness must also be applied to the act of learning. From the description of the concept of outcomes, it can be concluded that the purpose of outcomes is the demonstration of learning in context. Consequently, the learner must be aware of – and be made aware of – the end product that he/she must be able to carry out or demonstrate. It is therefore the teacher's job to bring to the learner's attention, clearly and explicitly, those meaningful outcomes to be achieved by the learner so that these outcomes can remain the focus point of the learner's attention throughout.

3.5.1.3 Totality principle

According to the philosophical schools of thought of the eighteenth and nineteenth centuries, man's intellect, emotions and will were separate abilities that could be isolated for special attention during the teaching-learning act. In response to the fragmentation approach that emphasises the component parts, the Gestalt psychology proposes that man must firstly be seen as a unit or totality and that the various dimensions or facets of the human personality can be differentiated but never separated (De Klerk, 1971:134; Duminy *et al.*, 1990:21).

The concept of totality quickly gained popularity in education. De Klerk (1971:135) formulates the principle of totality in the field of didactics as follows:

- According to the principle of totality, the teacher is totally involved in teaching;

- The learner is totally involved in teaching; and
- The learning process takes place by means of wholes, and the learning plan and presentation thereof must therefore work with the total image.

Harmse and Kirstein (1980:293) go on to state that the physical and mental characteristics of a child must be taken into account so that every child can be optimally developed in consideration of his/her unique abilities. Kruger & Muller (1987:40) state that the teacher implements the totality principle if he/she sees every learner as a whole and teaches every learner as a whole or in totality.

The Gestalt-psychological viewpoint of the act of learning offers several guidelines for the teaching-learning situation. This principle poses several demands in order to ensure that the learner's act of learning in the FET phase is as effective as possible (Duminy, 1972:23-27; Duminy *et al.*, 1990:21-22; Gorman, 1974:73-76; Van Loggerenberg & Jooste, 1970:167-169). For the teaching of Economics, these demands can briefly be summarised as follows:

- All the knowledge must be correlated and integrated into a meaningful whole (global learning), e.g. economic principles of international economics.
- Frameworks and associations must be indicated (structural unit), e.g. changes on the demand side.
- Experiences gained in a particular situation, and skills gained in a particular area, must be related to other knowledge and areas of life (insight through mastery), e.g. the effect of externalities on the economy.
- The goals pursued by means of the course and the eventual learning outcomes to be achieved through teaching must be kept in mind at all times so that all teaching and learning activities lead to these (emphasis on the essentials), e.g. supply and demand to determine market balance price.

The past few decades have been characterised by a so-called explosion of knowledge, with new knowledge not only coming to the fore but also becoming more available via, *inter alia*, the printed media and the internet. In light of the above, the totality principle is given even more meaning. The learner must develop the ability to structure within the learning situation. It is thus the teacher's duty to apply this principle in the teaching-learning situation and at the same time assist the learner with the development of his/her own structuring ability.

The application of the totality principle in the teaching-learning situation also makes certain demands on the teaching actions of the teacher. As per the viewpoints of De Klerk (1971:138-139) the following guidelines can be set for the teaching of Economics:

- At the start of the academic year, the objectives (and the eventual learning outcomes) pursued by means of the course (i.e. the course outcomes, e.g. grade 12) should be made available to the learner.
- The learner should be provided with the NCS, including learning outcomes (LOs) and assessment standards (ASs), the teaching method, and a full timetable.
- Upon commencement of teaching, a brief preview should be given of the learning outcomes to be dealt with, and the objectives specifically pursued by that section (i.e. the unit outcome) should be brought to the learner's attention.
- It must be ensured that every teaching session (whether a lecture, practical lesson or group work) relates meaningfully to the previous teaching session.
- Upon commencement of the teaching session, a brief synoptic preview of the subject matter to be dealt with must be given, together with the goals (i.e. the specific lesson outcomes) to be achieved.

- Upon completion of the different process elements of the teaching session, focus should be returned to the overall structure of the lesson, and the accent should once again fall on the essences.
- New knowledge should be applied in as many new or unfamiliar situations as possible in view of the total mastery of the newly acquired knowledge and in accordance with the OBE approach.
- Upon completion of learning outcome 1 (i.e. course units, e.g. macro economics), as well as on completion of the learning outcome as a whole (e.g. grade 10), the subject matter should again be summarised into a meaningful whole by means of a clear indication of the mutual relationship among the different sections. The use of outlines and frameworks to indicate overall structures serves an important purpose in this regard.

According to Kruger and Muller (1987:43) the global teaching method, the project method and the method whereby subject matter is divided up into lesson units have developed into some of the most important teaching methods based on the totality principle. From the many demands that the totality principle sets for teaching – only the most important of which are highlighted here – it is thus clear that the application thereof makes a major contribution to the effective process of Economics teaching.

3.5.1.4 Activity principle

Educational psychologists and educationists agree that every individual has a natural urge for self-development and that self-activity is the basic principle on which all learning is based (Bevelander *et al.*, 1985:67). Coetsee (1971:142) describes learning as a process of active acquisition of knowledge, but Jacobs *et al.* (2004:12) refer to this as participatory teaching. In light of the OBE approach it is obvious that self-activity or self-industry fulfils an important function in the act of learning.

It is, however, important to distinguish between activity and self-activity. Taking notes during a lecture is an indication of activity, but not necessarily self-activity. According to Coetsee (1971:142) self-activity in the teaching-learning situation is found when the learner depends on himself/herself, and where the learner himself/herself is the seeker, discoverer, inventor or creator. According to the self-activity principle, the learner must learn to rely on his/her own skills to seek, research, create, discover, do and think, and thus master knowledge and apply it with insight – a concept referred to as mastery learning, which forms the basis of OBE. Elton (1975:144) sees this independent and self-sufficient search for and mastery of knowledge by the learner himself/herself as "one of the universal product aims of education".

Ever-increasing emphasis should be placed on the activity principle during the teaching-learning situation. De Bod (1996:140) and Mohr and Fourie (1997:12) indicate that most Economics teachers still make use of lecturing to achieve certain teaching-learning goals. Research conducted as early as 1974 revealed that lecturing is not only ineffective, but also does not encourage the habit of self-study (De Bruyn, Gleave & Louw, 1974:6). Self-activity should not be seen as an independent teaching method. It should serve as a teaching principle that is ascribed to in various teaching methods, including lecturing (Coetsee, 1971:144). Rambiyana, Kok and Myburgh (1996:191) describe participation as "taking part, being involved". The OBE approach to Economics teaching leans heavily on the principle whereby the learner becomes actively involved in the acquisition and mastery of knowledge, skills and attitudes and the application thereof (Jacobs *et al.*, 2004:12).

Although the activity principle strongly emphasises the role of the learner in the teaching-learning situation, the role of the teacher must not be underestimated. Coetsee (1971:142) describes the role of the teacher in this case as being one of leadership and guidance – leadership in terms of the formulation and publication of outcomes designed to encourage activity in the learner, and guidance by

means of questions, problem statements, work assignments and so forth by means of which the learner's activities are directed to allow him/her to achieve the outcomes himself/herself (also compare Bonstingl, 1992:69). The teacher thus fulfils the role of facilitator in the cooperative learning approach. The requirements for the successful application of the activity principle in the teaching of Economics, as can be derived from the above, can be briefly summarised as follows:

- The purpose (lesson outcome) of the learning activity must be made clear to the learner.
- The most suitable learning opportunities and learning activity (activities) that enable the learner to achieve outcomes independently must be selected.
- The teacher must motivate the learner and lead him/her towards activity and then guide the learner further and direct his/her activities so that the learner himself/herself can achieve the predetermined outcomes.

3.5.1.5 Social principle

Man is by nature a social being that is in contact with others from the moment of birth. According to Harmse and Kirstein (1980:297) the learner's social development is a natural consequence of the learner's realisation that he/she has a duty to help other members of his/her community. The learner must also eventually take his/her place in the (economic) community. Isolating a learner means that he/she will receive less stimulation from fellow learners, will experience poor motivation, and will do less-creative work (Duminy *et al.*, 1990:40). There is a definite social dimension in the practice of Economics. Besides the fact that Economics is a social science, social influence is also inherent to the teaching and learning actions of the subject. The following are some of the most important aspects for the teaching of Economics:

- Sound social relations must be maintained in class.
- Strong emphasis must fall on group work where each learner is given the opportunity to work together as a member of a group in order to achieve a common goal (outcome) (but sometimes this is applied practically).
- Healthy competition within a group promotes motivation and encourages the individual members of the group to work harder and consequently perform better.

3.5.1.6 Principle of individualisation

Interest in the individual and his/her place in the teaching-learning situation started increasing significantly at the beginning of the twentieth century. According to Van Heerden (1987:29) differentiated teaching is based on anthropological demands, because any disregard thereof leads to an under-appreciation of uniqueness as the essence of humanity. The didactic principle of individualisation is based on the idea that every learner should be helped to reach his/her full potential in line with his/her abilities (Duminy *et al.*, 1990:31). The purpose of differentiated education is, according to Harmse and Kirstein (1980:9), the adaptation of the teaching-learning situation in such a way that it leads to the optimal deployment of every learner's potential in order to prepare the learner as independently and responsibly as possible for "life". This principle is one of the basic assumptions of OBE. For the teaching of Economics it means that, as far as possible, provision must be made for the different teaching methods, learning styles and pace of learning, as well as assessment (compare Kruger & Muller, 1987:45).

3.5.1.7 Principle of motivation

Motivation relates to "wanting to learn". It is this aspect that is important in making learners want to learn. The teacher's role is to create learning opportunities that will stimulate (i.e. motivate) the learner to learn. This

motivation can take place intrinsically or extrinsically (Kruger & Muller, 1987:66-72). The motivation principle makes many demands of the teaching-learning situation (Duminy *et al.*, 1990:29-30), of which the following are most important for the teaching of Economics:

- All available resources in the school and in the community should be used.
- Communication between teacher and learner must be in a language that the learner can understand.
- New subject matter must be brought into line with what is already known.
- The application possibilities of that which is being learned must be identified as far as possible.
- Subject matter must be structured systematically and in meaningful outlines, frameworks, etc.
- Where applicable, one should work from the concrete to the abstract.
- Teaching must be approached from interesting problems or situations with which the learner is familiar.
- Assessment must take place continuously so that the learner can determine the extent to which the outcomes have been achieved.

3.5.1.8 Principle of assessment

The effectiveness and success of learning can only be determined through valid assessment. It is thus the teacher's job to determine whether the learner has learned anything (Duminy *et al.*, 1990:41) and to provide the learner with feedback in that regard. In an OBE approach to cooperative learning, it means that the teacher must determine the extent to which the predetermined outcomes have been achieved (compare Bonstingl, 1992:69), and if the outcomes have not been achieved, the teacher must identify the necessary remediation in order to guide the learner towards the achievement of the outcomes. Assessment has already been addressed. Hansem (1989:172) identifies the following principles inherent to assessment in an OBE approach:

- Outcomes are stated clearly.
- Teaching is directed at the achievement of the outcomes.
- Learning is constantly monitored.
- Teaching and learning are continually adapted so that learners are given sufficient opportunity to master outcomes.
- Assessment reflects the specified outcomes and affords opportunities to learn further.

The following important aspects can be highlighted in respect of the didactic principle of assessment and the teaching of Economics from an OBE approach:

- The Economics teacher must have a clear image of what he/she wishes to determine by means of assessment.
- The Economics teacher must realise that the specified outcomes will eventually determine the assessment method.
- Assessment is not an isolated part of teaching and learning, but rather functions as an integrated component of teaching and learning so that optimal learning can take place.
- Assessment is more than proof that the learner can repeat memorised facts. The learner must demonstrate that he/she has mastered the Economics subject matter and can use it with the necessary skill in new situations.

3.5.1.9 Principle of illustration (perception)

It is universally accepted that knowledge is based on – or has its origin in – the concrete, visible objects surrounding man. This knowledge is brought to the classroom in the form of educational media so that the child can experience aspects of the living world within the classroom setup. Perception includes the stimulus of all the senses, namely sight, hearing, taste, smell and touch. As far

as possible, the learner must come into contact with the concrete objects he/she is learning about, as learning is more meaningful and effective when as many senses as possible are involved in the act of learning (Duminy *et al.*, 1990:25). It is not always possible to bring the correct example to the classroom, hence the importance of the categories of educational media, including pictures, diagrams, photographs and models. The antipole, however, is that if learners do not come into contact with concrete objects or examples thereof, it leads to verbal teaching using words without meaning, resulting in "parrot" learning. The purpose of media is to support learners in acquiring insight into the science between the abstract world of values and ideas on the one hand, and the concrete world of objects and actions on the other. The use of educational media – the actual assignment of meaning to the principle of perception – allows learners to experience the teaching-learning events (Duminy *et al.*, 1990:25-27; Kruger & Muller, 1987:59-60).

On the basis of the overall conditions that the principle of illustration sets for teaching in general, the particular demands in respect of the OBE approach to the teaching of Economics can be summarised as follows:

- As many senses as possible must be involved.
- The purpose of perception must speak clearly to the learner.
- The learner's attention must be focused on the perception aspects to be observed.
- Terminology is important, as principles are conveyed through language, whether verbal or written.
- Shortcomings in the formation of accurate perceptions must be identified and addressed, and misperceptions must be remedied.

3.5.1.10 Diagnostic and remedial principle

Teaching must be diagnostic in the sense that it identifies and analyses problems that can result in learners failing to (fully) achieve specific outcomes. Teaching

must also be remedial in the sense that problems, which can result in the act of learning not taking place effectively, are eliminated (compare Bonstingl, 1992:69; Du Toit, 1997:126; Van Loggerenberg & Jooste, 1970:181). There are different methods that the Economics teacher can use to meet the demands of the principles, namely:

- Posing questions to the learners to determine whether they have acquired knowledge, insight and skills, as well as any learning problems that might exist;
- Having learners apply the work in new and unfamiliar situations;
- Problem-solving; and/or
- Diagnostic tests.

3.5.1.11 Principle of mastery

In the teaching of Economics, certain outcomes are stated which the learner must achieve during the course of the lesson or programme. The preceding supposes that learners must master specific outcomes. The OBE curriculum model for South African schools also reflects various elements of mastery learning. The aim is for learners to not only understand the subject matter, but also to be able to use the subject matter in new situations. The outcome for the teaching of Economics supposes that certain thought processes and activities must be mastered. For example, learners must acquire knowledge and insight from the different ways in which goods can be produced, as well as the principle of supply and demand. A certain degree of skill in the application of these methods and principles must be demonstrated.

One of the specific outcomes of Economics supposes that learners must be able to evaluate the relationships amongst the economic branches and labour economy. In this case, learners must master Economics as a whole, up to a specific level. Apart from knowledge, skills and viewpoints, the learner must gain

a certain perspective in respect of the nature and being of Economics, as well as the similarities and relationship between Economics and other sciences.

The most important guidelines that apply to the teaching of Economics so that mastery of the subject matter can take place optimally can be summarised as follows:

- Summaries of the subject matter to be drawn up by the learner in order to develop intellectual capacity so as to be able to identify key points and create structure;
- Revision, where the emphasis falls on a variety of activities and problem solutions;
- Classroom and homework exercises in order to consolidate subject matter and practise certain skills;
- Active participation by the learner in both the teaching and learning processes;
- Structured presentation of subject matter during both the teaching-learning situation and the assessment and demonstration of skills, so that mastery can take place systematically and logically;
- The learner being in possession of the necessary prior knowledge, insight and skills at the beginning of the teaching-learning opportunity;
- Learning at own speed to allow time for mastery to occur;
- Self-assessment opportunities so that learners can determine their own level of mastery, can act remedially, and can adapt their learning strategies.

3.5.1.12 Principle of clear focus

According to Spady (1998:27) clear focus is one of the most important principles of an OBE approach: "Nothing can proceed in an authentically outcomes-based way without it". This principle therefore has the following purpose:

- To help teachers form a clear image of the learning they want their learners to be able to demonstrate;
- To remind teachers that the success of learning is the most important priority of planning, teaching and assessment;
- To create a clear image of the desired outcome, the starting point of the curriculum, as well as teaching and assessment; and
- To enable teachers to clearly communicate the desired outcome to learners by presenting and explaining the desired outcome to learners as soon as a lesson unit commences, and to do so continually.

The following aspects must be kept in mind by the Economics teacher in order to meet the demands of the principle:

- All teaching-learning events must be directed at the achievement of the specified learning outcome, be it knowledge, understanding or application of the subject matter.
- The planning, teaching and assessment must be of such a nature that learning is made possible for all learners and all learners can (eventually) be successful in achieving the specific outcome.
- The learning outcome to be achieved must be clearly presented to learners, and the reasons why – as well as the place where the learning outcomes fit in – must be explained to learners.

3.5.1.13 Principle of downward planning

Curriculum design and teaching planning must start at the point where teachers eventually want their learners to be, i.e. the eventual outcomes learners must be able to demonstrate. According to Spady (1998) outcomes can be classified into three broad categories, namely "culminating outcomes", which are synonymous with the second category, i.e. "exit or "programme outcomes", and thirdly

"enabling outcomes", which are essential for the learner's eventual successful demonstration of outcomes. "At its core, the process requires staff to start at the end of a set of significant learning experiences – its culminating point – and determine which critical components and building blocks of learning need to be established so that students can successfully arrive there" (Spady, 1998:28).

It is important for the Economics teacher, taking into account the outcomes to be achieved, to be able to differentiate between the "need to know" and the "nice to know" of the available subject matter. Only the truly necessary subject matter needed to achieve the specific outcomes must be selected and presented to the learner.

3.5.1.14 Equity principle

According to Bray (1998:77) equity in an educational context means equal opportunities in education, the equal treatment of language, cultural and religious rights in order to be free from discrimination on the basis of race, socio-economic conditions and gender bias, and fair conduct by the education authorities. From an OBE approach, the NCS meets this requirement in that it offers learning opportunities to all learners irrespective of race, gender, or level of education and training.

The Economics teacher can meet the demands of the equity principle by selecting subject matter that is not prejudiced in respect of race and/or gender. Moreover, a careful approach must be taken to subject matter dealing with ethnic backlogs (for example, the distorted distribution of national income by developing countries, the developmental phases in which countries and ethnic groups in countries find themselves, etc.)

3.5.1.15 Principle of mother-tongue teaching

According to Wood (1997:41) the role of language in education is an important topic of discussion in the current educational setup in South Africa. There are many questions with regard to teaching medium, language policy, multilingual teaching, and so forth. Language gives learners the opportunity to enter into dialogue effectively with the world and its people. This language encompasses both colloquial language and technical language (terminology). In South Africa the principle of mother-tongue teaching is mainly limited to teaching in English and/or Afrikaans as first or second language. Although South Africa has eleven official national languages, most learners are taught in English. According to Duminy *et al.* (1990:36) this practice is unacceptable, as learning can be more effective if the learner is taught in his/her mother tongue (compare Kruger & Muller, 1987:75-76). Several reasons can be given for why mother-tongue teaching should convert to teaching in English or Afrikaans. Some of the most important reasons are:

- Some languages do not yet have the necessary scientific terminology for teaching and learning in the FET phase.
- There is a lack of non-English and non-Afrikaans professional literature.
- There is a belief amongst non-Western cultures in South Africa that mother-tongue teaching is inferior (Calitz, 1993:110; Duminy *et al.*, 1990:36; Kruger & Muller, 1987:77).

Language is an inseparable part of human education. Language is also important in overall human development. Forming concepts, assigning meaning, and subsequently experiencing the world in which we live are unthinkable without language. Wood (1997:46) points out that comprehension is not a skill, in that the teacher cannot teach the learner to understand. "One seeks to bring into being the kinds of cognitive structures that will enable understanding, or acceptably competent interpretations...". Communication, by means of the spoken and written word, is the essence of teaching in school (Calitz, 1993:107-

111). Consequently the teaching of Economics will without a doubt be influenced by the language in which it is taught.

The Economics teacher can attempt, by means of his/her teaching, to limit as far as possible any unclear, ambiguous and/or superfluous information. When unknown concepts that fall outside the experience of the learner(s) are discussed, such concepts can be concretised with the aid of educational media. Where necessary, concepts can even be explained in the learner's mother tongue, after which the learner can be guided to understand the concept in the language of instruction.

3.5.1.16 Principle of human resource development

It is universally accepted that successful, modern economies and communities need citizens with a strong foundation in general teaching; with the desire and ability to learn further and develop and apply new knowledge, skills and technologies; with the mobility to easily move between different careers; who accept responsibility for their own personal performance; who set acceptable standards and achieve them; and who can cooperate amongst themselves (Gultig, 1998:3).

The Economics teacher fulfils the important role of preparing learners for these demands by recognising that learners are themselves sources of knowledge and that the teaching-learning process, although it builds on existing prior knowledge, must be a process of pushing back the borders of knowledge.

3.5.1.17 Principle of learner centeredness

Curriculum development, and more specifically the development of teaching programmes and material, must have learners as the central focus point and

must build on the existing knowledge and experiences of the learner. The process of curriculum development and the teaching of subject matter must take into account the developmental characteristics of the individual learners as well as the group. Different learning styles and pace must be taken into account and accommodated. The way in which different cultural values and lifestyles construct knowledge must be recognised and incorporated in the development and implementation of teaching-learning programmes. The motivation of learners with positive learning experiences, as well as the respect of different languages, cultures and personal circumstances, is a prerequisite for learning. Learners must be encouraged to reflect on their own learning experiences and processes and to develop skills and strategies to use open learning to learn distance and multimedia programmes (Gultig, 1998:3).

The Economics teacher can meet the demands of this principle by:

- Giving the learner the opportunity to work cooperatively and in a problem-solving way as a member of a group;
- Allowing learning opportunities to adapt to and build on the field of experience of the learner;
- Allowing aspects, concepts, etc. to fall within the learner's frame of reference as far as possible; and
- Giving the learner the opportunity to master the subject matter at his/her own pace and in his/her own way.

3.5.1.18 Principle of relevance

The curriculum must be relevant and applicable in respect of current and future needs of the individual and community, as well as trade and industry. It is becoming ever more evident that economic growth in a competitive international economic system is fundamentally dependent on a generally well-educated population equipped with the necessary skills and knowledge as required by the

economy. Moreover, the population must be equipped with the capacity to learn further, develop skills, and acquire new competencies. These essentials do not suggest that the teaching and training policy must be linked to the economic policy of a country, but rather that learning programmes must give learners the opportunity to become technologically literate and environmentally aware. The boundaries of knowledge to which learners are accustomed must be broadened to areas unknown to the learner. In the development, design and delivery of learning programmes, cognisance must be taken of differences in culture, language and religion (Gultig, 1998:4).

For the Economics teacher this means that the selection of topics for teaching and learning, teaching methods, assessment techniques and so forth must be reflective of cultural sensitivity. Learners must be equipped to acknowledge the unique multicultural situation in South Africa and to envisage the possibilities of developing this cultural composition into a unique South African commodity, which will have positive implications for nation-building and economic and social development.

3.5.1.19 Principle of integration

Successful modern economies and communities need to break down the artificial socially organised hierarchies. This principle applies to the allocation and management of career opportunities, as well as the organisation and certification of teaching and learning. An integrated approach to teaching and learning implies a vision that ignores rigid separation between academic and applied knowledge, between theory and practice, and between knowledge and skills. This separation has been characteristic of the organisation of curricula and learning opportunities in many countries of the world, including South Africa. Although this principle as such will not give rise to a successful economy and community in South Africa, it is a prerequisite for successful human resource development. Furthermore, it will make a positive contribution to the restructuring

and development of the community and the economy. Integration as a curriculum strategy can lead to the achievement of specific goals in a more effective and time-saving way. Integration can be effected by combining two or more traditional subjects or by combining different subject perspectives in a single topic (Gultig, 1998:5-6).

For the Economics teacher (and, based on the principle of integration, also the teachers of other Economic and Management Sciences, e.g. Business Economics, as well as subjects such as Mathematical Literacy, Entrepreneurship, etc., which incorporate components of Economics) this means that subject matter must be integrated so that specific components of the subject matter are not merely approached in a subject-typical way, but are also studied across subject boundaries.

3.5.1.20 Principle of differentiation

Learning programmes must make provision for all learners, including those who are handicapped and/or disabled, so that they can achieve the outcomes. This principle does not disregard the relevant educational differences among individual learners, nor does it exclude the different teaching approaches involved in different levels of mastery. Implicit to the national standards is the view that differences in learners' interests and abilities will challenge teachers to attempt different or alternative teaching methods and approaches. Learners must have the opportunity to master outcomes at their own pace, rather than at the pace of their class (Gultig, 1998:5).

Economics teachers must therefore differentiate in all elements of teaching and learning so that all learners can achieve success. Different teaching and learning strategies must be utilised to make provision for differences in pace and style of learning.

3.5.1.21 Principle of nation-building and non-discrimination

Teaching and learning must promote the development of a national identity and simultaneously make learners aware of South Africa's role and responsibility in respect of Africa and the rest of the world. Learning programmes must make provision for the development of:

- Mutual respect for diverse religious views, value systems, cultures and languages;
- Multilingualism and informed choices in respect of the language of instruction;
- Cooperation, community responsibility, and the ability to participate in all aspects of the community; and
- An understanding of national, provincial, regional and community development needs.

Moreover, learning programmes must protect and promote basic human rights, irrespective of gender, race, class or age. Learners must develop a sense of self-worth and acceptance, irrespective of their differences (Gultig, 1998:6-7).

It is important for the Economics teacher to constantly make learners aware of South Africa's unique national identity by, for instance, illustrating subject matter with South African examples (such as indigenous knowledge systems traded among native tribes in South Africa). The role and importance of South Africa in terms of international trade with the rest of Africa and the world must also enjoy special attention. The learner's responsibility towards the community in which he/she lives and the importance of meeting personal and community needs must also be addressed.

3.5.1.22 Principle of critical and creative thought

Learning programmes must improve the learner's ability to think logically, analytically (not vaguely), holistically (integrated as part of a whole) and laterally (experimentally creative, not inhibited by conventional thought patterns). Included is the recognition of the temporary and varying nature of knowledge, as well as the balancing of independent, individual thought against social responsibilities and the ability to function as a member of a group or community. The perception that the teacher is the only source of knowledge must be changed to a perception whereby learners are partners and active participants in the acquisition of knowledge and the learning thereof (Gultig, 1998:7).

For the Economics teacher this means that the subject matter must be viewed in such a way and be presented to learners in such a way that the greater portion thereof, and the implications of the subsections for the greater whole, can be realised. The analytical skills of learners must be developed by means of problem setting, where learners must think of creative solutions to relieving aspects such as scarcity. The cause-effect relationship of Economics must be clearly presented to learners, and the consequences of the seemingly simply solution must be thoroughly explained to learners. It is only in this way that learners can be guided towards critical and creative thought in Economics, particularly when it come to the creation of business cycles.

3.5.1.23 Principle of adaptability

Although the learning programmes for teaching and training must relate to a coherent framework of OBE principles and lead to the attainment of national standards and qualifications (according to the NCS), the methods used to achieve these goals must be determined by the teachers in concurrence with the needs of their learners (Gultig, 1998:7-8).

The Economics teacher must make provision for the increasing number of learning opportunities that allow learners to decide for themselves what, where, when, how, and at what pace learning will take place. Learning programmes must therefore be adaptable.

3.5.1.24 Principle of progression

An integrated approach to education linked to the development of the NQF is based on a system of credits earned for the achievement of learning outcomes. Learners are promoted on the grounds of the learning outcomes achieved. Learning programmes must facilitate progress from one class, phase or learning outcome to the next (Gultig, 1998:8).

The Economics teacher must compile learning programmes in such a way that progress from one class, phase or learning outcome to the next will occur logically and subsequent learning programmes will continue to build on the existing knowledge of learners.

3.5.1.25 Principle of creditworthiness

Learning programmes should have national and international creditworthiness. With regard to national creditworthiness, learning programmes must be seen by the community as being valid, relevant, and of high quality. On the international front the learning areas and national standards must satisfy domestic needs without deviating too much from those of the international arena (Gultig, 1998:8).

For the Economics teacher this means that the learning programme must meet the demands and needs of the community. Learning programmes must thus set economic growth, job creation and the curbing of inflation as demands for the broader community within which the learner lives.

3.5.1.26 Conclusion

From the discussion of the didactic principles applicable to the teaching of Economics, it would appear that the teaching of Economics, from a cooperative learning approach, must take place purposefully and in totality in an illustrative manner and that, although the mutual differences of learners must be taken into consideration, the social nature of man must be kept in mind. The learners must be guided to achieve the specified outcomes by means of self-activity and motivation. By means of assessment, mother-tongue teaching where possible, and the diagnosis and remediation of learning problems, optimal learning must take place. Consequently the didactic principles are not studied in terms of a classifying framework, but rather each principle that is important in the teaching of Economics is studied individually. Simultaneously, the demands that each principle makes of the teaching of Economics are also discussed, which are important to meet the demands and needs of the community.

3.6 OUTCOMES AS DIDACTIC COMPONENT OF THE TEACHING OF ECONOMICS

The focus of cooperative learning as teaching strategy for Economics within an OBE curriculum falls on what learners must know (knowledge and comprehension) and do (application). The point of departure of teaching planning is thus the eventual learning result in terms of knowledge, skills and values, rather than the prescription of subject matter to be learned (Gultig, 1998:9). According to Killen (1997) outcomes are the midpoint of cooperative learning. These outcomes, which are classified as either critical or developmental outcomes, have already been discussed. Critical outcomes are 'working principles' and form the basis of all teaching and training, as well as the development of learning programmes and material (Gultig, 1998:9). It therefore follows that OBE programme development starts with the formulation of critical outcomes that will in turn guide all further curriculum planning processes. The

critical outcomes accepted for the South African situation are summarised in table 2.1. According to Kotze (1999:32) these critical outcomes refer to:

- Communication;
- Problem-solving and creativity;
- Value judgements and decisions;
- Social interaction;
- Analysis;
- Globalisation of the environment and technology;
- Problem-solving within related systems;
- Civil responsibilities;
- Life and career planning; and
- General welfare.

Specific outcomes are content specific and refer to relatively broad goals in learning areas that determine teaching methods and subject matter selection (Kotze, 1999:32). According to Du Plooy (1998:14) specific outcomes represent the end point of the teaching-learning process, although this signals the beginning of the curriculum design process.

Specific outcomes indicate what the learner should know and be able to do. The most important purpose of these outcomes is that the specific outcomes (and not just subject matter) are evaluated. It involves the development of basic (economic) knowledge, skills, abilities and values necessary to function in a changing society. Each specific outcome consists of elements that must each be achieved before the specific outcome can be mastered. These credits in turn serve as building-blocks for earning qualifications within the NQF (Gultig, 1998:11).

3.7 SUBJECT MATTER AS DIDACTIC COMPONENT OF THE TEACHING OF ECONOMICS

3.7.1 Selection of subject matter

Decisions about what is to be taught and learned are, according to Ntshoe (1991:227), as old as the history of schooling and education in the community. Various authors, including Lawton (1973), Stenhouse (1975), Tyler (1949) and Wheeler (1979), display different perceptions of the composition and planning models of the curriculum. Prior to 1994, subject matter was strictly prescribed by the syllabus, with little freedom for both the teacher and learner with regard to the discovery or development of different subject matter. Objectives and goals for lessons were defined in terms of the subject matter, while the teaching strategy and possible educational media were selected and the knowledge of the subject matter was eventually evaluated (Du Plooy, 1998:14). Similarly, Mahomed (1998:12) states that the situation with regard to subject matter in South Africa is extremely sensitive, firstly as a result of the central position occupied by subject matter in the teaching-learning situation, and secondly due to the biased nature of subject matter in terms of gender, Eurocentricism, and the middle- and higher-class perception of knowledge.

In cooperative learning as teaching strategy, subject matter is no longer central to the teaching-learning situation. The subject matter and the way in which it is taught are no longer prescribed. The teacher and learner have – relatively speaking – reasonable authority to make decisions on the subject matter and methodology, as long as the outcomes are achieved (Du Plooy, 1998:14). Consequently, the teacher and learner are faced with two important decisions, namely:

- What subject matter (from the available mass or reality) should be included; and

- The influence of this subject matter on the achievement of specified outcomes.

According to Harmse and Kirstein (1980:52-53) the subject matter is *"nie die werklikheid nie, dit is ('n) verteenwoordigende seleksie(s) uit die werklikheid"* ["not reality, it is (a) representative selection(s) from the reality"]. According to Duminy *et al.* (1990:158) this selection of subject matter falls within the field of the subject didactics of each specific subject. Each subject will then select subject matter in a similar way. The following can be seen as universal guidelines for the selection of subject matter, namely that the subject matter must be adapted to suit the learner's level of development and abilities, and that the depth, level of difficulty, pace of delivery, as well as the extent to which interest is piqued, should be taken into account in the selection of subject matter (Duminy *et al.*, 1990:158). According to Lombard (1991:217-219) it is essential that the selection of subject matter is focused on an accountable, workable and generally accepted model. The unique nature of subject matter should also be considered, as it will have an effect on the envisaged teaching and learning experience.

The document **Generic guidelines for the development of learning support material for outcomes-based education and training** (NDE, 1997f:9-10) describes the nature of subject matter as follows:

- Subject matter must be sensitive to aspects related to culture, race, gender, disability, etc. Furthermore, it must be free from discrimination and, where possible, it must promote equal opportunities.
- Subject matter must place sufficient emphasis on knowledge, comprehension, skills and attitudes so that the desired outcomes can be achieved.
- Subject matter must meet the needs of both the teacher and the learner and must not contain irrelevant material.
- Subject matter must progress logically.

- Subject matter must be relevant, it must create opportunities for use in everyday life, it must promote technology and, where possible, have ties to other learning areas.
- Subject matter must relate to the everyday life of the learner.
- Subject matter must be accurate and up to date (in particular, the horizontal form of financial statements must be practically oriented).
- Subject matter must address a variety of skills and possibilities, e.g. cognitive skills, psychomotor skills, critical thought, etc.
- Subject matter must accommodate a variety of learners according to their skills and abilities, e.g. different exercises for different groups, or additional work for learners with special needs.
- Enrichment must include the following: Development of knowledge, the use of higher-order thinking abilities, e.g. analysis, synthesis and evaluation, as well as independent investigation and research.

The LOs and ASs of the NCS curriculum (NDE, 2003a:6-12) for Economics can be found in table 3.2. The objectives of teaching and learning are, however, more clearly described in terms of outcomes.

3.7.2 Systematisation (classification) of subject matter

The idea of subject matter systematisation is a logical consequence of general didactics. All subject matter must in some way or another be delivered to learners in a logical order so that the new subject matter can be related to the subject matter that has already been mastered. The organisation of subject matter is then also one of the fundamental aspects influencing curriculum and teaching planning. With the new OBE curriculum approach, subject matter is not strictly prescribed. It is the task of the teacher and the learners to decide which subject matter will be selected in order to achieve certain learning outcomes. Moreover, it is the teacher's job to organise the subject matter. It is important that the principles for the organisation or systematisation of subject matter are

briefly discussed. Duminy *et al.* (1990:160-165) identify the following principles of organisation: chronological and symbiotic classification; linear classification; spiral classification; concentration classification; and symbiotic classification. The influence of each of these classification methods is briefly discussed on the basis of Economics teaching.

- **Chronological classification**

Chronological classification means the organisation of subject content according to the date or time of events. The subject content is therefore arranged in sequence according to time. This type of organisation is found in Economics where economic thoughts or systems are discussed. One period is followed by the next, and in order to draw a comparison between the thoughts or systems of the two periods, the first period must be mastered before moving on to the next period (economic principles to be applied by learners).

- **Linear classification**

Linear classification refers to the organisation of subject matter in a uniform and linear manner. Each learner must master the programme from the logical beginning to the logical end.

- **Spiral classification**

In terms of the spiral classification principle, subject matter is organised from a simple concept (e.g. definition) to more complicated subject matter. The starting point is the most elementary aspect of a theme, which is followed by the addition of more complex aspects of that theme. This type of classification can be used in Economics teaching when discussing the causes of unemployment, i.e. the elementary aspects of what causes unemployment, moving towards the solutions to be sought to the problem.

- **Concentric classification**

According to concentric classification, a common starting point serves as the point of departure for the breadth and depth of the learning outcomes and assessment standards. According to the assessment standards, the subject matter is classified in such a way that the essence of the subject matter remains the same, but the depth and scope thereof increases over time (e.g. the three-year phase of Economics teaching in the FET phase). This type of organisation can be used in Economics teaching in cases where the macro economy is being studied. In the NCS for grade 10, learning outcome 1 and assessment standards, macro economics is applicable to the economic problem being addressed. In grade 12, the macro economy is also studied, but in terms of economic flow and business cycles.

- **Symbiotic classification**

The symbiotic classification of subject matter indicates that the learner, as far as possible, must make contact with reality. The learner must therefore make meaningful contact with and experience the world in which he/she lives. This type of organisation can be used in Economics teaching where macro economics and especially budgets are being studied. Learners can listen to the budget speech, read relevant literature, and relate the new and previous budgets to each other.

3.8 TEACHING METHODS AS DIDACTIC COMPONENT OF THE TEACHING OF ECONOMICS

The method(s) used by teachers to introduce and explain subject matter can be seen as communication methods. These methods (educational actions) must then, according to Van der Merwe (1986:56), form a bridge between the teaching outcomes desired by the teacher and the eventual achievement of outcomes by the learner.

An OBE approach to teaching and learning has various implications regarding the teaching methods. Specific outcomes will vary, but will still be guided by the critical outcomes. According to Gultig (1998:22) it means that teaching and learning will be directed at the mastery of skills rather than the memorisation of facts. Consequently the teaching methods will have to adapt to the specific outcomes to be achieved. "The ability to solve problems, communicate effectively, work in groups, etc. cannot be developed except by practising those activities, and constantly refining performances in response to assessment of progress – teacher, self and peer."

The above supposes, *inter alia*, the following (Gultig, 1998:22):

- Emphasis of activity-based learning, with sufficient opportunities for learners to investigate ideas and approaches to learning and to exercise skills;
- Cooperative as well as individual learning opportunities so that learners can master the skills of group work and individual self-activity and can also determine when each method will be most effective;
- Emphasis of formative assessment so that both the process and the developmental nature of learning, as well as the learning product, can be seen as important;
- Establishment of tasks that integrate theory and practice so that classroom learning can be linked to the broader community in which the learner finds himself/herself.

The National Department of Education (NDE, 1997b:10-12) sums up the approach to teaching as follows:

- The approach to teaching and learning must suit the outcomes and the learners.

- The approach to teaching and learning must take into account the learning styles of individual learners.
- A practical and manageable approach to teaching and learning must be used.
- Various approaches to teaching and learning must be used in order to pique the interest of learners.
- The selected approach to teaching and learning must be clearly communicated to learners.

Du Plooy (1998:15) points out that teachers, even within a reasonably prescriptive OBE curriculum, can apply a variety of innovative and creative teaching methods that can lead to the achievement of certain outcomes. The allegation that everything done by teachers in the past is wrong, is debatable. One of the fundamental aspects of OBE is that the specific context dictates the most suitable teaching and learning practices and that the teacher is in the best position to decide what these practices must be (also compare Brodie, 1997). OBE thus gives form to what good teachers are already doing. It must be emphasised that effective teaching is already taking place in many instances. Instead of effective teaching being changed, it should rather be emphasised and highlighted (Du Plooy, 1998:15). Van der Vyver (1998:22) elaborates on this and states that the goal of OBE is "making what happens in classrooms more transparent, more focused". From the above it appears that the teacher who in the traditional teaching system already emphasised the critical outcomes propagated by OBE will have to make few adjustments. However, the teacher who in his/her teaching focused exclusively on the memorisation of information will have to make radical adjustments in order to adapt to the new teaching paradigm.

Subsequently, certain didactic principles are explained that gradually build up to a schematisation in which the place of each of the specified concepts in the teaching-learning events is identified.

3.8.1 Place of teaching strategies in the teaching-learning situation

Marais (1992:38) differentiates between teaching strategies and teaching techniques. Teaching strategies can be defined as a didactic model that describes the extent of the relationship between indicative (ostensible) and self-detecting (heuristic) didactic actions as a unit action. Indicative teaching actions are those where the teacher presents the subject matter in a recitative or demonstrative manner. In contrast, dominant heuristic action supposes that all lesson participation by learners is through self-activity in the execution of certain tasks. Numerous combinations of the heurostentics occur on a continuum between these two extreme poles.

Decisions on the degree of balance between indicative teaching and learners' self-activity determine a typical teaching strategy. Inductive teaching actions and deductive teaching actions also occur within the framework of the heurostentics. A teaching strategy must thus be seen as the logical point of departure of a lesson. Marais (1992:42) points out that the first and foremost plan of action of any lesson takes place mainly within the framework of the heurostentics. It is therefore necessary for the teacher to also consider the learner's share in a particular lesson or series of lessons.

3.8.2 Place of didactical methods in the teaching-learning situation of Economics

From strategic lesson planning, several didactic methods occur as finer nuances. More specifically, this involves educational actions. Class discussions and teaching-learning discussions can emerge as examples from this discussion of archetypical methods. The choice of a particular method is directly related to the specified outcomes, i.e. that which must be learned. According to Fraser and Niemann (1996:186) different learning styles require different teaching methods. The selected teaching method must therefore ensure that the outcomes can be

achieved as quickly and effectively as possible. For example, in order to pursue the critical outcome of effective communication, methods will have to be used that can put the learner in a position where communication skills can be developed and practised as often as possible.

3.8.3 Place of didactic techniques and skills in the teaching-learning situation

The application of subject-directed didactic techniques and the practising of subject-typical skills can be seen as the specialisation of teaching methods. Subject-didactic specialisation of general didactic and educational knowledge and techniques is the breeding-ground from which every teacher develops a personal teaching style and didactic flexibility in his/her presentation of lessons. All didactic procedures (strategies, methods and techniques) that crystallise into a personal teaching style should be directed at the achievement of predetermined outcomes. Seen from an OBE approach, Snow (1994:2761) states that "there is substantial evidence that less able learners do better when instruction is tightly structured, lessons are broken down into a sequence of simplified units, and teachers or instructional conditions exercise control over minute-to-minute activities and provide frequent feedback".

Various techniques can be taught to help the learner master particular subject matter. Such techniques are, however, highly dependent on the competency level of the teacher. The teaching technique is therefore determined by a wide variety of internal as well as external factors. Internal factors are inherent to the teacher, the learner, and the physical environment. Here we refer to factors such as personality, didactic skills and insight, and the motivation and creativity of both the teacher and the learner. The Economics teacher can apply cooperative learning techniques such as role-play, simulations and case studies with immense success.

3.8.4 Educational media and educational aids

Subject matter can be unlocked for the child in no other way than through media (communication). As teachers must make use of some or other form of educational media in the unlocking of subject matter, the most suitable medium for the given teaching-learning situation must be selected (Briel, 1983:25).

Subjects differ from one another, also in terms of subject context in respect of the nature and complexity of the subject matter (Marais, 1992:30). The fact that the nature of the subject matter of subjects differs (especially with regard to the concretisation thereof) is the only explanation for why some subjects are better suited to a wider or different variety of educational media. In this regard we refer to subject-typical educational media – meaning that each subject is suited to a number of specific educational media that will adapt best to the particular nature of the subject matter in question. The function of the subject matter, and thus also the medium, is to help the learner develop the basic insights. However, as soon as the basic insights become founding principles, the function of the subject matter and educational media changes to the application of insights. The first task of the teacher when planning the lesson design is to reduce subject matter to the bare essentials (Van der Stoep & Louw, 1987:145,147). During the reduction of subject matter, teachers must keep in mind the educational media that could possibly be used to optimally and unambiguously present the planned subject matter to the learner (Maree & De Lange, 1979:35).

The subject matter (assessment standards) directly determines the way in which such subject matter is to be unlocked. Educational media must therefore be carefully selected so as to constitute a meaningful and integrated part of the whole lesson (Marais, Calitz & Van Wyk, 1983:30). According to Russell and Molenda (1994:3745) the main purpose of educational media is the facilitation of learning. The educational media must be able to support the subject matter and

at the same time present the necessary stimuli needed for learning. Educational media must thus be able to encourage learners to perform the required learning activity. Since a single educational medium is in many cases unable to transmit all the required stimuli, more than one educational medium must be used – the so-called multimedia approach. This multimedia approach is used where a single medium is unable to meet all the demands of a particular teaching-learning situation (Romiszowski, 1988:60).

There is a strong relationship between the teaching methods used by a teacher and the way in which the teacher interacts (with learners) during the teaching-learning situation.

3.9 ASSESSMENT AS COMPONENT OF THE TEACHING PROCESS OF ECONOMICS

The assessment of learners, as well as the writing of tests and examinations, are probably among the most common and everyday tasks of the instruments using by Economics teachers. Marais (1988:98) is of the opinion that assessment is important in teaching and learning activities. Assessment is the most difficult and complex of the teacher's professional responsibilities (Van der Stoep & Louw, 1987:228). Assessment is one of the most important components during the teaching and learning situation (Fraser, Loubser & Van Rooy, 1996:171; Keeves, 1994:362). Keeves (1994:363) believes that the method of assessment used in a particular teaching-learning situation is influenced by: (1) the purpose of the assessment; (2) the focus of the assessment; and (3) the reporting of the assessment.

In light of the above discussion, the different aspects of the assessment, which have implications for the assessment of Economics, are investigated. Firstly, the purpose, methods and requirements of assessment are discussed. Secondly, the assessment techniques applied during the assessment of learning activities

for Economics are explained. Finally continuous assessment, with specific reference to portfolios as measuring instrument for Economics during assessment, is highlighted.

3.9.1 Purpose and value of assessment

The purpose of assessment is decision-making and the formation, monitoring and provision of information (Clarke, 1996:328; Kotze, 1999:32). Geyser (1997b:328) stipulates the value of assessment as follows:

- Providing the learner with personal details of the learner;
- Providing the teacher with personal details of the learner;
- Motivating the learner;
- Drawing up a progress report on the learner;
- Determining the learner's knowledge, skills and values in the subject;
- Providing information on the learner's readiness for new learning experiences.

Lane and Glaser (1995:279) and Van der Stoep and Louw (1987:237) allege that the final result of the learner's achievement gives an indication of the learner's knowledge, attitude, skills and aptitude. Each learner's achievement gives an indication of the progress profile, promotion to the next grade, motivation to perform, choice of study direction, personality profile, research data, status of the teaching-learning situation, suitability of the curriculum, and effectiveness of the teaching method.

For the Economics teacher, assessment is part of teaching and forms an integral part of the teaching-learning situation (Kotze, 1999:31; Piek, 1984:94; Steyn, 1985:21) and can lead to improved learning results (Lombard, 1991:219; Piek, 1984:94).

In conclusion, it can be stated that the purpose and value of assessment for Economics lies in determining the status of the effectiveness of teaching. In the same vein, the National Department of Education (NDE, 1999:13) states that: "having the outcomes clearly in mind will help the educator to decide on what method of assessment would be best in that situation".

3.9.2 Assessment methods

The Economics teacher can make use of different assessment methods during the teaching of Economics. According to Keeves (1994:365-370) and Van Rooyen and Prinsloo (2003:91) the Economics teacher can make use of the diagnostic assessment, mastery assessment, criterion-directed assessment, minimum-performance assessment, domain-directed assessment, norm-directed assessment, standardised tests, performance-directed assessment and continuous assessment.

Apart from the above-mentioned measuring techniques, Van Rooyen and Prinsloo (2003:91) also suggested written work, artcles of relevant topics, work maps on any economic topics under class discussion and making and presentation of economic issues on cassettes and DVD's.

The above assessment methods and tools can be sued by the Economics teacher will great effect during lesson planning and presentation of lessons. These methods will promote the knowledge, skills and attitude towards understanding the purpose of assessment.

3.9.3 Demands to be met by assessment

The demands to be met by assessment are subsequently briefly discussed. The purpose is not a detailed discussion of every demand. Validity means a tests of assignment given should measure what it is supposed to measure. For example,

if the Economic teacher's intention is to measure the economic data ability of a Grade 10 learner whose first language is not English, then statistical data problems should, as far as possible,be excluded from the test. Objectivity is when learners read a question, they may assume that a variety of answers is possible. To reduce the subjective element in assessment,one has to frame questions very carefully and clearly in an effort to avoid ambiguity or misinterpretation. Reliability refers to the extend to which the same test produces the same results, if it is administered to the same group of learners under similar conditions. Discrimination in a test or assignment is that it should be able to distinguish or discriminate sufficiently between able and less able learners (see Dalziel, 1998:352-353; McMillan, 2000:61-67; Priestly, 1998:59-61; Steyn, 1985:110-112; Van der Stoep & Louw, 1987:240-242; Van Rooyen & Prinsloo, 2003:34-36).

3.9.4 Summative and formative assessment

According to Kotze (1999:32) and Van Rooyen and Prinsloo (2003:41,90) summative assessment is the traditional and most well-known form of assessment. Summative assessment takes place at the end of the year or upon completion of a learning programme. According to Scriven (1994:2098) summative assessment "measures what students ultimately achieve on completion of a course or a programme of studies". Mackrory (1999:17) sees summative assessment as "...a summary of the learner and it is an indication of past learning experiences".

According to McMillan (2000:106) and Scriven (1994:2098) formative assessment takes place during learner development or performance improvement. The purpose of formative assessment is to focus the learner's attention on that outcome that has not yet been mastered. Mackrory (1999:17) points out that formative assessment "is forward looking and allows teachers to form the learner to plan future learning experiences".

Kotze (1999:32) points out that formative assessment is seen as a challenging concept in education, "especially as a means of achieving the high aspirations of OBE". Economics teachers will definitely have to thoroughly master this component of assessment so that different assessment techniques can be thoroughly planned. The reason for this is that Economics teachers must give feedback to learners so that, if possible, remediation can take place and the learner can be given guidelines for mastering the learning outcomes.

3.9.5 Measuring techniques during assessment

According to Steyn (1985:102) measurement in the teaching-learning situation involves the application of a measuring instrument to gather information in connection with leaner performance and to then express it normatively, symbolically or quantitatively. During assessment, the Economics teacher can apply different types of assessment techniques – namely subjective and objective measuring techniques – to determine whether the specific learning outcomes have been achieved.

Subjective measuring techniques measure the learner's self-formulated answers to problem statements that require a learner to read the question, think, select suitable subject matter, and convey it verbally and/or in writing (McMillan, 2000:240-243). According to Marais and Vlok (1981:275) the following subjective measuring techniques are most commonly used:

- Traditional written tests and examinations
- Oral examinations
- Simulation testing
- Practical examinations
- Open-book examinations
- Self-assessment

Van Rooyen and Prinsloo (2003:91) also suggest the following techniques for the measuring of learner performance:

- Project work
- Panel discussions
- Presentations and demonstrations
- Constructions and designs
- Role-play
- Posters
- Debates
- Graphics and illustrations

In terms of the objective measuring technique, the learner must give a highly structured and predetermined answer in the form of a word, phrase, short sentence, figure or symbol (McMillan, 2000:243). Objective measuring techniques are typical questions where the answers will earn the same marks from all markers. Objective measuring techniques consist of the following types of items:

- Supply-type items like short-answer items;
- Choice-type items like pairing-off, true-or-false, and multiple-choice items (compare Krugell, 1992:52; Marais & Vlok, 1981:277).

It is then the Economics teacher's job to select those types of questions that will lead to the most effective measurement of specified outcomes.

3.9.6 Conclusion

The assessment of learners is one of those tasks that the Economics teacher will always have to perform. The method used by the Economics teacher to

determine the learning outcomes of learners will be determined by the eventual learning outcomes that are desired in the NCS for the FET phase for Economics. The different assessment methods discussed can be effectively applied in the FET phase.

The assessment of learner progress in Economics teaching requires more than a type of pen-and-paper testing. Economics is a thought process and it is therefore important to go further than simple objective measuring instruments. Assessment instruments should:

- Focus on specific outcomes;
- Promote teaching and learning;
- Promote substance, skills and comprehension; and
- Render fair, valid, reliable and objective outcomes.

If the above can be achieved and the eventual aim of assessment achieved, teaching and learning in Economics can be improved. In next papragraph continuous assessment as an assessment instrument for economics are discussed (cf.2.8.7)

3.10 CONTINUOUS ASSESSMENT AS AN ASSESSMENT INSTRUMENT FOR ECONOMICS

3.10.1 Definition of continuous assessment

Kotze (1999:32) is of the opinion that continuous assessment is an assessment practice with a cumulative character. The learner is constantly assessed in respect of different aspects of the work covered – that is, regular, systematic assessment of different consecutive learning occasions. According to Van Rooyen and Prinsloo (2003:93) continuous assessment is "an approach that makes teaching, learning and assessment part of the same process". The purpose of continuous assessment is to be an effective, purposeful and fair

assessment strategy to bring to the fore different evidence of the learners' learning at different times to be assessed.

3.10.2 Continuous assessment strategies

Le Grange and Reddy (2000:19-24) point out that there is a variety of different assessment strategies that the teacher can use. These continuous assessment strategies include journals, diaries, projects, portfolios, practical work, exhibitions, demonstrations, assignments, reports, discussions, debates and interviews.

The Economics teacher can utilise the following with great success:

- Portfolios as assessment strategies, especially in Economics;
- Projects utilising jigsaw groups, student teams-achievement divisions or teams-groups-tournaments; and
- Role-play and simulations applied to reality.

3.10.3 Advantages and disadvantages of continuous assessment

According to Le Grange and Reddy (2000:34) and Mackrory (1999:17) continuous assessment (CASS) has the following advantages:

- It provides the Economics teacher with information on the quality of the learners;
- It provides the learner with performance levels;
- Assessment takes place over the long term;
- A larger portion of the learning plan is covered;
- It motivates learners to work throughout the year;
- A variety of methods can be used; and
- Skills and concepts, particularly in Economics, can be assessed.

According to Le Grange and Reddy (2000:34) there are also some disadvantages to using continuous assessment (CASS):

- There is a possibility of an increase in workload for both the Economics teacher and the learners;
- Teachers could experience stress in the implementation of CASS;
- Projects could possibly be completed by experts, which means that the learners might not have the opportunity to master the project;
- CASS can be difficult to implement in large classes; and
- Schools could follow different approaches in respect of CASS and this could have an impact on the transfer of teachers to other schools that do not apply CASS in the same way.

Below follows a brief description of portfolios as component of continuous assessment.

3.10.4 Portfolios as component of continuous assessment

In the following section, portfolios are defined, the purpose and design of portfolios is discussed, and the advantages and disadvantages of portfolios are explained.

3.10.4.1 Definition of a portfolio

A portfolio is an instrument for the documentation, analysis and summarisation of the learner's progress throughout the year (Meisels, 1993:38; Shasha, 2004:51). Arter and Spandel (1992:36) summarise the important properties of a portfolio in their definition and describe a portfolio as "...a purposeful collection of student work that tells the story of the student's efforts, progress or achievement in given areas. This collection must include student participation in selection of portfolio content, the guidelines for selection, criteria for judging merit, and evidence of student self-reflection."

3.10.4.2 Purpose and design of a portfolio

Jacobs *et al.* (2004:303) and Spady and Schlebusch (1999:113) state that the purpose of a portfolio is to indicate the learner's progress in respect of outcome achievement. According to McMillan (2000:231-232) the purpose of portfolio design is a purposeful, standardised, well-organised and structured selection of proof of a learner's work, specific mark-allocation criteria, selection and reflection of performance, and outcomes achieved.

Arter and Spandel (1992:42) and McMillan (2000:233-254) identify the following objectives of portfolios:

- To give an indication of learners' development and change over a period of time;
- To express the work process, the course of the project, and the final product;
- To document proof of performance;
- To demonstrate the learner's knowledge and skills in specific areas;
- To illustrate the learner's skills with regard to problem-solving during project development; and
- To assess the learner.

McMillan (2000:236) provides guidelines for the successful planning of portfolios, namely the purpose of the planning of portfolios, the identification of the design aspects of the portfolio, the identification of the inherent components of the portfolio, and guidelines for the awarding of marks, for symbolic measurement and for assessment values. McMillan (2000:240-242) suggests certain aspects during the implementation of the portfolio, namely the outcomes and the introduction of criteria for the assessment of portfolios; the teacher providing the learners with guidelines on what subject matter must be included in the portfolio; the learner having to self-assess the portfolio once he/she is familiar with the criteria; the teacher also assessing the portfolio by means of a checklist; teacher-

parent conferences to discuss the learner's portfolio; and finally feedback to the learner in respect of the portfolio.

According to Jacobs *et al.* (2004:304-305) and Le Grange and Reddy (2000:23) a portfolio is a file or container consisting of a variety of a learner's assessment documents. It may include the following aspects: written assignments, improvements to documents, sketches on learning experiences, photographs of projects, graphic descriptions, work maps, models, and personal comments on reports by teachers and parents.

3.10.4.3 Advantages and disadvantages of portfolios

McMillan (2000:232-234) identifies the following advantages and disadvantages of using portfolios:

Table 3.3 Advantages and disadvantages of a portfolio

Advantages	Disadvantages
• Promotes learner self-assessment. • Promotes cooperation in assessment. • Is a continuous and systematic process. • Focus is on improvement and not comparison. • Focus is on learner's strong points, i.e. which skills the learner can demonstrate. • Assessment process is individualised. • There is recognition of any unique skills demonstrated. • Promotes performance-directed teaching. • Provides concrete examples of learner performance. • Promotes adaptability and flexibility during assessment.	• Recording of marks may lead to low reliability. • Teacher training is necessary and time consuming. • Drawing up criteria and allocating marks to assess the learner is time consuming. • Learners sometimes do not include their best assignments or selection of assignments in portfolios. • Random drawing or sampling of documents can lead to generalisation. • Parents may find it difficult to understand and judge portfolios.

(Adapted from McMillan, 2000:233)

3.10.5 Conclusion

The assessment of learners is one of the professional teaching tasks that the Economics teacher will always have to perform. In the final part of this section, continuous assessment as a measuring instrument, with specific reference to portfolios for Economics, was discussed. Economics teachers will have to implement continuous assessment as a measuring instrument for the measurement of learner performance, as well as for promotion purposes, since this is a prerequisite set by the National Department of Education (NDE, 2003b:12). One of the aspects that Economics teachers will have to deal with often in the assessment of learners is the learner portfolio. Learner portfolios are part of the current continuous assessment process in the NCS curriculum for the FET phase.

3.11 CONCLUSION

This chapter served to analyse the nature and learning field of Economics, the economic reality, and the principles according to which man functions within the economic reality as part of the total reality. This chapter also briefly explained the nature and learning field of Economics as a science. Secondly, Economics as a school subject within the framework of the NCS policy documents was discussed. Thirdly, the teaching principles applicable to Economics were discussed. Finally, continuous assessment – with specific reference to Economics – was discussed.

The responsibility for ensuring the success of Economics in the NCS for the FET phase rests on the shoulders of every experienced and dedicated Economics teacher. If the learner is seen as the focus point of the teaching profession, and seen in light of the fact that the learner (as client) is purchasing a service, the NCS for the FET phase challenges every Economics teacher to make a real difference and to make a success of the process.

In chapter 4, cooperative learning is discussed as a teaching strategy. Viewpoints on cooperative learning, important cooperative learning models, as well as group compositions are discussed. Moreover, perspectives on the development of cooperative learning, the rationale thereof, as well as the advantages and disadvantages, are explained.

CHAPTER 4

COOPERATIVE LEARNING AS A TEACHING STRATEGY

4.1 INTRODUCTION

The promotion of the total population's education and training is probably the most difficult and most important challenge facing the government over the past ten years of democracy. One of the most important characteristics of an outcomes-based education (OBE) curriculum model is the capacity for transformation and renewal.

The promotion of an effective teaching and learning situation within the classroom necessitates a new teaching method or strategy. Teaching procedures and conditions within the classroom are consistently being closely scrutinised.

Various research studies in respect of group dynamics within the classroom as well as amongst individual learners are still being conducted (Sharan,1990:291-292;Johnson and Johnson,1991:169-178 & Slavin, 1990:127). Although various new tendencies and directions in the teaching and learning process are still being researched, some teachers are still struggling to successfully manage group work during lesson presentation. Research studies of Sharan (1990:291-292); Johnson and Johnson (1991:169-178) and Slavin (1990:127) showed that the cooperative learning approach is an effective teaching strategy to accommodate learners from diverse backgrounds, also with regard to academic, social, affective and cognitive benefits.

Cooperative learning offers teachers and learners several different opportunities and challenges when it comes to focusing on maximum learning participation in

the teaching and learning process within the classroom situation. Cooperative learning as teaching strategy encourages teachers to be more proactive for effective teaching and learning in the classroom (Johnson and Johnson, 1991:169-170). The researcher contention is that cooperative learning as a teaching strategy for Economics can promote maximum learning participation and improve the performance of learners.

Apart from the necessity of people working together cooperatively to achieve a group aim, Manning and Lucking (1991:120) point out that this phenomenon showed an unprecedented increase during the 1990s.

The critical outcomes require learners to cooperate effectively with other members of a team, group, organisation and community according to the NCS policy document, namely the principle of cooperative learning (NDE, 2003c:2). The implementation of cooperative learning as a teaching strategy promotes learning participation and group work.

Cooperative learning appears to be important not only for schools, but also for society. According to Dhand (1991:78) the act of learning in the classroom becomes important, and here cooperative learning as a teaching strategy, which emphasises the above-mentioned aspects in a holistic approach, can have a major impact.

The current interest in cooperative learning arises especially from two forces, namely:

- Recognising and accepting that traditional learning environments focusing on competition encourage learners to compete rather than learn; and
- Recognising that cooperative learning, when implemented correctly and properly, has the potential to contribute positively towards the academic performance, social skills and self-esteem of the learner.

Since, in the researcher's opinion, cooperative learning models have the potential to stimulate the development of cognitive skills on the one hand, and the social interaction necessary for cognitive growth and effective learning on the other, the cooperative learning approach is now discussed in depth in the subsequent sections.

This chapter discusses the historical development of cooperative learning, as well as viewpoints on cooperative learning, important cooperative learning models, cooperative learning strategies, and group compositions. Furthermore, the perspective on the development of cooperative learning, the rationale thereof, as well as the advantages and disadvantages are discussed.

4.2 DEFINITION OF COOPERATIVE LEARNING

Cooperative learning is a teaching method whereby learners work together so that the group members can gain a joint benefit from the group activity. Johnson and Johnson (1992:218) point out that, "Without the cooperation among individuals, no group, no family, no organization and no school would be able to exist". The concept of cooperative learning refers to "...classroom techniques in which students work on learning activities in small groups and receive rewards or recognition on their group's performance" (Slavin, 1980:315). With cooperative learning, the group members organise their problem assignments and project structuring so that the group members can work together to set goals and achieve outcomes to the benefit of the group. Cooperative learning, according to Van der Horst and McDonald (1997:128), is not the consequence of any single stream of educational thought. The original thereof goes back as far as the ancient Greek philosophers.

Johnson and Johnson (1984:88-89) define cooperative learning as "a relationship in a group of students that requires positive interdependence (a sense of we sink or swim), individual accountability (each of us has to contribute and learn),

interpersonal skills (communication, trust. leadership, decision-making and conflict resolution), and face-to-face promotive interaction and processing (reflecting on how well the team is functioning and how to function even better).

4.3 HISTORICAL DEVELOPMENT OF COOPERATIVE LEARNING

Cooperative learning rests on the philosophy of John Dewey (1961) and his belief that democracy in schools must be promoted in order to develop good citizenship amongst children. Slavin (1987a:74-76) started researching the specific application of cooperative learning in the classroom as early as 1970.

The contemporary cooperative learning movement dates back to the early 1900s. Kurt Koffka, a gestalt psychologist, alleged that groups are dynamic units in which the interdependency of members can vary. One of his colleagues, Kurt Lewin, refined this idea by defining interdependency in more detail. One of Lewin's top pupils, Martin Deutsch, in turn developed this idea further when, in the late 1940s, he formulated his theory on cooperation and competition. Further research in the 1950 focused on the effect of goal structures on group coherence.

In the 1960s social reform focused particularly on emphasising selflessness, empathy, identification and other pro-social motives and behaviours.

The 1970s in turn were characterised by the establishment of interpersonal relationships amongst diverse ethnic groups.

In the 1980s cooperative learning was characterised especially by research focusing on the models of Robert Slavin (1983) and David and Roger Johnson (1987). David Johnson and Martin Deutsch conducted research into the theory and practice of cooperation by means of cooperative learning. David Johnson formulated the five components of cooperative learning.

In the 1990s David and Robert Johnson applied their research in the classroom with cooperative learning as a teaching strategy in order to articulate the goals fundamental to the improvement of performance and the development of social skills for group work, as well as the establishment of cooperative classroom communities. In his research, Robert Johnson focused particularly on the effect of cooperative learning in improving academic performance.

Organising groups to work together is not a new practice in education. The use of group work projects is a common occurrence globally. Research also points to the effective and efficient use of group work in the USA (Aronson, Blaney, Stephan, Sikes & Snapp, 1978), England (Smith, 2000), Canada (Ziegler, 1981), Australia, West Germany and Nigeria (Okebukola, 1985).

4.4 THE NATURE OF COOPERATIVE LEARNING

Gathering learners together in a group is no guarantee that they will work together.

According to Johnson *et al.* (1994:32) cooperative learning involves much more than regular group work: "...cooperation is much more than physically associating with other students, discussing material with them, helping them, or sharing knowledge with them".

These elements are all important for cooperative learning, but Johnson *et al.* (1994:32) identify four basic elements that must be present before small groups can truly function cooperatively:

4.4.1 Positive interdependency

In a cooperative learning situation, learners must accept that they are positively interdependent on one another for the learning process. This relationship can

only be created if the group members have common goals, the work is distributed amongst the members, information is shared amongst group members, and the group is rewarded jointly. Group reward is also identified by Slavin (1987b:32) as an important component of cooperative learning. Smith (1987:644) summarises the issue of interdependency as follows: "For true cooperation to take place, students must realize that they will sink or swim together". Apart from interdependency amongst group members, a cooperative learning group also implies that group members influence one another (Johnson *et al.*, 1994:16): "...there tends to be considerable peer regulation, feedback, support and encouragement of learning". Acceptance by the peer group is of cardinal importance, and cooperative learning conditions almost "force" learners to accept one another, since they are dependent on one another.

4.4.2 Group interaction

Johnson and Johnson (1986:31) identify three ways in which the interaction process amongst learners can take place. Learners compete with one another to determine who is the best (competitive goal structure), or they work on their own to achieve a goal (individualistic goal structure), or they work together to achieve a common goal (cooperative goal structure), after which the group as a whole is rewarded. Face-to-face communication or interaction plays an important role in the process of cooperative learning. According to Slavin (1987b:31) peer group interaction is an important element of the cooperative learning process.

Johnson *et al.* (1994:15) allege that the interaction process during the cooperative learning process also promotes the discovery and development of higher quality strategies.

4.4.3 Individual learning performance

The purpose of any learning activity is to pursue maximum individual learning performance. Feedback mechanisms are necessary to determine each learner's

mastery level, if learners are expected to support and help one another. According to Slavin (1987b:32) the individual responsibility of each group member contributes to the eventual success of the group. Individual responsibility is seen as an essential prerequisite for effective cooperative learning. Smith (1987:663) assigns responsibility for the learning process in cooperative learning where it belongs – namely to the learner.

4.4.4 Interpersonal and small-group skills

The teacher cannot expect learners to work together effectively as a group if they do not possess the necessary social skills. The fact that the teacher purposefully structures a cooperative learning situation is no guarantee that the cooperative learning process will take place effectively. Taylor (1991) believes that high-level cooperation amongst learners is necessary so that the learners can work together to plan the interaction process and decide how projects will be assigned to each group member. According to Smith (2000) group formation is not a once-off occurrence, but rather a continual process that encompasses a number of separate and consecutive phases. These levels in the group development process are known as "forming, storming, norming and performing" (Borich, 1996:463-470).

4.5 COOPERATIVE LEARNING OUTCOMES

The outcomes of cooperative learning as a teaching strategy can be summarised as follows (Adams *et al.*, 1990:12-16; Barnett, 1991; Bartlett, 1995:139; Christison, 1990:9; Johnson *et al.*, 1994; Kohn, 1987:54; Manera & Glockhamer, 1989:53-56; McKeachie, 1994:145-147):

- An outcome is a visible result such as the development of knowledge, social skills and values/attitudes achieved by the learner;
- Cooperative learning is a strategy applied to get learners to participate in the process of achieving specific outcomes;

- Learners are assigned to small groups to adopt specific roles in the effort to achieve the group's aim;
- Learners achieve outcomes by means of direct interaction and cooperation with group members in order to achieve specific outcomes; and
- The results of learner involvement in cooperative learning as a teaching strategy have been successful (Manera & Glockhamer, 1989:56).

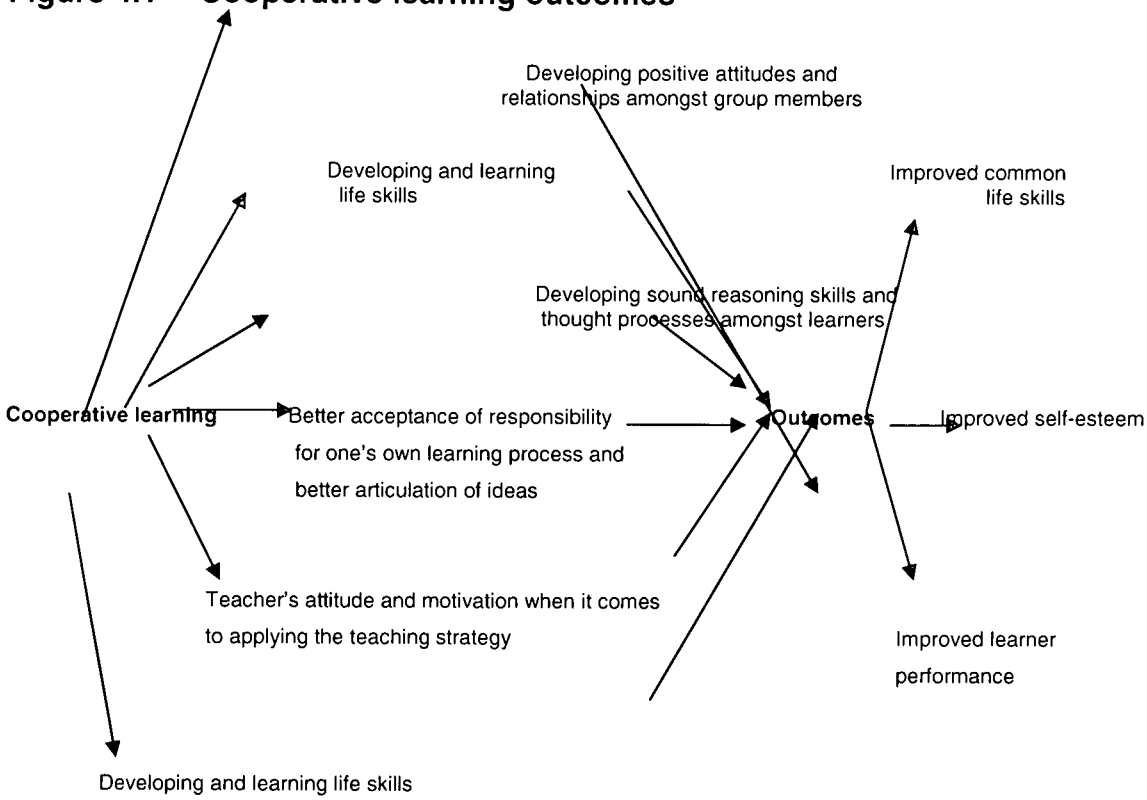
Barnett (1991) and Christison (1990:9) are of the opinion that learners can benefit from the achievement of good results due to the implementation of cooperative learning for both learner and teacher.

The following outcomes of cooperative learning are discussed in more detail for purposes of clarity (see figure 4.1 in connection with the outcomes of the cooperative learning model):

- Improving learners' performance;
- The teacher's attitude and motivation when it comes to applying the teaching strategy;
- Developing positive attitudes and relationships amongst group members;
- Developing and learning life skills;
- Developing sound reasoning skills and thought processes amongst learners; and
- Better acceptance of responsibility for one's own learning process and better articulation of ideas.

Borich (1996:425) offers the following schematic diagram of outcomes of cooperative learning:

Figure 4.1 Cooperative learning outcomes



A discussion of the above cooperative learning outcomes follows.

4.5.1 Improving learners' performance

Christison (1990:9) researched the effect of the implementation of a cooperative learning programme on students' performance in a particular training centre. Christison's research revealed that the application of cooperative learning as a teaching strategy has a positive effect on learners' performance. Learners within the group are responsible for the interdependent success of the group in question. Learners are therefore compelled to assist and support group members to achieve the goals as set by the group. Group members work at a specific pace to achieve these goals, yet individual responsibility remains important. Johnson *et al.* (1994) agree that the outcomes of Christison's research have positive results for students: "...promotes higher achievement than does

competition". How can this outcomes be achieved, is where specific challenge are given to perform an assignment by the group. This means that each learners within the group are responsible for the interdependent success of the group in question to complete the task and achieve the outcome of the assignment. They must support each other in the process to achieve group goal and therefore enhance performance.

4.5.2 Attitude and motivation of the teacher when it comes to applying the teaching strategy

The implementation of cooperative learning also depends on a positive attitude towards such a teaching strategy within the classroom, otherwise it will not achieve the intended goal. A highly motivated teacher will definitely achieve success if such a teaching strategy is applied purposefully and with proper planning. According to Artzt and Newman (1990:448) and Davidson and O'Leary (1990:31) the role of the teacher is to act as facilitator and role model offering support and assistance to all group members. Teachers provide guidance and guidelines in order to promote cooperation and mutual interaction within every group.

4.5.3 Developing positive attitudes and relationships amongst group members

Cooperative learning as a teaching strategy promotes mutual respect and an understanding of learners' individuality. The NCS addresses aspects such as human rights, inclusiveness, and environmental and social justice, and in this way promotes human rights as determined by the Constitution of the Republic of South Africa, Act 108 of 1996 (NDE, 2003b:4).

For purposes of this study, self-esteem for the learner means that he/she must have high expectations of himself/herself, because participative role-playing is

involved in cooperative learning. Various research studies (Christison, 1990:8; Johnson *et al.*, 1994:53; Nattiv, Winitzky & Drickey, 1991:217) have proven that the application of cooperative learning in the classroom promotes and improves the self-esteem of learners: "... assumes that students in cooperative groups will feel more liked by their classmates because of the increased opportunities to interact". Johnson *et al.* (1994:53) are of the opinion that learners who are active participants in cooperative learning receive more social support from the group within a group context. Moreover, group members experience more positive self-esteem based on self-acceptance by the other group members. Positive self-esteem leads to learners feeling better about themselves "from being liked, accepted and connected" (Kohn, 1987:54). In this way, learners become important sources of information for the group in question. Positive relationships and attitudes are cultivated amongst the members of the group.

4.5.4 Developing and learning life skills

According to Van der Horst and McDonald (1997:129) it is the teacher's job and responsibility to teach, develop and empower learners in life skills as a prerequisite for a cooperative learning situation. Life skills, according to Hanekom and Nel (1991:132-234) and Taylor (1991:246), include the following:

- Communication skills such as language enrichment and reporting;
- Creating and maintaining a climate of trust within the group;
- Settling differences amongst one another and making a constructive contribution to the group; and
- Developing research skills.

Taylor (1991:245-246) is of the opinion that a cooperative learning strategy is not merely a situation where learners sit physically close to one another, discuss an assignment or assist other learners, but rather that it must involve mutual one-on-one cooperation and support. Learners must develop skills as determined by the NCS's critical and developmental outcomes. Interaction amongst learners

means that they work together to plan, think and make decisions in respect of the execution of their project.

4.5.5 Developing sound reasoning skills and thought processes amongst learners

The teacher must guide all learners in a democratic and responsible way to achieve their critical and developmental outcomes. Social, psychological and cognitive skills must be developed in terms of the NCS's objectives. The greater the learners' involvement in cooperative learning, the more higher-order reasoning techniques can be developed. Higher-order reasoning techniques give rise to involvement in deep and sophisticated debate and discussion amongst group members (Khumalo, 2001:35).

Manera and Glockhamer (1989:53) are of the opinion that "when students become active participants in cooperative learning group discussions, they develop higher reasoning strategies such as analysis, evaluation and application". Briefly, this means that when learners become involved in a spirit of cooperation and support within a small-group context, this leads to the mastery of complex subject matter. From this it can be deduced that when learners work together in a group context to perform cooperative learning activities, they are able to learn more easily, recall more easily what has been learned, and more objectively evaluate other group members during cooperative learning activities.

4.5.6 Accepting responsibility for one's own learning process

When learners become actively involved in cooperative learning activities, the assumption is that learners will be encouraged to accept responsibility for their own learning process. Group members accept responsibility for the actions and cooperation of their fellow group members – that is, each group member is assigned a different role. According to Bartlett (1995:139) and Christison

(1990:9) learners' involvement in active learning depends on the extent to which learners accept full responsibility for their learning process: "When students become responsible for their own learning, they do so because they share ideas during discussion sessions". Nattiv *et al.* (1991:217) argue that when a cooperative learning approach is applied in the classroom, "... students participate and assume greater responsibility for their own learning". Learners involved in cooperative learning activities accept greater responsibility for their own learning – in other words, the dependent learning process gradually develops into an independent and self-sufficient learning process.

Cooperative learning improves the learner's ability to express his/her ideas more clearly and to debate his/her points of view more freely within a group context. Learners can effectively and efficiently advance their viewpoints and ideas to the benefit of the small group. Learners can easily become involved in debates and better back up and express their ideas and arguments. The more learners become involved in debate and reasoning, the better their arguments and ability to formulate questions and ideas (Manera & Glockhamer, 1989:53).

In summation, the outcomes of cooperative learning can improved academic performance and improved social and interpersonal relationships whereby learners construct personal meaning from concepts and principles and apply comprehension to different aspects of their existence. Secondly, learners acquire knowledge, skills and values for lifelong learning in order to learn effectively and efficiently and to develop knowledge. Thirdly, learners are prepared for lifelong roles by means of motivation and practise. Fourthly, learners develop their life roles by promoting mutual leadership roles where respect and a sense of responsibility are nurtured. Fiftly ,learners are taught, by means of class development and team-building sessions, to develop relationships with one another. Lastly, learners are given more opportunities to develop their responsibility and capacity.

The cooperative learning outcomes mentioned above can be achieved if Economics teachers in particular are positive and sufficiently motivated to apply this teaching strategy in their classrooms. The achievement of these outcomes also depends on the vision and attitude that the teacher wishes to inculcate in his/her learners.

4.6 VIEWS ON COOPERATIVE LEARNING

The concept of cooperative learning is discussed in more detail by referring to relevant literature.

Johnson, Johnson and Smith (1998) are of the opinion that cooperative learning is the teaching-learning method for small groups by means of which cooperation amongst learners is facilitated with the aim of improving the learning experience.

Slavin (1994) is of the opinion that cooperative learning is a didactic strategy whereby small groups, each with learners displaying different abilities and a variety of learning activities, are used to improve the understanding of certain subjects, with each member of the group being responsible for personally learning what is being taught and also helping other group members to learn.

Sapon-Shevin and Schniedewind (1992:32) state that cooperative learning "...can foster educational excellence for all children regardless of class, race or gender, and can provide students and teachers with the experience and expectation of active participation in controlling and changing the spheres of their lives".

According to Reid (1989:229) cooperative learning can be seen as follows: "...cooperative learning arrangements appear to be as effective as teacher-led instruction because they replicate natural learning context, enhance self-efficacy, provide level-appropriate information processing models, provoke meaningful

construction, and address the specific needs of students with learning difficulties".

Goor and Schwenn (1993:12) define cooperative learning as follows: "...cooperative learning views students as active participants in their own learning and as future citizens who are learning to work together and share responsibilities".

Cooperative learning is a philosophical and practical approach to changing classroom and school organisation, classroom processes and learning activities in order to offer all learners more active learning experiences, equal opportunities, access, and a more social supportive role (Slavin, 1987b:29-35).

According to the description of cooperative learning given by Nastasi and Clements (1991:110), "...cooperative learning is a group learning process built on the belief that students learn better when they learn together".

Felder and Brent (2001) believe that teachers use cooperative learning as an instrument to involve learners in their own learning, and as a method of promoting social interaction skills amongst learners.

According to Haynes and Gebreyesus (1992:577) cooperative learning is "...a culturally sensitive pedagogical and social learning approach that benefits all students and black students in particular".

The researcher views cooperative learning as a teaching strategy whereby learners at all performance levels actively work together in small, structured groups to achieve common group outcomes under the conditions of positive interdependency, group responsibility and the advancement of learner performance. This furthermore implies that that the learner is actively involved not only in group-related learning, but also in the construction of personal

knowledge, skills and attitudes. The researcher sees cooperative learning as a teaching strategy for any subject that will have a major impact on research in the coming decade, particularly in South African schools. Cooperative learning addresses the critical outcomes of thought-process development and learner performance as being fundamental to the NCS and the principles of the OBE curriculum model.

Moreover, it is important to note that cooperative learning involves so much more than simply group work. In this regard, Schniedewind and Davidson (1987:30-31) refer to the following:

- Cooperative learning is not a once-off project, but rather involves various academic projects.
- Cooperative learning does not allow certain learners to do more and accept more responsibility than others. Work and tasks are divided equally amongst learners, and each group member is responsible for a specific part of the project.
- The distribution of tasks is structured in such a way that everyone in the group accepts responsibility.
- Every group member works according to the group goals in order to achieve these within group context.
- More thought and organisation is required in cooperative learning than in normal group work.

In order to truly understand the impact of the differences between the traditional learning approach and cooperative learning, it is important to study these differences in depth.

Oakley, Felder and Elhajj (2004) are of the opinion that cooperative learning can be viewed from a number of perspectives, namely:

- Cooperative learning can be seen as a teaching strategy.

- Cooperative learning can be used a technique to facilitate workshops and training sessions.
- Cooperative learning can also be used to orient people in respect of the vision and objectives of an organisation.

The differences between the traditional teaching-learning approach and cooperative learning are discussed in more detail in table 4.1 below.

Table 4.1 Differences between a traditional learning approach and a cooperative learning approach

TRADITIONAL	COOPERATIVE
o My personal goals are important.	Both common and personal goals are important.
o I work and learn alone.	I work and learn in group context.
o I work and live for my own benefit.	I work and live for my own and others' benefit.
o I find my own information and ideas.	Trust and sharing are important.
o I first consider my own needs.	I consider my own needs and those of others.
o I feel good when I achieve success and beat others.	I feel good when everyone achieves success together.
o Supporting myself is a positive value; others are unimportant until I need them.	Supporting myself and others, and helping myself and others, are positive values.
o I am responsible only for myself.	I am responsible for myself and other group members.

It is evident from the above differences that cooperative learning offers a different paradigm for teaching and learning, because learners discover and construct knowledge. Learners are given the opportunity to develop new talents and skills, and teaching-learning interactions amongst learners and between learners and teachers are optimised in this way.

This new paradigm is also a necessary and important teaching strategy that can be applied successfully by both experienced and novice teachers to develop

higher-order thought processes and to equip learners for the challenges of the classroom and society.

4.7 RATIONALE FOR THE IMPLEMENTATION OF COOPERATIVE LEARNING AS A TEACHING STRATEGY FOR ECONOMICS

Why cooperative learning as a teaching strategy for Economics? Although the researcher focuses on the impact of cooperative learning as a teaching strategy for Economics, and the rationale for this is clear from the research into cooperative learning, the rationale for the implementation of cooperative learning extends only to the improvement of academic performance and social interaction and the development of learners' skills. The concept of a cooperative learning strategy for the classroom poses a philosophical challenge to teachers in this country. One of the critical cross-cultural fields for the implementation of an OBE curriculum model by teachers in the classroom is firstly to encourage learners to work together effectively with other learners within a group, organisation and community. The rationale for the implementation of a cooperative learning strategy for the classroom in the subject of Economics is of critical importance for the OBE curriculum model and the NCS in South Africa. The implementation thereof aims to teach learners how to solve problems, organise themselves, work together in a group, gather and analyse knowledge, communicate effectively, and use technological and scientific research methods. Learners must be prepared for cultural diversity, as well as occupational and entrepreneurial opportunities for economic development.

Taylor (1991:244) emphasises the importance of cooperative learning by referring to its necessity in a technological era. Modern technology can contribute to people's sense of isolation and alienation, which in turn can lead to a socialisation crisis. Technology emphasises efficiency and a results orientation, i.e. higher profit margins for businesses. In the classroom, cooperative learning can compensate for these disadvantages of technology.

Millis (2001:1-3) provides that cooperative learning has an established research base not only in regular education, but especially in higher education. Secondly, cooperative learning is "...the most researched and empirically well-documented form of collaborative learning in terms of its positive impact on multiple outcome measures" and that cooperative learning gives researchers philosophical and specific opportunities to transform their teaching. Lastly, the principles of cooperative learning promote both the structuring and adaptability of teaching, for the continuation of and further research into cooperative learning.

Oakley *et al.* (2004) proved that there is bound to be a significant increase and rise in the adaptability of cooperative learning over the next decade, particularly in the education systems in underdeveloped countries. A faculty survey at the University of California revealed that the application of cooperative learning as a teaching strategy had increased tremendously since 1995 in the various departments of that university. The faculty survey in question revealed that the use of cooperative learning had risen by 9% between 1989 and 1995, with group projects showing a 7% increase in that time period (Millis, 2001:2). In South Africa, these types of teaching strategies have not yet come into their own by means of regular research projects, and there is tremendous potential for the application of cooperative learning as a teaching strategy in an educational setup at secondary as well as tertiary levels.

The following aspects are explained in more detail:

4.7.1 Classroom research

Research reveals the success and many advantages of cooperative learning in terms of academic performance, social interaction, improved attitudes towards school and learning, inter-group acceptance, better time management (Slavin, 1996) , as well as more effective learning of material and better retention (Nattiv

et al., 1991:218). Learners also accept more responsibility for their own learning. Several research findings in respect of the classroom situation also support the implementation of the cooperative learning approach as an effective teaching strategy. Khumalo (2001:22) points out that cooperative learning as a teaching strategy "demands recognition and credibility and as a result of the creation of centres of excellence which help workshop people to try and apply this strategy at classroom level."

4.7.2 Effective student-teacher practices

Higher education institutions and training institutes will definitely have to address their student-teacher training by providing future teachers with training in cooperative learning strategies during their years of study. They will have to be exposed to cooperative learning strategies such as jigsaw, student teams-achievement divisions (STAD), teams-games-tournaments (TGT), and group investigations.

4.7.3 Learners' styles of learning

Learners differ in their learning preferences, ranging from cooperation and competitions to individuals styles of learning. The current interim syllabus (grades 10-12) relies heavily on individual and competitive strategies, particularly at grade 12 level, where the Senior Certificate examination is the only measuring instrument for high symbols within the education system, which is detrimental to learners. The solution would be to include cooperative strategies in individual and competitive activities, which would offer learners a more balanced learning approach.

4.7.4 Philosophical rationale

The cooperative learning approach is based on the philosophy of John Dewey (1961) and his belief that democracy in schools should be promoted in order to develop good citizenship among learners.

4.7.5 Society's needs

According to Abramson and Bronstein (2004) many leaders in the world of education, business and economics are pleading for a greater emphasis on cooperation as being essential for continued growth and success. When young people enter the labour market, they require communication skills and social skills that they could only have acquired in a cooperative learning setup, for example problem-solving skills, conflict resolution, group cooperation, inter-group relations, and effective communication skills (Felder & Brent, 2001).

4.7.6 Research at tertiary and secondary level

To the best of the researcher's knowledge, in the South African context – especially at secondary and tertiary level – there is still relatively little research into cooperative learning as small-group research topic. A relatively small research base exists at especially junior and senior-primary level. This study, which focuses only on the creation of guidelines for the application of cooperative learning as a teaching strategy for Economics at secondary-school level, allows the researcher to make a contribution to the FET phase of research.

A relatively small amount of research has been conducted into cooperative learning in the Higher Education and Training (HET) and Further Education and Training (FET) phase.

Dansereau (1988:103-120) focused his research on the effect of cooperative learning on the cognitive processes of university students. He found that

learners benefit more from learning in pairs than alone, and that learning through interaction has an influence on individual performance.

In their research Sherman and Thomas (1986:169-172) also studied the effect of cooperative learning methods amongst university students. There were, however, no differences in performance between the experimental and control groups, but learners in cooperative learning environments did evaluate their experiences much higher than learners in other environments.

Khumalo (2001:53-66) focused his research on the effect of cooperative learning on the performance of students in English as a second language, with specific reference to the Madadeni College of Education. His study revealed that students taking part in the study saw an improvement in especially their self-esteem and self-image. Secondly, students taking part in the study showed improved academic performance in English as a second language. Thirdly, if more cooperative learning activities are applied at tertiary level, students will develop better thought processes and lastly, students taking part in the study revealed better comprehension and were better able to articulate their ideas.

The following research studies have been conducted into cooperative learning in the FET phase:

In his FET-phase research at a secondary school, Du Plooy (1993) studied the effect of cooperative learning on inter-group relations. He found that school learners especially must be exposed to inter-group relations in order to eliminate prejudice and improve relations amongst groups. In his study, cooperative learning intrinsically motivated learners not to compare themselves with their friends, to establish healthy competition amongst themselves, and to develop respect for one another's opinions.

Motsitsi (2001) found that cooperative learning in a learner-centred approach at certain Mangaung (primary) schools allowed learners to learn in a more concrete and realistic manner – in other words, learners were more actively involved in their own learning. More active participation and interaction with group members took place. Learners were more focused, with social skills such as respect and opinions being more valued amongst the learners.

More research at tertiary and secondary level is needed to meet the growing needs of the labour market and to allow learners to compete globally with other learners.

4.8 PRINCIPLES OF A COOPERATIVE LEARNING

The cooperative learning is based on the following principles:

4.8.1 Principle of positive interdependency amongst learners

Within a group context, learners realise that they are interdependent on one another and in this way are obliged to achieve certain goals for the group. Dishon and O'Leary (1984:79) believe that positive interaction is beneficial to the relationships amongst group members. Furthermore, Johnson and Johnson (1992:174) are of the opinion that positive interdependence allows group members to share a common goal and success. Cooperation thus depends on how groups work together to achieve their goals. Thus, the group members will do everything in their power to achieve the group's goals. Dishon and O'Leary (1984:80) suggest certain strategies for the development of positive interdependency, namely accountability for the management of group resources, interdependent accountability, and interdependent recognition / reward.

4.8.2 Accountability for the management of group resources

In this case, the teacher makes only a limited amount of resources available to each group. The group must decide how economically and constructively they can use the resources to the joint benefit of the group. The teacher only makes limited resources available for one particular group activity, and it depends on the joint contribution of members how inputs will be used to achieve their goals. All group members are responsible for the resources assigned to the group. All members are jointly responsible for sharing knowledge, skills and attitudes in order to achieve their goals. Johnson and Johnson (1992:179) believe that each group strives for higher levels of interpersonal cooperation in order to promote the success of group members, support group members and encourage group members to improve their skills, and to strive jointly to achieve the group's goals.

4.8.3 Interdependent accountability

Johnson and Johnson (1991:68) are of the opinion that the individual remains responsible for the positive interdependence of the group. Accountability exists when the individual learner's performance is evaluated and reflected back on the group in question. In other words, if the individual learner achieves success, the group as a whole will also achieve success. Group members sometimes feel personally responsible for contributing towards the success of the group. Group members are also aware that when the individual members are successful, the group members become more interdependent on one another.

4.8.4 Interdependent recognition / reward

This aspect is of cardinal importance for the group, because if the group is successful there is a possibility that the group will be recognised for achieving its goals. Since the individual learner's success in cooperative learning depends on the success of the group as a whole, learners also want their friends to do well

and so will encourage one another to succeed. Group members are usually dependently motivated to prepare and also to participate during class and to succeed, since such actions elicit the peer group's approval and ensure the success of the group.

The reward or recognition given to the group is determined by the group's motivation, and therefore the group strives to ensure the best cooperation for positive interdependence (Jacobs *et al.*, 2004:193).

4.8.5 Interpersonality principle

This principle is based on the assumption that learners must develop the ability to work effectively in a group – in other words, they must develop social skills. Davidson and Worsham (1992:103) define social skill as interpersonal, intrapersonal or intragroup communication. The principle of person-to-person interaction, which includes aspects such as intrapersonal, interpersonal and intragroup communication, is discussed broadly.

4.8.6 Meaning of intrapersonal communication

Intrapersonal skills involve learners possessing thought skills and processes and using these to communicate effectively. Solomon, Watson, Scaps, Battistich and Solomon (1992:105) refer to six aspects of intrapersonality that people can possess, namely factual data, conceptual data, considered viewpoints, preferential data, emotional data and experiential data.

4.8.7 Meaning of interpersonal communication

This aspect of interpersonality refers to the social and thought skills that leaders can use to communicate successfully within group context. Learners can share their social and thought skills with other learners in various ways – in other

words, their interest in other group members. Learners in a group can more easily support, sympathise with, achieve consensus with and resolve conflict with other group members, i.e. group members develop negotiating skills.

4.8.8 Meaning of intragroup communication

Learners experience group processing skills, i.e. when intragroup communication takes place. In small groups, the focus falls primarily on performance and the development of life skills such as role acceptance, information sharing and respect (Solomon *et al.*, 1992:108).

4.8.9 Principle of small-group and interpersonal skills

Cooperative learning is based on the fact that all learners are supposed to understand, to learn, and to access a leadership role. Anderson (1989:177) is of the opinion that students in a group assign tasks among themselves, give instructions for learning information, and see to it that the group's goals are achieved. Each member of the group accepts responsibility by ensuring that the common goals are achieved. Leadership roles in cooperative learning groups are based especially on social skills such as the sharing of ideas and sensitivity to the feelings of other group members.

4.9 COOPERATIVE LEARNING MODELS

Cooperative learning models have been designed, developed and applied by the following researchers in the under-mentioned subject fields:

- Felder and Brent (1994): Engineering
- Graham and Townsend (1993): History
- Johnson and Johnson (1994): Physical Education
- Johnson *et al.* (1994): Adult Education
- Maier and Keenan (1994): Economics

- Nichols (1996): Mathematics
- Renegar and Heartling (1993): Literary Studies
- Slavin (1983, 1990, 1995): Mathematics
- Sullivan (1996): Social and Human Studies

Although there are different models of cooperative learning, cooperation amongst learners lies at the core of them all. However, there are clear shifts in emphasis in respect of the weight assigned to each of the following elements in the different models of cooperative learning: interdependent project structure; individual effect structure; team-oriented reward structure; and indirect authority structure.

- Socio-technological forms of cooperative learning, consisting of the STAD and TGT teaching techniques.
- The socio-psychological form of cooperative learning, consisting of jigsaw groups and peer tutoring groups.
- Positive controversy, consisting of small-group teaching.
- The group investigation approach.

(Du Plooy, 1993:29-43; Meyer & Steyn, 1989:783-788)

The models are discussed individually and the most important aspects of each are highlighted.

4.9.1 Socio-technological form of cooperative learning

Below is a discussion of the different cooperative learning programmes classified under socio-technological form:

4.9.1.1 Teams-games-tournaments (TGT)

This cooperative technique is applied most often as an effective teaching strategy (Bossert, 1989:229-230; De Vries, Slavin, Fennessey, Edwards &

Lombardo, 1980:1-73; Jacobs *et al.*, 2004:201-203; Johnson, Johnson & Stanne, 2000:2-5; Killen, 1998:96-97; Meyer & Steyn, 1989:783-784; Sharan, 1994:6183-6184; Sharan, 1995; Slavin, 1990; Slavin, 1995:139-141; Stallings & Stipek, 1986:746).

The group classification in this cooperative technique is based on a grouping of four to five students per group. The different groups are each heterogeneous in respect of the learners' abilities, gender and academic performance in the grade group. This technique works on the principle of a weekly TGT in the form of games, i.e. an academic spelling tournament, with learners competing against the members of other teams to earn team points. The winner in each team earns six points for his/her team. Poorer performers compete against poorer performers, and better performers against better performers. Everyone has an equal chance at success. Team-mates help one another to prepare, but may not help one another during the games. This learning model is accessible and applicable for all grades and all subjects at school. According to De Vries *et al.* (1980:3-4) this cooperative technique can be described as follows: "...TGT is the most appropriate for teaching well-defined objectives with single right answers, such as mathematical computations and applications, language usage and mechanics, geography and map skills, and science concepts". Examples of TGT techniques that can be used are quiz competitions and tests for individual learners.

Figure 4.2 and table 4.2 illustrate the mechanism behind the TGT and indicate tournament performance in terms of points.

Figure 4.2 Teams-games-tournaments

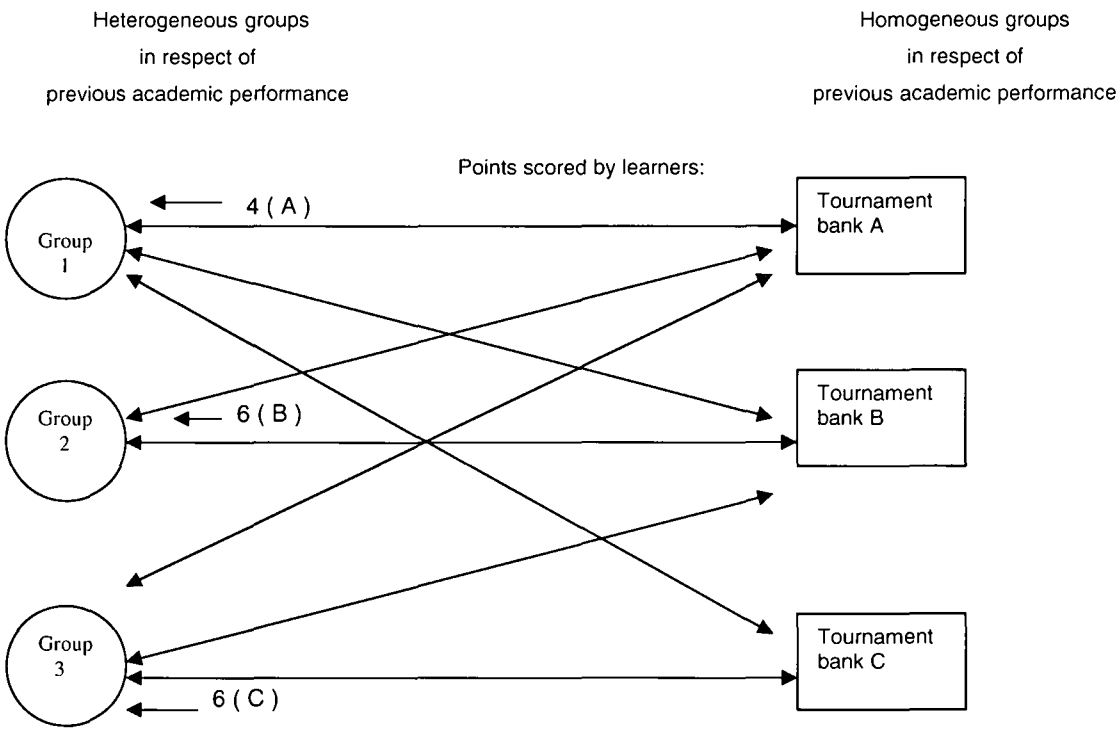


Table 4.2 Tournament scorecard

Name of learner	Scorecard for tournament performance						Total out of 15
	Tournament 1			Tournament 2			
	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3	
1	4					5	**9**
2			6	6			**12**
3	6				4		**10**
4	3					4	**7**
5		6			6		**12**
6			6	5			**11**
7			6	6			**12**
8		2				4	**6**
9		6			5		**11**
Group total	**13**	**14**	**18**	**17**	**15**	**13**	

The above tournament group scorecard can be used by the teacher when applying TGT as a teaching strategy within a cooperative learning approach. A TGT with a 12-point plan can be requested and then keyed into the above tournament scorecard to determine the group winners. In the above example, the group members scored the following points during the TGT (see figure 4.2 and table 4.2):

- Group 1 : Tournament 1 = 4, 6 & 3 (13) Tournament 2 = 6, 5 & 6 (17)
- Group 2 : Tournament 1 = 6, 2 & 6 (14) Tournament 2 = 4, 6 & 5 (15)
- Group 3 : Tournament 1 = 6, 6 & 6 (18) Tournament 2 = 5, 4 & 4 (13)

According to De Vries *et al.*, (1980:5-6) the TGT is an important teaching technique for the following reasons:

- It promotes cooperative learning in terms of cooperation amongst small groups, motivation through educational games, and competition amongst groups for the enjoyment of the players.
- The TGT technique can be implemented simply and at low cost – that is, this technique uses only minimum learning material and equipment such as stopwatches and tournament scorecards (see table 4.2).
- The TGT technique is simply and easy to implement, as it can be conducted within one 45-minute period, depending on the planning.

The TGT technique can be applied effectively as a cooperative learning approach on the basis of previous classroom research outcomes and experiments and can have the following benefits:

- Improved academic performance, i.e. students work harder because they enjoy and support the TGT technique.
- Improved and adjusted attitudes and dispositions of students, i.e. students have shown less resistance to class attendance and regular study sessions.
- Development of peer tutoring, i.e. active tutoring amongst groups.

- Simulated reality and society leading to students reaching out more towards other aspects of society.
- Reduction or elimination of social barriers and obstacles that may hinder inter-group relations.

The TGT technique can be summarised as follows in the diagram below:

Teams	⟹	Games	⟹	Tournaments
4-5 group members		Short, content-based games		± 40-45 minutes

4.9.1.2 Student teams-achievement divisions (STAD)

The student teams-achievement divisions or STAD as teaching technique was designed and researched by the Johns Hopkins University and is known as "student team learning" (Sharan, 1994:1-19). This STAD technique was applied with great success by especially Bossert (1989:230-232), Jacobs *et al.* (2004:202-203), Owens and Sweller (1985), Sharan (1980:245), Slavin (1980:320), Slavin (1983), Slavin (1986:380) and Stallings and Stipek (1986:747) in various research projects. This cooperative technique is at present the most researched cooperative learning model in especially Mathematics, Science, Social Studies, Art and other subjects. The main purpose of STAD is to drastically improve and accelerate learner performance. As Sharan (1984:4-5) puts it, "The learning task in STAD always consists of reviewing the materials presented by the teacher: Student gathering of information from available sources and open discussion of ideas by the group as a whole requiring multilateral communication and exchange are not typical of STAD groups as they are of G-I (Group Investigation) groups and classrooms. The group goal is always to achieve a score that is extrinsic to the learning process itself". This technique consists of the following important components:

- Teams

- Individual improvement scores
- Class presentations
- Team recognition
- Quizzes

Briefly, these components can be described as follows:

- **Teams**

Teams consist of heterogeneous groups of four or five members composed on the basis of performance, level of development, gender and ethnicity. Each week the teacher introduces new subject matter and material. The teacher assigns the members to groups, because learners tend to only choose certain members for their groups. According to Sharan (1994:4-9) "the main idea behind STAD is to motivate students to encourage and help each other master skills presented by the teacher". Team members study the subject matter and learning material together until all learners have successfully mastered the subject matter and work assignments. Each learner is tested individually on the learning material without any assistance from other learners. Each learner's points are constantly compared with the points scored previously. The sum of the individual points in a group serves as basis for the points allocated to the group. Group members compete with one another and earn certificates on the basis of how well the group performs.

- **Individual improvement scores**

This offers all learners an equal opportunity to achieve high marks if they try their best to successfully complete the projects and assignments. At the beginning of the programme, learners are assigned to an order from high to low on the basis of their previous individual performance. Learners are assigned to achievement divisions on the basis of their performance in different assignments and tests.

After every test performance, the learner will possibly move to either a higher or a lower division. Once every group member has earned points, learners are

moved to different divisions. Each learner now competes with others at his/her level in his/her division, and not with the whole class.

This programme consists of direct teaching for approximately 40 minutes, team exercises for approximately 20 minutes, and a test session of approximately 20 minutes. This programme allows all learners to be rewarded and also offers plenty of opportunity for individual responsibility and an intensive, structured work schedule.

According to Slavin (1978:42-49) this programme has the following benefits:

- Team techniques with intensive teaching schedules promote academic performance more than traditional techniques do.
- Learners' motivation with regard to academic projects improves with their friends' support.
- There is a positive effect on learners' interaction with others.
- Success is possible for all learners and not just for a privileged few, as with the traditional competitive system.

- **Class presentations**

Material used in quizzes is presented in the classroom for assessment. Quiz techniques differ from traditional teaching methods in that all group members must focus on what is being presented, since their presentations can have an impact on the quiz competitions, which in turn will determine their scores and test results.

- **Team recognition**

Teams can receive recognition for their performance by means of certificates or any other rewards if their scores meet certain criteria. Certificates are awarded to teams that meet certain standards in terms of high levels of performance, which means that group members are motivated to do their best within the group.

- **Quizzes**

After one or two periods, individual group members can participate in quizzes. Learners are not permitted to help one another during a quiz, which ensures that each group member is responsible for his/her own learning and information acquisition during the quiz.

4.9.2 Socio-psychological form of cooperative learning

The following cooperative learning techniques, which fall under the socio-psychological form, are discussed briefly:

- Jigsaw technique
- Peer tutoring technique

4.9.2.1 Jigsaw technique

The **original jigsaw technique** was designed in 1978 by Aronson and his colleagues in Austin, Texas in an effort to address racial tension in schools (Aronson & Goode, 1980:47). Aronson's research study focused on inter-group relations where group members rely on one another's contribution to the success of group goals to be achieved, i.e. "students are then accountable to their jigsaw group for teaching that part of the lesson to the rest of the jigsaw group members" (Sharan, 1990:3-4).

Cooperative learning skills are compiled and learned in advance, which is where the importance of the method lies.

Learners work together in groups of four or six on academic material divided up into different subsections. Each learner is responsible for becoming an expert on a particular subsection. As soon as each learner has mastered his/her subsection, he/she goes on to learn the subsections of the other learners in the group. Learners remain in the same group for six to eight weeks, until such time

as the subject has been studied in full. Learners must also listen to their team-mates in order to fully understand the subject as a whole. Each group member is individually evaluated on the overall subject. Individual performance and not group performance is rewarded.

In 1980 Slavin took Aronson's **jigsaw technique II** further and organised competitions amongst groups to research the effect on the performance of study teams. In Slavin's research study, elements such as cooperative and individual incentives were offered to groups. These incentives aimed to encourage group members to improve their performance. Learners work together in groups of four or five and everyone is given the same material to read and study. The study material is then divided up and each group member receives one topic on which to concentrate and then master. Members of groups given the same topic to master then form separate groups to discuss the topic thoroughly. Such a group is then known as an **"expert group"** (Skibbe, 1996:26). According to Skibbe (1996:26) the experts and other group members have a responsibility to:

- Research the relevant sub-themes;
- Understand ideas and concepts of the sub-themes being studied;
- Teach other group members about their findings in respect of the sub-themes; and
- See to it that each group member is exposed to a quiz / test.

The expert group members form a new separate group to discuss their topic and in turn report to their original group. Every individual is given a chance within the original group to explain his/her topic to the whole team. Learners participate individually in quizzes. Competitions amongst the study groups for specific rewards are based on individual performance. Teams earn points through learners' improved performance compared to previous quizzes.

In 1983 Gonzales and Guerrero further refined the **jigsaw technique II** by implementing the technique in bilingual classrooms in order to monitor the

interactions amongst group members in respect of language proficiency in group context (see figure 4.3). Wedman (1996:111-123) applied the jigsaw technique to teacher training in group learning in respect of different reading-method courses.

In this case, as with the TGT and STAD, each jigsaw group must be heterogeneous in nature. The subject matter must be meaningfully divided up into subcategories so that each of the five or six group members is given a portion of the main assignment to master. The completion and mastery of the subject matter (sub-assignment) occurs when all members of all the groups with the same assignment come together in "expert" groups to study the common assignment. As soon as the members of each expert group are satisfied that they have mastered the subject matter, the experts return to their original group. The knowledge gained is then conveyed to the remaining group members. With such reporting back, each member is obliged to listen carefully so that each member can master the subject in its totality. Following such a learning situation, each learner takes part in a quiz with regard to the assignment as a whole. Credits earned during the quiz are for the individual and make no contribution to the group effort. According to Stallings and Stipek (1986:749) the credit structure as a motivational aspect of group credit is beneficial for all group members.

Interdependence is based on learners' individual efforts to master their assignments and to then master the main assignment points for the optimal utilisation of the teaching-learning situation. During the teaching-learning situation, each group member must optimally convey and explain his/her assignment to the group, but he/she is also obliged to listen carefully in order to master the big picture. All discussion, feedback and self-evaluation form part of the foundation for the heuristic teaching approach. During such a discussion each group member is actively involved in a teaching-learning situation, as each in turn plays the role of learner and teacher. Reporting is a subject-typical skill during the exercise of each sub-theme of the group members.

The jigsaw technique can play an important didactic role in the teaching of Economics. As an example, the main theme "Micro-economics" and various sub-themes can be depicted as follows:

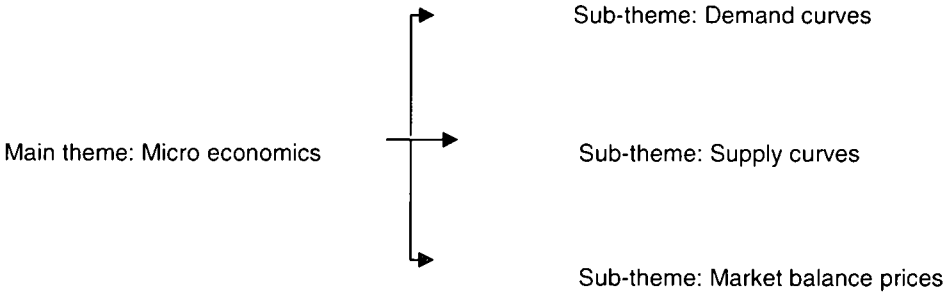
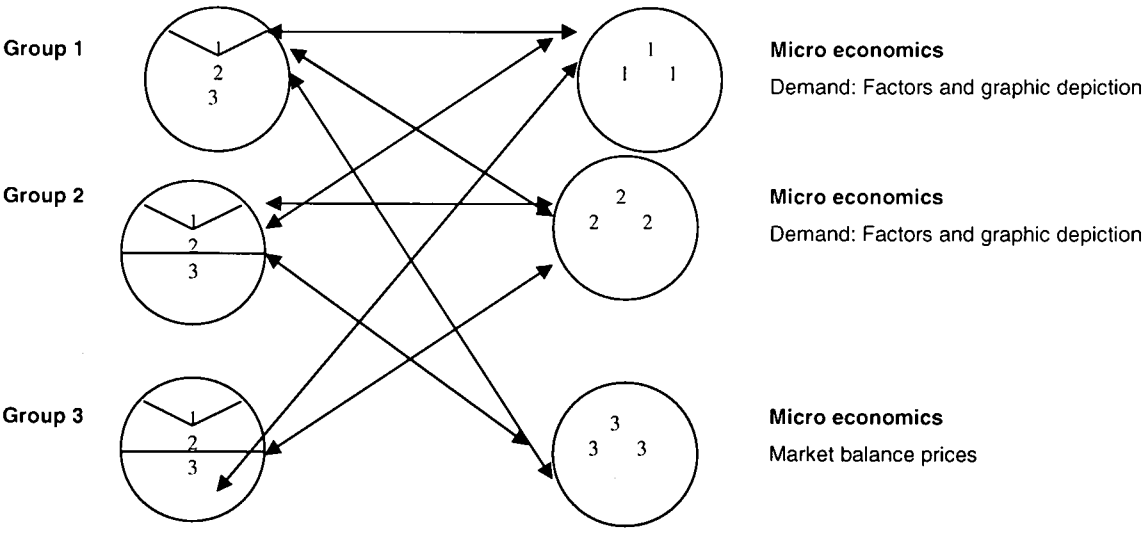


Figure 4.3 Jigsaw groups



4.9.2.2 Peer tutoring groups

According to Hanekom and Nel (1991:133-134) the term peer tutoring is synonymous with concepts such as "crossage tutoring" and "same-age-tutoring", sometimes also referred to by researchers as peer-supported tutoring. Du Plooy (1993) does differentiate between the synonyms in respect of meaning and implementation possibilities. According to Adams and Hamm (1996:14-15), "Peer teaching is defined in terms of persons involved, their role-switching as teacher-learner, and their active responding".

As cooperative learning means that group members rely very strongly on the assistance of fellow group members to achieve group goals, it can be accepted that peer tutoring is an essential element of cooperative learning. Slavin (1987a:74) differentiates between cooperative learning and peer tutoring as follows: During cooperative learning the teacher first gives the entire group a cooperative lesson before cooperative learning comes into effect when learners further discuss the subject in group context in order to achieve the specified goals. Peer tutoring takes place daily in an unstructured way in the classroom, as thorough planning and organisation allows this resource to be more effectively utilised as an effective teaching technique.

Du Plooy (1993) alleges that the peer-tutoring technique as a socio-psychological cooperative learning model hold advantages such as the teacher may find that students have more empathy for his/her role as teacher, as learners themselves now have to fulfil the role of teacher, but this role may not be fully realised in the GET phase. Secondly, since peer tutoring brings about positive attitude changes amongst learners, it could also lead to improved discipline and the academic performance of learners is improved. Thirdly, as learners are involved in the teaching-learning situation, they can develop to their full potential. Furthermore, learners enjoy this type of teaching technique, which contributes to improved school attendance. Lastly, there is no financial burden on the school, and all that is required is good planning and organising by the teacher.

4.9.3 Positive controversy of cooperative learning

4.9.3.1 Small-group teaching

According to Slavin (1980:321) small-group teaching gives learners greater autonomy. Learning takes place when learners are able to master the subject matter by means of cooperative group investigations and accompanying

discussions and the gathering of data. The teacher assigns a main project and the small groups decide how the specific project will be subdivided. The effort is then presented to the rest of the class as a group effort. Other group members and the teacher then conduct the evaluation. Slavin (1980:322) is of the opinion that this technique has considerable value in respect of group autonomy and interaction due to the fact that the credit structure is not clearly defined. However, the small-group technique can also be implemented without any credit structure. The primary purpose of this technique is to actively involve learners in the teaching-learning situation.

This method emphasises cooperation. Four basic elements form the foundation of this method: Positive interdependence (learners feel responsible for their own learning, as well as that of the entire team), face-to-face interaction, individual responsibility (everyone must be able to demonstrate that they have mastered the material), and social skills (learners communicate effectively, build and retain progress, and figure out ways to work more effectively). Teams of four or five members are usually formed. Small-group teaching can, for example, be used effectively during certain projects, for example with regard to the main theme "periodic supply system", where interviews and surveys are conducted at retail chain stores in connection with the role and application of computers in the business's stocktaking system. During such an excursion, every individual can be involved in some way in a particular activity, such as surveying the type of supply system. Another group could in turn study the advantages and disadvantages of such a computerised system for the business. Each group member is actively involved in surveying or observing the experiences during the educational excursion.

4.9.3.2 Cooperative integrated reading and composition (CIRC)

This model has been designed to teach reading and writing skills in the upper elementary grades. Learners are assigned to different heterogeneous reading

teams operating at different levels. The teacher works with one team at a time, while the remaining teams are involved in other cognitive activities such as reading, extracting the most important elements from stories, predicting how stories will end, summarising stories and learning new vocabulary. Teams move through a sequence of teaching, team exercises, team evaluation and quizzes. Quizzes are only held once the team feels that each member is ready. Team recognition is given. The most important characteristics of the CIRC teaching cycle are lesson presentation, team exercises, peer assessment, additional exercises and testing. According to Sharan (1990:271-285), Sharan (1994:25-31) and Slavin (1990:88-89) the CIRC programme consists of the following elements:

- **Basal-related activities**

  Such activities involve partner reading, in other words where two group members read to each other; storytelling, where group members tell each other stories; words out loud, where group members read a paragraph out loud and listen to the correct pronunciation of the words; word meaning, where the group members must describe the meaning of a word prior to the STAD competition; story retell, where the group members must retell a well-known story to the other members of the group; and spelling, where the group members must learn the spelling of words prior to quizzes.

- **Direct instruction in reading comprehension**

  During the lesson, each group reads a paragraph and is asked to define or spell certain words or to write them down in order to test comprehension skills in quizzes prior to a STAD competition.

- **Integrated language arts and writing**

Applying the above elements involves a focus on reading groups, teams, and basal-related activities.

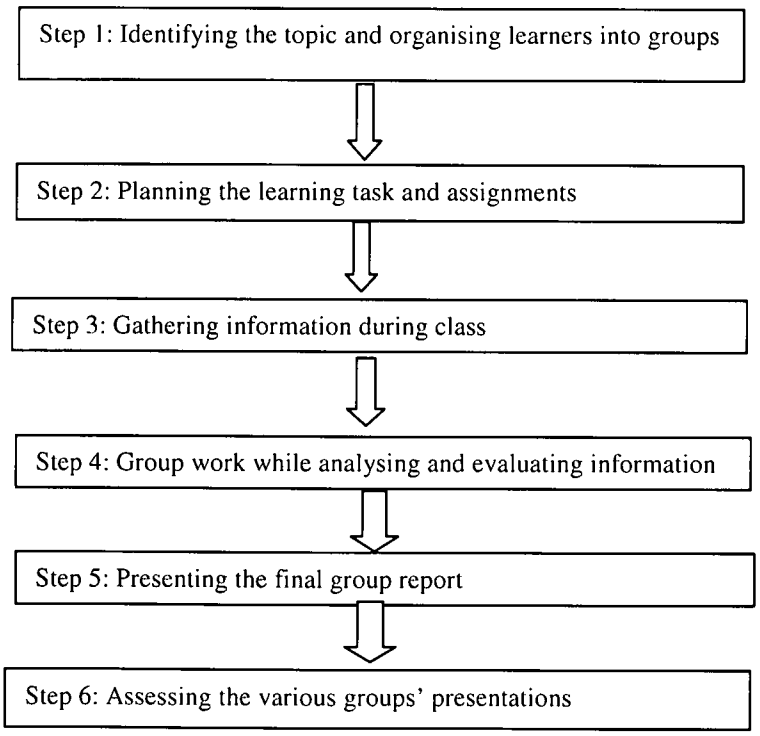
The reading groups consist of learners from two or three different reading groups according to their reading levels as determined by the teacher.

4.9.4 Group investigative forms of cooperative learning

4.9.4.1 Group investigations

This technique was designed by Slomo Sharan of the University of Tel Aviv as a general class plan for organising group investigations. Group members are assigned to small groups to take part in cooperative investigations, group discussions and cooperative planning for particular projects. Learners form their own groups of two to six members. Group members are given topics and must prepare their own group reports and presentations. According to Sharan (1990:97-113), Sharan (1994:5-7) and Slavin (1990:10-12,94-101) group investigations as a technique are implemented as follows:

Figure 4.4 Steps in the implementation of a group investigation



4.9.4.2 Team support groups

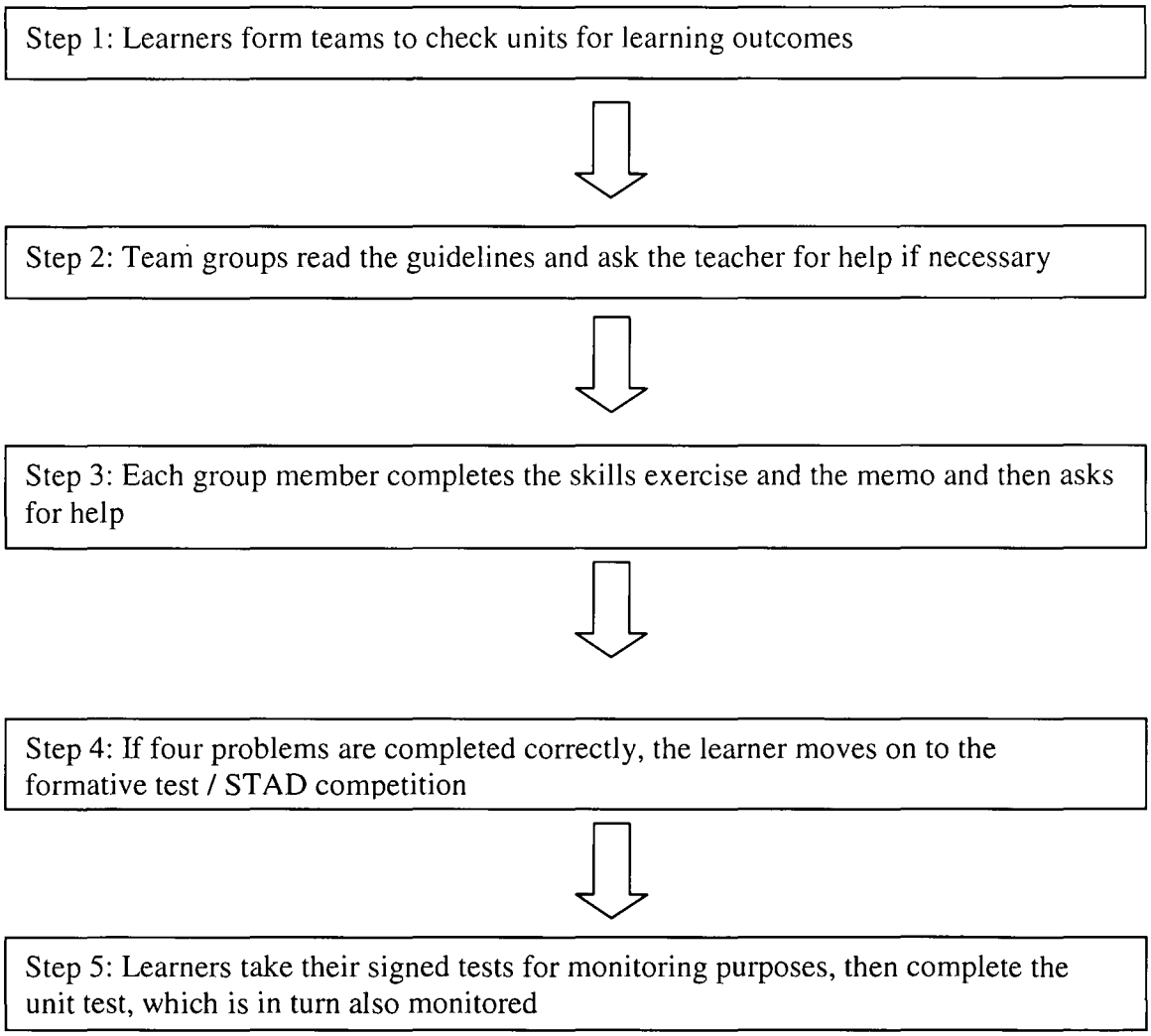
Each group consists of four members, as with the STAD and TGT groups. This type of technique within the cooperative learning model is dependent on a specific set of teaching material that works according to a unique implementation plan. Learners are first required to take a pre-test before being divided up into groups. The elements of the programme curriculum of the team support group consist of guidelines for step-by-step problem-solving by the different groups. Various skills tests in respect of problem-solving on certain group activities are formulated for completion. Furthermore, formative tests with, for example, two equal sets of ten items per test on any learning outcomes for economics can be given for individual tasks. The team support groups complete a fifteen-item unit test for example as a quiz and a memorandum of skills exercises and formative unit tests are also excellent examples for team support groups activities (Sharan, 1994:22-25; Slavin, 1990:84- 85).

Before the team support groups start investigating their topics, the teacher must first present a full lesson plan. Each team support group receives a set of prepared topics with different units for investigation. The following are examples of different aspects that can be presented for investigation and adjustment by team support groups in Economics class tests:

- Inaccurate unemployment figures for 2000-2005;
- Inaccurate calculations in respect of the inflation rate; and
- The impact of HIV/Aids on the labour market.

Figure 4.5 below reflects the different steps in the team study approach:

Figure 4.5 Steps in team support for problem-solving



4.10 CLASSIFICATION OF COOPERATIVE LEARNING TECHNIQUES

According to Slavin (1980) cooperative learning models can be classified into four primary groups, namely team learning, expert groups or master groups, joint project completion, and joint problem-solving.

4.10.1 Team learning

The following cooperative learning techniques can be classified under team learning:

- Cooperative integrated reading and comprehension groups
- Student teams–achievement divisions
- Team support groups
- Teams–games–tournaments

The learners are guided by the teacher to learn subject matter that will be reflected on later and to support one another in the act of learning. Groups are rewarded on the basis of the joint performance of the individual team members.

4.10.2 Expert groups or master groups

The following models can be classified under expert groups:

- Jigsaw groups
- Peer tutoring groups

Learners are responsible for learning one another's material. Each learner in the group is assigned a project to study in order to master a specific topic or section of work and to then teach this work to others. Learners are eventually evaluated on all the various topics or themes.

4.10.3 Joint completion of projects

The learning model classified under this group is **small-group learning**. Learners are given an assignment (for instance, reasons to protect emerging industries in South Africa) and they complete the project jointly by means of

cooperation. The group decides on the procedure to be followed in completing the project. The group is evaluated and rewarded on the basis of the group's final product.

4.10.4 Joint problem-solving or research

The learning model classified under this group is **group investigation**.

4.11 TEACHING TECHNIQUES THAT CAN BE USED JOINTLY WITH COOPERATIVE LEARNING STRATEGIES

Besides the cooperative learning models discussed above, Davidson and O'Leary (1990:31), Kagan (1988:9-12), Nattiv, Winitzky and Drickey (1991:217), Schniedewind and Davidson (1987:33-34) and Slavin (1981:655-656) propose more than fifty additional teaching techniques that can be applied in cooperative learning models. Below is a discussion of the additional teaching techniques that the teacher can use to offer some variety in the classroom:

Think-tank grouping as a cooperative learning techniques aasigned learners to a particular number for each quiz activity. The teacher poses a question and the learners work together to find the correct answer. A certain number is then called out and the group members who were assigned that particular number must then answer the question. If the question is answered correctly, the group is recognised for group performance.

The teacher poses questions to the class during a **peer sectoral grouping.**The. Learners must write down their own answers. Each response is discussed with a classmate in order to ensure that the answer is correct. The answer is then shared with the entire class. The teacher may have the entire class stand up and, as each group member provides the correct answer, he/she may take his/her seat.

Learners find out about their classmates' opinions on a particular subject during the **peer sectoral grouping.** They pair up to conduct interviews and each learner then relates to the entire class what he/she has learned.

Peer grouping is where learners work together in groups of two. One solves the given problem while the other assists. They then exchange roles as soon as the problem is given, and the student pairs then check each other's answers.

During the **exchange grouping** setting, the teacher poses a question that can have more than one correct answer. Each learner writes down an answer. The group members then exchange their answers.

Furthermore, Schniedewind and Davidson (1987:33-34) proposed partnership grouping, small-project, business games, monopolistic business games, treasure hunt as possible techniques for optimal teaching and learning in the classroom. A short explanaition of these techniques for cooperative learning activities:

- **Partnership grouping** as whereby two learners work together to complete a particular project.

  - **Small-project grouping**

  Learners work in groups of four and each one completes a certain portion of the project, which is then combined into the final product.

Other effective techniques that are especially applicable to the teaching of Economics and which have a stronger business element are:

  - **Business games**

  During a business game, groups compete to secure the highest profit margin. The focus here is on cash transactions and accurate bookkeeping. Such a game can be played over a number of class periods to develop purchasing

and sales techniques amongst groups. Learners play different roles such as bank manager, shopkeeper, producer, salesman and customer.

- **Monopolistic business game**

Individual learners play this form of board game to determine the best time to invest in property, take risks and do bookkeeping.

- **Treasure hunt**

Learners are given a number of clues to help them solve problems in respect of the subject matter.

4.12 APPLICATION POSSIBILITIES FOR COOPERATIVE LEARNING AS A TEACHING STRATEGY

4.12.1 Introduction

The application possibilities for cooperative learning as a teaching strategy imply that renewed attention will have to be paid to certain aspects of teaching and learning, namely steps in the successful implementation of cooperative learning, the way in which groups approach projects, the role of the teacher, the role of the learners, characteristics of a cooperative lesson, and the assessment of cooperative learning activities.

4.12.2 Steps in the successful implementation of cooperative learning

The first question one should probably ask when it comes to the implementation of cooperative learning is: How long should the session be and how much time will be needed to achieve success?

Research has revealed that significant improvement in performance can be achieved with sessions of approximately 15 to 90 minutes for a period of approximately nine months (Johnson & Johnson, 1985:103-124).

Much depends on the skills to be learned, the learners' abilities and the amount of practice necessary to ensure retention (Nastasi & Clements, 1991:122).

Adams and Hamm (1996:18-19) and Johnson and Johnson (1984a:26-40) propose the following 18 steps for the successful implementation of cooperative learning:

- Specifying the subject matter, outcomes and mastery criteria for every lesson;
- Determining group size;
- Assigning learners to heterogeneous groups according to ability, gender and ethnicity;
- Forming groups in circles for ease of communication;
- Planning teaching material for groups to promote interdependency;
- Assigning roles to group members to promote interdependency;
- Explaining the project and the time available for completion;
- Implementing a specific cooperative learning model;
- Structuring individual responsibility for learning;
- Specifying guidelines, criteria and approaches for the cooperative lesson in order to ensure success;
- Specifying social and cooperative skills for the lesson in question;
- Monitoring problems;
- Providing support and assistance when needed;
- Intervening when groups experience problems;
- Refining lessons by means of conclusions and summaries by both learners and teachers;
- Assessing the learners' work;

- Evaluating groups by means of observation during lessons and discussions;
- Providing feedback to groups in view of recognition.

Some of the above aspects are now highlighted for discussion in respect of the implementation of cooperative learning.

4.12.3 The group's approach to the project

Adams and Hamm (1996:59-64) identify the following important aspects that should characterise the group's approach to the project in order to facilitate effective cooperation:

- Groups must commence with their project immediately.
- The project at hand should not be deviated from.
- Groups should be carefully monitored and controlled.
- All group members must take turns to assume different roles.
- Everyone must ask and answer questions.
- The pace at which the group works must be such that all members can keep up and the project can be completed and concluded in time.
- Group members must support and assist other members.
- Group members must also learn how to show appreciation for one another and to avoid unnecessary conflict.

4.12.4 The role of the teacher

The role of the teacher in cooperative learning activities differs from that of the teacher in traditional learning activities.

The role of the teacher in the teaching-learning situation can be described as follows (Adams & Hamm, 1996:24-25):

- Setting clear outcomes for the cooperative lesson;
- Assigning learners to groups before the lesson commences;
- Explaining the project, structure and learning activities to the groups;
- Monitoring the effectiveness of the cooperative learning groups and intervening to provide them with advice and guidance; and
- Assessing the learners' performance and discussing the way in which they are working together.

Goor and Schwenn (1993:10-11) propose the following aspects that each teacher should keep in mind:

- The teacher must develop mechanisms to minimise movement and noise in the class and to manage time.
- The teacher must first praise those learners who are doing their work and then turn his/her attention to those who are misbehaving.
- It is important for the teacher to display all tasks and projects.

Ford (1991:35-38) also proposes certain important aspects that could facilitate the teacher in fulfilling his/her role:

- The teacher must ensure that all learners understand all aspects of the activities before they commence with the assignment or project.
- The teacher must first explain the reward procedures to the learners.

Detmer (1992:22-23) considers the following to be the most important duties of the teacher:

- The teacher must present all questions and assignments, as well as a daily progress report to be completed by the group.
- The teacher must encourage the groups to search for information in different places.

- The teacher must set aside approximately 15 minutes per day for group members to meet, find answers and fill in the progress report.
- The teacher must hold regular feedback sessions and reward the group that answers the most questions correctly.

According to Adams and Hamm (1996:25) the following aspects are central to a teacher's role:

- As a facilitator and guide, the teacher identifies subject matter, the outcomes to be achieved and reward procedures.
- The teacher creates a climate conducive to the successful completion of cooperative learning activities.
- The teacher assists the group members to interpret their roles and responsibilities within the group.
- The teacher identifies social and cooperative skills for groups.
- The teacher initiates the specific structure for learning activities.
- The teacher assigns different types of learning activities for projects.
- The teacher sets aside time for discussion and problem-solving opportunities.

Moreover, Holubec (1992:182-183) refers to the importance of the teacher's role in bringing variety into the cooperative learning activity by means of regular variations in cooperative learning models and teaching techniques in order to prevent boredom.

Schniedewind and Davidson (1987:37) recommend that for all cooperative learning activities, teachers divide the available time as follows amongst the following three outcomes:

- 70% of the time to cooperative outcomes such as working together to achieve group goals;

- 10% of the time to cooperative outcomes such as inculcating and drilling subject matter into the learners during quizzes;
- 20% of the time to cooperative outcomes such as the learning of specific information and skills.

Another task of the teacher involves the giving of explanations, since this promotes learning and leads to cognitive restructuring and improved comprehension. The teacher must give regular feedback, encourage learners to understand different perspectives, make learners aware of their own strengths and weaknesses, give recognition or reward for good performance, set short-term objectives, assist learners to try again after failing in a certain task, and encourage various types of interaction amongst learners. Active involvement must also be encouraged. In this way, active attempts are made to assign meaning. Cognitive conflicts and solutions to these are also important, as they bring about cognitive growth.

4.12.5 The role of the learner

The role played by the learner in a cooperative learning situation differs from the role played by the learner in a traditional learning situation. With cooperative learning, the learner assumes a much more active role in the learning process. The teacher assigns roles to students on the basis of their academic competency, as well as their social skills. Since all learners are involved in the cooperative learning situation, provision must therefore be made for roles that suit each learner's unique personality. Adams and Hamm (1996:19), Borich (1996:434-436), Detmer (1992:22-23), Dhand (1991:81) and Goor and Schwenn (1993:10) identify a variety of productive roles that learners can take, as reflected in table 4.3 below, which provides a summary of the various cooperative learning roles and cooperative learning functions of learners in a cooperative learning situation.

Table 4.3 Cooperative learning roles and functions of learners

Cooperative learning role	Cooperative learning functions
o Quiet captain	Quieting the group if members are making too much noise.
o Timekeeper	Ensuring that the group keeps to the schedule and completes the project in time.
o Encourager	Encouraging the group and giving the group positive feedback in terms of cooperation.
o Equaliser	Ensuring that every member of the group participates.
o Note-taker	Writing down the group's answers and decisions.
o Presenter	Reading out the group's information to the entire class and ensuring that information is received from all members of the group.
o Taskmaster	Identifying the modus operandi, dividing the work amongst the group members, telling the group when to get started, and announcing new questions or sections of work.
o Coach	Assisting struggling group members to master the subject matter without actually doing their work for them.
o Reporter	Briefly summarising each group member's contribution and commenting on the group's cooperation at the end of each activity. Completing the progress report for the teacher.
o Question commander	Attempting to answer questions asked during the completion of the project or referring a question to other group members before consulting the teacher.
o Problem solver	Identifying problems and proposing possible solutions.
o Group manager	Ensuring that all written work of the group is held in safekeeping, and approaching the teacher for assistance in the event of the group experiencing problems.

From the above table 4.3, the teacher can also assign roles on a rotation basis, but there are also certain responsibilities to be honoured by all members of the group. According to Adams and Hamm (1996:29-30) and Nastasi and Clements (1991:126-128) these responsibilities are the following:

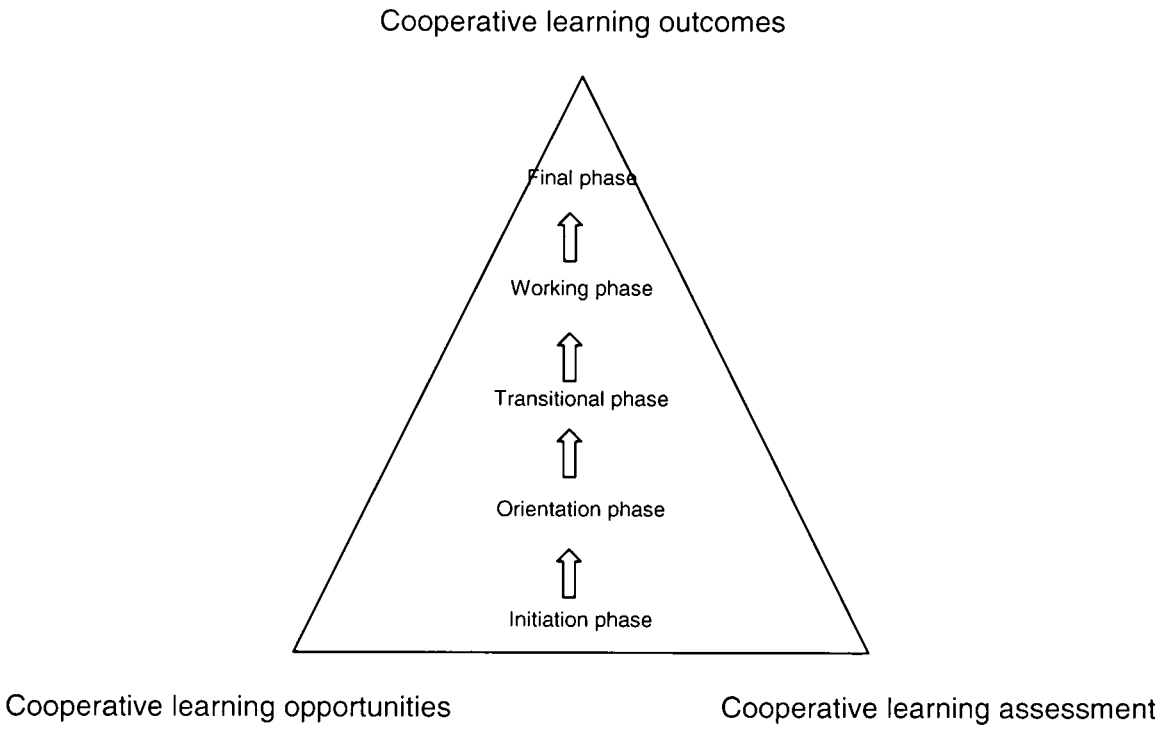
- All group members must be prepared to work together and to explain the work to one another as carefully as possible.
- All group members must make an effort to understand one another's explanations.
- Group members must ask specific questions when seeking assistance.
- Group members must be able to explain all answers.
- All group members must agree on the final answer to be written down.
- Group members must encourage one another.
- Group members must criticise ideas and not one another.

4.12.6 Characteristics of a cooperative lesson

Each cooperative lesson (see figure 4.6) is characterised by certain elements that must always be present, namely:

- Group members must realise that they are responsible for their own learning.
- Group members must be given the opportunity to explain things to one another and help one another.
- Each member of the group must be able to demonstrate that he/she has mastered the work.
- Group members must be able to use social skills during the lesson.
- Group members must be able to monitor their progress as a group and must make time to improve the functioning of the group.

Figure 4.6 Depiction of the cooperative learning process



During the cooperative lesson (didactic action) groups must go through various phases:

- **Initiation phase**, during which learners get to know one another, formulate group norms, and outline subject matter and outcomes;
- **Orientation phase**, during which learners become familiar with their new cooperative learning roles and develop trust in one another;
- **Transitional phase**, during which the learners' potential is revealed. Confrontation can also occur, and inactive members of the group may come under pressure;
- **Working phase**, during which cooperative learning activities take place in order to achieve outcomes and the group's work is evaluated;
- **Final phase**, during which plans are made for future activities, and group members acknowledge one another's contribution to the group.

4.12.7 Implementation of a cooperative project structure for the cooperative classroom

Holubec (1992:181-183) offers teachers the following tips for implementing a cooperative project structure:

- Cooperative activities should initially be short in duration and be performed regularly.
- Guiding work should first be done with the learners before they are left to get on with the work on their own.
- Teachers should first go through the activities with the learners before they are left to work on their own.
- Points for activities are not awarded at first, but only later.
- Learners must initially check their own answers.
- Later, once learners have learned the work themselves in groups under the teacher's observation, group points can be awarded.
- Learners should also be taught to thank one another at the end of each activity.
- These actions should later occur spontaneously and naturally within the groups.

4.12.7.1 Lesson outcomes of a cooperative learning activity

The outcome of any cooperative learning activity is the expected knowledge, skills, values and attitudes to be achieved by the group members upon conclusion of the activity. These outcomes could possibly take the following forms:

- Written group reports;
- Improved individual performance upon conclusion of the activity;
- Performance as agreed upon verbally by the group;
- Achievement of critical outcomes and developmental outcomes;
- Critique of a particular assignment or project;

- List of bibliographic frames of reference.

4.12.7.2 Structuring of the cooperative learning activity

The following factors can play an important role in the structuring of the learning activity (Borich, 1996:431-432; Marzano, Pickering & Pollock, 2001:89-90):

- Size of the group will be dependent on the outcomes for a specific lesson
- Selection of group members indicates the specific outcomes for the group
- Allocation of time to each group activity depends on types of activities
- Role assignment within each group; and
- Recognition and reward for individual and group work.

4.12.7.3 Teaching-learning process of the cooperative lesson

During the cooperative learning process it is important for the teacher to identify cooperative skills at an early stage, since it is precisely this ability to exchange ideas and knowledge that determines the success of the group. According to Borich (1996:439) learners will be able to more comfortably express their thoughts, opinions and feelings if they develop such skills in group context. Borich (1996:439-440) and Johnson and Johnson (1991:234-245) consider the following skills to be important for a successful cooperative learning process:

- Learners should to be taught to effectively communicate their own thoughts and feelings.
- Messages must be detailed and specific.
- Verbal and non-verbal communication should be made concurrent for all groups.
- An atmosphere of respect for the views and opinions of all group members should be created.
- Assessment methods should be demonstrated when groups hold presentations.
- Active learning is demonstrated by means of participation in activities.

- Participation and leadership lead to empowerment.

4.12.7.4 Monitoring and control of the lesson

According to Borich (1996:441-442), in creating a cooperative learning structure the teacher is expected to implement observation and intervention as monitoring instruments in order to ensure the successful implementation thereof. The reason for this is to support learners and to assist them in achieving group outcomes. During the monitoring process the teacher must guide the groups towards the gathering of information to enable them to complete their project successfully. Monitoring is implemented with specific objectives in mind:

- Identifying groups that need support and assistance;
- Providing direction to particular groups that are not on course with their activities;
- Providing assistance, empathy, emotional support and encouragement to certain groups.

4.12.7.5 Feedback to groups

Groups are always concerned about their progress in the cooperative lesson and therefore it is important for the teacher to give continuous feedback to the groups in respect of their progress. Borich (1996:442-445) suggests the following forms of feedback and evaluation that can be successfully implemented by teachers:

- Teachers should be transparent and open in their feedback to learners regarding their activities. The group should be asked about what truly concerned them throughout the cooperative learning process.
- Suggestions for improving the learning process should be accepted.
- The views and opinions of the groups should be taken into consideration.
- The assessment of group activities can be applied.

4.13 ROLE OF COOPERATIVE LEARNING GROUPS IN ADVANCING A TEAMBUILDING CULTURE IN THE CLASSROOM

4.13.1 Group composition

The role of cooperative learning groups in the advancement of a teambuilding culture in the classroom is subsequently discussed. The following aspects are discussed in respect of group composition:

4.13.1.1 Group size

The literature presents numerous guidelines in terms of group size. According to Holubec (1992:181), Marzano *et al.* (2001:90-91) and Nastasi and Clements (1991:120) it is preferable to start with small groups and to then expand them gradually. Group size is determined by the cooperative learning technique used, i.e. groups may not be too large or too small, as this would have an effect on their efficiency. Learner competency influences the size of the group. Peterson, Janicki and Swin (1981:123) found that a group of learners with high competency and another group with low competency fared better in small groups of four members than in larger groups.

4.13.1.2 Selecting group members

The teacher can determine the group size at the beginning of the cooperative learning process and, if he/she chooses, it may be left up to the groups to select their own members, provided the set outcomes are achieved. The teacher will specifically have to see to it that group roles are constantly alternated to give each member the opportunity to fulfil a cooperative learning role.

Johnson *et al.* (1994:24-29) propose a few aspects to be kept in mind when determining the size of the group, but their point of view is that small groups are the most suitable and effective:

- If the size of the group increases, the knowledge, skills and variety of viewpoints within the group will be crucial to the success of the outcomes to be achieved by the group.
- The larger the group, the more skills the group will have to possess in order to meet the challenge of accommodating each member's point of view during discussions.
- If the size of the group increases, there is a danger that interaction amongst the group members could decline.
- The allocation of time can influence the group size, since time is important in group discussions.

The teacher must determine which learners in the class have not yet been exposed to group cooperation and allow these learners to first work together in smaller groups so that they may become familiar with the cooperative learning approach. The teacher must inform the group members regarding the criteria for group composition.

The criteria for determining group size are the following:

- Different abilities
- Ethnic backgrounds
- Learning styles
- Interests (Dumas, 2003)

Research has shown that determining group size is more important for heterogeneous groups than for homogeneous groups. Johnson (1985) is of the opinion that gifted learners should be members of heterogeneous groups, as such learners play a cardinal role in group composition. Diversity also brings together learners with varying backgrounds in terms of language, culture,

perspectives, socio-economic circumstances and learning disabilities. Hence, no learner may be excluded when group size is determined.

Johnson *et al.* (1994:28-29) suggest that when members are assigned to groups, the following two types of group assignment can be applied:

- **Random assignment**

  This type of assignment of members to groups is the simplest and easiest way of identifying groups for cooperative learning activities. With this type of group assignment, different variations can be applied to ensure success, such as the mathematical method where particularly Accounting learners correctly add up the columns of cashbooks and balance them within a given period of time. Another variation is that involving countries and capital cities where group members must determine which countries apply generally accepted accounting practices. Thirdly, there is the historical variation where learners must determine which groups of people have applied accounting principles. Finally, personal references can be used, for example well-known individuals who have played a role in the accounting profession.

- **Stratified random assignment**

  This type of group assignment can sometimes be difficult to apply, but it can also prove to be quite fruitful. Assignment to groups can take place in the following manner: Firstly, group members can be selected based on their academic performance; secondly those learners performing best academically and those performing worst academically can be grouped together; and finally the first and second steps can be repeated.

4.13.1.3 Types of cooperative learning groups

Three types of cooperative learning groups are now discussed, namely formal learning groups, informal learning groups, and base learning groups (Johnson *et al.*, 1994:4-6; Marzano *et al.*, 2001:89-91; Sharan, 1994:52-56):

- **Formal learning groups** can work together for a number of weeks on a particular project or assignment. The teacher supplies the groups with the necessary learning material, the time schedules and the project to be completed by the group (formal learning groups must also go through the same cooperative learning process). Learners in such groups are expected to first consult their fellow group members and discuss the project with them, assist other group members, offer members support, and work out concepts and strategies for the completion of the project (Marzano *et al.*, 2001:89; Sharan, 1994:52).

- **Informal learning groups** are temporary and exist only for a brief period of time, i.e. for only one or two class periods. The purpose of these groups is to focus learners' attention on the study material, to organise study material beforehand, to ensure that learners master the learning material, and to teach learners how to conclude a lesson (Sharan, 1994:54).

- **Base learning groups** are long-term in nature, because the project is conducted over a long period of time during which group members must research a particular problem. The purpose is to support learners in their academic progression (Sharan, 1994:56).

4.13.1.4 Creating a quality team in cooperative learning

The success of the quality team depends on the following characteristics (Sapon-Shevin & Schniedewind, 1992:25-32):

- Group members must have the necessary cooperative learning and social skills.
- Group members must be familiar with what the project entails and must know what to do.

- Group members must understand the group's mission and vision, as well as the roles played by the members and their responsibilities.
- Group members must approach their tasks dutifully and with dedication,
- Group members must display a strong sense of coherence.
- Group members must accept the ideas and opinions of others in the group.
- Group members must work together on teambuilding activities, e.g. a team motto and team name.

4.14 EMPIRICAL RESEARCH OF COOPERATIVE LEARNING AS A TEACHING STRATEGY

To really be convinced that cooperative learning is a viable teaching strategy, it is necessary to consider an empirical evaluation of cooperative learning. Research into cooperative learning strategies already commenced in the early 1970s. During the 1980s cooperative learning received much attention due to its potential as an alternative classroom strategy.

There is evidence in the literature of successful research with regard to cooperative learning. Despite certain disadvantages, research has shown that this strategy holds major benefits for teaching and learning.

An empirical evaluation of cooperative learning as a teaching strategy encompasses the following:

- Outcome of research into cooperative learning;
- Benefits of researching cooperative learning; and
- Shortcomings of cooperative learning.

4.14.1 Outcome of research into cooperative learning

A number of research studies have proven that cooperative learning has a number of positive aspects, for instance:

Nichols and Miller (1994:167-178) focused their research on the benefits of team-supported learning in a cooperative learning environment in respect of motivation and performance. They also found that learners are more focused on learning and their goals within such an environment. They observed a marked decline in performance and motivation when the cooperative learning group was moved to a traditional learning environment.

The research of Watson and Marshall (1995:401-406) focused on heterogeneous grouping and the encouragement of cooperative learning. This research study involved college students and brought about improved relationships amongst different ethnic groups and amongst students with learning disabilities and those without.

The research of Stevens, Madden, Slavin and Farnish (1997:433-454) focused on three cooperative learning models: STAD, TGT and jigsaws. The researchers showed that team learning can effectively replace traditional teaching methods. These three cooperative learning models produced positive results in terms of academic performance, inter-group relations, mutual concern, and self-image.

Stevens and Slavin (1995:321-351) recorded a significant positive effect on the standardised measurement of reading and vocabulary, as well as reading and comprehension and learners' ability to express themselves, following the implementation of cooperative integrated reading and comprehension groups.

Research with regard to cooperative learning indicates the potential for improved performance in various subjects and a positive influence on relationships, self-

image, attitude with respect to learning, and the ability to work with others. Chiu (2004:365-399) also found that cooperative learning strategies work for all types of learners, and even gifted learners and those who perform well are not disadvantaged. The cooperative learning model found to be most effective by most researchers is STAD. Besides the team learning methods, the model that has consistently proven to be most successful when it comes to improving performance is the group investigation model.

Research has also produced some interesting findings regarding disabled learners who are integrated into the normal school setup, especially in an inclusive teaching-learning situation. Research has shown that in such a situation, disabled learners experience less rejection from their classmates, while the self-image of all learners is improved.

Johnson and Johnson (1987) and Manning and Lucking (1991:121-122) go on to say that research data on cooperative learning proves that it encourages learners to want to learn and to learn more and that it develops their self-confidence, improves their academic performance, enhances skills such as critical thought, and facilitates improved skills in respect of cooperation. They identified a variety of positive cooperative outcomes:

- Improved performance at all levels of competency;
- Improved higher-order thought processes;
- Deeper comprehension skills;
- A more positive attitude;
- Better social skills;
- Improved self-image.

Newmann and Thompson (1987) evaluated 37 studies on research into cooperative learning at secondary level using the following learning models: STAD, TGT, teams, learning groups, group investigations, and jigsaw groups. In 25 of the studies, significant improvement was evident in favour of cooperative

learning, with immense success in grades 8 and 9 in respect of Mathematics, Science and Languages. The most successful model was the STAD, while the jigsaw was the least successful.

The findings of the empirical research reveal the viability of cooperative learning by means of the outcomes of positive aspects for the teaching-learning situation:

- Great expectations for learning;
- Lessons being more learner oriented;
- Clear and focused instructions;
- Constant monitoring of the act of learning;
- Groups formed on the basis of their specific learning needs.

Johnson and Johnson (1987:24) describe the empirical evaluation of cooperative learning as a teaching strategy as follows: "...cooperation is the most powerful way to learn a whole range of outcomes".

4.14.2 Benefits of researching cooperative learning

Practically all research into cooperative learning concurs that this teaching strategy definitely holds numerous benefits. However, in this section the researcher attempts to summarise all the positive aspects pertaining to cooperative learning, as can be found in the following literary references: Burron, Lynn-James and Ambrosio (2003:697-707), Hamm and Adams (1994), Hooper, Temiyakarn and Williams (1993:234-245), Johnson and Johnson (1985:237-256), Nastasi and Clements (1991:111-113) and Schniedewind and Davidson (1987:1-23).

The benefits mentioned encompass practical benefits, as well as benefits in respect of project design:

- It is possible for all learners to improve their academic performance, as their ability to understand, analyse, interpret, evaluate and solve problems and to draw conclusions also improves.
- There is less prejudice towards others, because learners of different ethnic groups and genders and with different interests and personalities must learn to work together.
- Excessive competition and aggression is reduced, because shared objectives become as important as individual objectives.
- Constructive patterns of social interaction are developed. Learners are involved in group context to learn together with one another. Cooperative learning helps learners to develop intellectually, personally and socially by means of the cooperative nature of the act of learning.
- In heterogeneous cooperative learning groups, learners learn about one another's unique skills and learn to respect one another's life experiences, i.e. group members learn to care about one another.
- Gifted learners and learners who perform well academically develop advanced cognitive skills during peer tutoring, while poor performers accept the challenge to participate more willingly in cooperative learning groups.
- Learners learn skills they can use both in and out of school, for example the ability to give constructive criticism, the development of coherence, and the ability to praise and encourage others.
- Learning is internalised and the quality thereof improved, because ideas and communication are more stimulating and work is more purposeful.
- Teachers work more effectively, because they have more time to make valuable discoveries about the learners.
- Effective communication is made possible through immediate feedback, while a new vocabulary is learned.

4.14.3 Shortcomings of cooperative learning

Although research has identified cooperative learning as a constructive and viable teaching strategy, there are, however, certain disadvantages associated with this strategy. The disadvantages referred to in the literature are particularly applicable to the gifted child.

Robinson (1990:22) alleges that too little research has been done on the effect of cooperative learning on the gifted child, and is of the opinion that cooperative learning may hold possible disadvantages for the gifted child, including the following:

- Teaching is limited to curriculum material, i.e. there is little opportunity to stimulate the gifted child, who is likely familiar with the subject matter or finds it easy.
- Lesson presentation must adapt to the group's pace, which prevents the gifted learner from working ahead.
- Gifted learners could become arrogant and lose faith in their classmates who are not progressing at the same pace.
- Gifted learners could tend to take over the group rather than share and support leadership.
- Gifted learners could grow frustrated and bored if group members fail to honour their responsibilities and roles in the group according to the group project.
- Gifted learners may find it difficult to understand why others cannot master the work as quickly as they can.

According to Nattiv *et al.* (1991:223) cooperative learning can demand a significant amount of time when it comes to concluding a particular topic, and the pressure on group members to prepare and perform well can result in failure.

With these advantages and disadvantages in mind, Good and Brophy (1997:284) come to the conclusion that the benefit of cooperative learning is that it can be successfully applied as a constructive and viable teaching strategy in any subject.

Millis (2001:1-4) is of the opinion that cooperative learning is here to stay and that the teacher can successfully implement this teaching strategy in the education process:

> " ... cooperative learning: it's here to stay, because of the established research base of cooperative learning, adopting a structured approach to research on cooperative learning and the key principles of the cooperative learning approach provides both structure and flexibility for research..."

4.15 CONCLUSION

The current interest in cooperative learning arises particularly from the acknowledgement and acceptance that the traditional learning environments that focus on competition are unable to achieve the outcomes set by cooperative learning as a teaching strategy. Cooperative learning has the potential to make a positive contribution to the academic performance, social skills and self-image of learners. In the opinion of the researcher, cooperative learning models have the potential to, one the one hand, stimulate the development of thought skills, and on the other, enhance social interaction necessary for cognitive growth and effective learning.

This chapter focused firstly on the historical background of the concept "cooperative learning approach" and secondly on the different viewpoints on cooperative learning. Thirdly, the most important cooperative learning models were discussed, and fourthly cooperative learning models were classified in

respect of the different group roles. The most important steps and characteristics in the implementation of cooperative learning were discussed, as were the roles played by the learner and the teacher. Finally, various aspects of the identification of group members, the types of cooperative learning groups and the development of a quality team for group composition were explained.

CHAPTER 5

EMPIRICAL RESEARCH DESIGN OF THE STUDY

5.1 INTRODUCTION

The preceding chapters contained a literature review of outcomes-based education (OBE) compared to the South African OBE curriculum model, the National Curriculum Statement (NCS) for the Further Education and Training (FET) phase, with specific reference to the NCS for Economics, and the place of Economics in the FET phase. Moreover, the nature and field of study of Economics in the FET phase was outlined, and a critical analysis of cooperative learning as a teaching strategy was reviewed. This chapter consists of two main components, namely a description of the empirical course of the research, and the research instruments used to gather data.

5.2 DESCRIPTION OF EMPIRICAL RESEARCH METHODOLOGY

Firstly, the purpose of the empirical research is stated. Secondly, the pilot study, sampling methods, preparation of the empirical research and quantitative research are also discussed. Furthermore, the statistical techniques for the interpretation of the data are discussed.

5.2.1 Purpose of empirical research

According to Gray (2004:200) empirical research involves the gathering of first-hand information. De Vos, Strydom, Fouché and Delport (2005:167) and Leedy and Ormrod (2001:202-204) consider empirical research to be the most fruitful method of gathering knowledge in the field of education. The main objective of the empirical investigation was to collect data relevant to the teaching of

Economics and the application of cooperative learning as a teaching strategy in secondary schools under the auspices of the Free State Department of Education (FSDoE). The demographic data on Economic teachers, the current status of training in the NCS for Economics and the application of cooperative learning as a teaching strategy are discussed.

5.2.2 Pilot study

5.2.2.1 Piloting the draft questionnaire for validity and reliability

According to Gray (2004:205) a questionnaire in particular must be accurate, simple and unambiguous because it is a "one-shot" attempt to gather data. The researcher was of the opinion that the questionnaire for this study would have to be piloted to reduce the incidence of non-response to the questionnaire. The researcher thus decided to pilot a draft questionnaire. Gillham (2000:234) and Gray (2004:205) both suggest that it is wise to pilot at least 50% more questions than needed so as to eliminate confusing or unreliable questions. They identify the following aspects in piloting the draft questionnaire:

- Instructions given to respondents;
- Style and wording of any accompanying letter;
- Content of face-sheet data;
- Formality or informality of the questionnaire in terms of tone and presentation;
- Length of the questionnaire;
- Sequence of questions;
- Quality of respondents in terms of whether they understood the questions and answered them in the way intended; and
- Scales and question format used.

The structured questionnaire was designed on a 4-point Likert scale with closed-ended questions. The questionnaire was aimed at determining the current status

of in-service training in the NCS and teaching strategies employed by Economics teachers. The researcher distributed three questionnaires as follows: One to a colleague, one to a Business Economics teacher, and one to an English Language teacher, to complete and comment on. The design of a specific questionnaire was based on the outcomes of these three pilot questionnaires.

5.2.2.2 Implementation of the pilot study

After piloting the questionnaire and correcting any ambiguous and unclear questions, the researcher conducted a preliminary pilot study at ten secondary schools in the Motheo district of the Free State Province. The pilot study was conducted during February 2005 to determine the current status of training of Economics teachers in the NCS, as well as the extent to which these teachers were applying cooperative learning as a teaching strategy in their classrooms. A structured closed questionnaire was designed and delivered to these ten schools and collected one week after completion. Interviews were arranged and conducted with the heads of the Economics programmes at these schools. A summary of the results of the pilot study identified the following areas for further investigation:

- 70% of respondents indicated that they were inadequately trained in the NCS for Economics;
- 65% of respondents indicated that at their respective schools, quality resource materials for Economics were insufficient or unavailable;
- 72% of respondents indicated that more in-service training in effective teaching strategies applicable to the teaching of Economics, such as small-group work, group discussions, role-play, simulations and cooperative learning, should be implemented to enhance learner knowledge, skills, values and attitudes;
- 60% of respondents indicated that training in the design and use of different assessment methods, instruments and strategies applicable to Economics was needed to ensure learner progression; and

- 63% of respondents indicated that more district support programmes should be conducted in subject planning and reflective teaching.

After conducting the pilot study, the researcher registered the research project with the Free State Department of Education. In the following paragraphs the research design of this study is outlined.

The rationale for piloting this study was to validate the research study and to make it more reliable in terms of internal consistency of the results.

5.3 PREPARING FOR THE EMPIRICAL INVESTIGATION

5.3.1 Permission

A questionnaire (Appendix A) and interview schedule (Appendix B) were designed and forwarded to the Directorate: Quality Assurance of the FSDoE in order to seek permission to conduct the research project. Permission was granted for the questionnaires and interviews to be conducted under certain conditions (see Appendix H).

5.3.2 Sample

The respondents were purposefully selected from the Education Management Information Systems (EMIS) database sent to the researcher by the Directorate: Quality Assurance. The researcher selected these secondary schools from the five districts offering the subject Economics, as indicated in table 5.1.

Table 5.1 FSDoE educational districts offering the subject Economics

Name of district	Schools per district	Questionnaires mailed
Xariep	9	5
Motheo	61	60
Lejweleputswa	45	40
Thabo Mofutsanyane	68	55
Fezile Dabi	46	40
Total schools	**229**	**200**

Source: FSDoE (2007)

In this study the researcher purposefully selected and arranged interviews with learning facilitators for Economics in all five education districts of the FSDoE. According to the guidelines on sample size, as stipulated by Alexander (2004:285) and Krejcie and Morgan (1970:607-610), at least 132 (66%) of the 200 mailed questionnaires would have had to be returned to meet the validity requirement for the investigation.

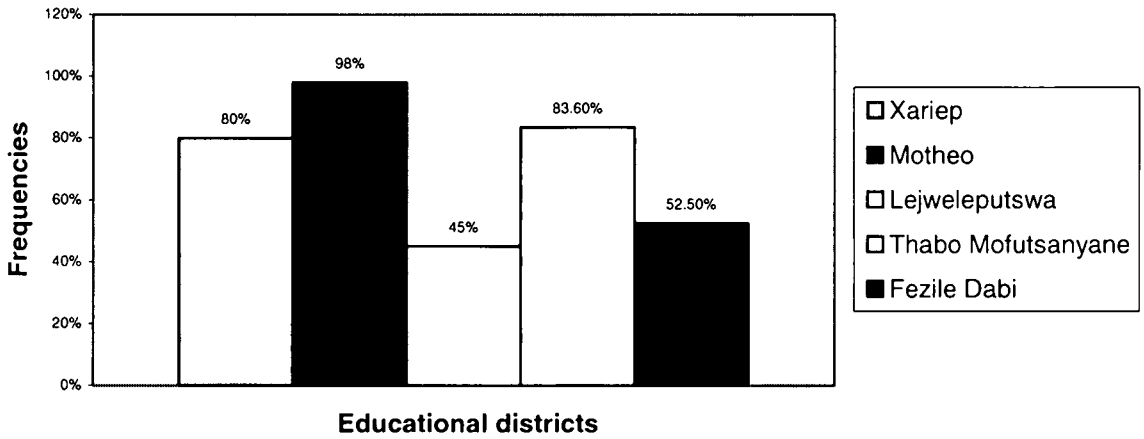
5.3.3 Response rate

The EMIS Unit of the FSDoE provided a list of schools with Economics registered as a subject (cf. 5.3.2, table 5.1). Two hundred questionnaires were mailed directly to the selected schools. The responses received are indicated in table 5.2 and graph 5.1.

Table 5.2 Responses from schools presenting Economics per district

Education district	Schools per district	Mailed questionnaires	Completed questionnaires received	Return rate per district
Xariep	9	5	4	80%
Motheo	61	60	59	98%
Lejweleputswa	45	40	18	45%
Thabo Mofutsanyane	68	55	46	83.6%
Fezile Dabi	46	40	21	52.5%
Total schools	**229**	**200**	**148**	**74%**

Graph 5.1 Responses from Economics teachers



The Motheo educational district had a return rate of 98%, while Lejweleputswa had the lowest return rate at 45%. Furthermore, the usable response rate of 74% of questionnaires completed by the total schools presenting Economics in the Free State is regarded as sufficient for purposes of this study.

The next paragraph provides an explanation of the rationale for the computation of data.

5.3.4 Computation of data

The questionnaires were encoded and submitted to the Department of Statistics at the University of the Free State. The Statistical Package for the Social Sciences (SPSS) Primer was used to do the computation.

The following statistical instruments were used to statistically analyse the data:

- Frequencies with respect to all the questions in the questionnaire were calculated. These results were also expressed in percentages. According to Peil (1982:185) certain researchers look down upon the use of percentages in statistical analysis, but it is of great value to laypeople and even researchers inexperienced in basic statistical data, allowing them to understand the data more easily.
- A test for reliability of the research results, namely Cronbach's alpha coefficient, was done on thirteen of the twenty-two questions.
- A Pearson's chi-square test for correlation coefficient was used to determine the comparison between mean scores for all the questions.
- A factor analysis, namely the Kaiser-Meyer-Olkin measurement, was used to calculate and determine the sampling adequacy of the teaching principles of the NCS for Economics. This sampling adequacy for question 18 and question 19 was statistically analysed.

5.3.5 Reliability of research results

Reliability indicates the accuracy with which the sample represents the accuracy of the broader universe of responses (Cohen, Manion & Morrison, 2003:118; Gray, 2004:207-208). This, according to De Vos, *et al.* (2005:167-172), depends on the accuracy and precision with which the measuring instrument measures.

The reliability of a data-gathering instrument or test refers, in general terms, to the degree of consistency the instrument displays in measuring that which it is supposed to measure (Gray, 2004:206-210). The Cronbach alpha coefficient indicates a measure of internal consistency in that it indicates the degree to which all the items in a test measure the same attribute (Huysamen, 1993:125). Furthermore, Starborn (2006:1) mentions that Cronbach's alpha is an appropriate test to use to assess the internal consistency of scales that are computed from Likert items.

To test the reliability of the research results, Cronbach's alpha coefficient was calculated for questions 7, 8, 10, 11, 13, 18, 19, 22, 23, 24, 25, 26 and 27.

The alpha coefficient covers values from 0 to 1 and is applied to multipoint formatted questions, as in the case of this study. The higher the score, the more reliable the data rating of 0.7 is acceptable (Gray, 2004:206). The Cronbach alpha coefficient tests the internal consistency of a model or survey (Starborn, 2006:1-2). Cronbach's α (alpha) has an important use as a measure of the reliability of a research questionnaire for this study. A reliability test, namely Cronbach's alpha coefficient, was done to test the reliability of the questions and to assess the reliability of the research results of the research questions of this study.

Cronbach's alpha is calculated by (Starborn, 2006:1-2).

$$\frac{N}{N-1}\left(\frac{\sigma_X^2-\sum_{i=1}^{N}\sigma_{Y_i}^2}{\sigma_X^2}\right)$$

where N is the number of components (items or testlets), σ_X^2 is the variance of the observed total test scores, and $\sigma_{Y_i}^2$ is the variance of component *i*.

Table 5.3 indicates the reliability coefficient of questions 7, 8, 10, 11, 13, 18 and 19, which employed a 4-point Likert scale.

Table 5.3 Cronbach's alpha coefficient for seven items in terms of the current status regarding training in the NCS for Economics

Item no.	Aspects in questionnaire	Reliability coefficient
7	Level of training in NCS-FET	0.8867**
8	Implementation of NCS-FET	0.8705**
10	Aspects of NCS-Economics	0.8918**
11	Problem areas of NCS-FET	0.8805**
13	Essentials included in NCS-FET	0.9881**
18	Teaching principles of Economics	0.9457**
19	Components for assessment in Economics	0.8797**
Overall		**0.9061****

Cronbach's α (alpha) **0.9061 > 0.7

The reliability coefficient of the current status regarding the training of Economics teachers in the NCS for Economics is high, ranging from 0.8705 to 0.9881. The overall reliability coefficient is also high (0.9061).

Table 5.4 indicates the reliability coefficient of questions 22, 23, 24, 25, 26 and 27, which also employed a 4-point Likert scale.

Table 5.4 Cronbach's alpha coefficient for six of the items in relation to cooperative learning

Item no.	Aspects in questionnaire	Reliability coefficient
22	Use of cooperative teaching techniques	0.8501**
23	Achievement of cooperative learning outcomes	0.8788**
24	Advantages of CASS in teaching	0.8720**
25	Experiences of cooperative learning in Economics	0.8752**
26	Areas of cooperative learning use in Economics	0.8654**
27	Effective use of cooperative learning groups	0.8876**
Overall		**0.8715****

Cronbach's α (alpha) **0.8715 > 0.7

The reliability coefficient indicating the use of cooperative learning in the classroom is high, ranging from 0.8501 to 0.8876. The overall reliability coefficient is also high (0.8715).

Table 5.5 shows the reliability coefficient of questions 7, 8, 10, 11, 13, 18, 19, 22, 23, 24, 25, 26 and 27, which employed a 4-point Likert scale.

Table 5.5 Cronbach's alpha coefficient for all items in relation to each of the questions on thirteen of the items regarding the current status of training in the NCS for Economics and the use of cooperative learning

Item no.	Aspects in questionnaire	Reliability coefficient
7	Level of training in NCS-FET	0.8867
8	Implementation of NCS-FET	0.8705
10	Aspects of NCS-Economics	0.8918
11	Problem areas of NCS-FET	0.8805
13	Essentials included in NCS-FET	0.9881

18	Teaching principles of Economics	0.9457
19	Components for assessment in Economics	0.8797
22	Use of cooperative teaching techniques	0.8501
23	Achievement of cooperative learning outcomes	0.8788
24	Advantages of CASS in teaching	0.8720
25	Experiences of cooperative learning in Economics	0.8752
26	Areas of cooperative learning use in Economics	0.8654
27	Effective use of cooperative learning groups	0.8876
Overall		**0.8888****

Cronbach's α (alpha) **0.8888 > 0.7

The alpha values of questions indicated in table 5.5 are high, indicating an overall high reliability of 0.8888.

The reliability coefficient of the current status regarding the training of Economics teachers in the NCS for Economics and the use of cooperative learning is high, ranging from 0.8457 to 0.9881.

It can thus be concluded that the reliability coefficient of the 13 items is greater than 0.7 in relation to one another, while the actual reliability coefficient is also high, which indicates high internal consistency or reliability of this research study.

5.3.6 Validity of the research study

A measuring instrument is valid if it measures what it is supposed to measure (Cohen *et al.*, 2003:128-129; De Vos *et al.*, 2005:167-172; Gray, 2004:206-210). The measuring instrument must also do what it is supposed to do. Validity thus comes down to the supposition that the measuring instrument must measure the concept under investigation and that this measurement must be accurate (De Vos *et al.*, 2005:177-178).

To ensure valid results, it is imperative that the content of the data-gathering instrument is representative of the body of knowledge of the scientific field it covers. Content validity of a test therefore refers to the degree to which the contents of the test are representative of the applicable body of knowledge (Cohen *et al.,* 2003:128-129; Gray, 2004:207; Huysamen, 1993:120). When this is applied to the questionnaire used in this survey, it simply means that the contents covered by this questionnaire are the different aspects of training in the NCS and the application of cooperative learning by Economics teachers within the FSDoE.

If the contents of the questionnaire are related to the different aspects of training and teaching of Economics, as discussed in chapters 2, 3 and 4, it shows that the contents of the questionnaire are indeed representative of the existing body of knowledge on the training and learning of Economics teaching. Furthermore, to ensure accurate measurement, the questionnaire used in this survey was presented during the pilot study. The usable response rate of 74% of the total schools presenting Economics within the FSDoE is regarded as sufficient for purposes of this study.

According to the guidelines on sample size, as stipulated by Krejcie & Morgan (1970:607-610) and Alexander (2004:285), at least 132 (66%) of the 200 mailed questionnaires would have had to be returned to meet the validity requirement for the investigation. Accordingly to the results, the survey can be regarded as valid.

5.3.7 Pearson's chi-square of correlation

Measures of relationship are used to indicate the degree to which two sets of scores are related or covaried (Cohen *et al.*, 2003:193-194; Gray, 2004:207). Relationship in this context of the study refers to the tendency of two variables or sets of data to vary consistently. A Pearson's product-moment coefficient of correlation – one of the best-known measures of association – is a statistical

value ranging from -1.0 to +1.0 and expressing this relationship in quantitative form. The coefficient is represented by the symbol χ^2 = $p<0.05$. Pearson's correlation coefficient was used to determine the relationship between question 10 and question 11.

5.3.8 Factor analysis of variables

The rationale for conducting the factor analysis was to compare the relationship sampling adequacy for the importance of the teaching principles of the NCS for Economics (question 18) and how often, statistically, the respondents were using information for assessment in Economics (question 19). Cohen *et al.* (2003:354) mention that the purpose of factor analysis is to reduce the number of variables and to detect structure in relationships between variables.

Factor analysis is a means of determining the nature of underlying patterns among a large number of variables. It is particularly appropriate in research where researchers aim to impose an orderly simplification upon a number of interrelated measures (Cohen *et al.*, 2003:354-355; Gray, 2004:207-209).

The Kaiser-Meyer-Olkin measurement was used to calculate and to determine the sampling adequacy for question 18 and question 19, which must be greater than 0.5 for a satisfactory analysis of the data.

Furthermore, Barlett's test of sphericity was also used to determine the relationship strength among variables between questions 18 and 19. Rotation sums of squared loading were calculated to rotate the factor solutions with the covariation in the data as initial solution. A varimax rotation was calculated and a results value of 1.0 (significant) and a loading of 0.0 means that there was non-significant data output (Cohen *et al.*, 2003:354-355).

5.4 THE QUANTITATIVE RESEARCH INSTRUMENTS

The researcher embarked on an empirical investigation employing a quantitative method of study.

In the quantitative phase of this research study, the researcher employed a structured mailed questionnaire to establish the current status of pre- and in-service training of Economics teachers at Free State secondary schools. Furthermore, the researcher used a qualitative method of research by conducting interviews with learning facilitators to become familiar with the current training and empowerment of Economics teachers, as well as how cooperative learning may be applied as a teaching strategy in the classroom.

5.5 THE QUESTIONNAIRE

The rationale for using a questionnaire lies in the fact that it is a widely used and useful instrument for collecting survey information and providing structured, often numerical data, the fact that it is able to be administered without the presence of the researcher, and because it is often straightforward to analyse. According to Plug, Meyer, Louw and Gouws (cited in Kotze, 1999) the questionnaire can be seen as a range of specific questions on a particular topic to be answered by a respondent. Questionnaires are research tools by means of which respondents are asked to respond to the same set of questions in a predetermined order. In the following paragraphs the researcher outlines the design of a questionnaire, the advantages of the questionnaire, the disadvantages of the questionnaire, the special design features for this study, the sample size for this study, questionnaire administration, and the analysis of the data collected from the questionnaires.

5.5.1 Design of the questionnaire

A questionnaire is an instrument with open-ended or closed-ended questions or statements to which a respondent must respond. Different kinds of questionnaires can be distinguished, such as mailed or posted questionnaires, telephonic questionnaires, or group questionnaires. The questionnaire is a quantitative data collection tool and is normally distributed to large numbers of respondents (De Vos *et al.*, 2005:167; Gray, 2004:206-208; Leedy & Ormrod, 2001:202-204).

5.5.1.1 Guidelines for writing effective questions

Cohen, Manion and Morrison (2000:105), De Vos *et al.* (2005:167), Gray (2004:206-208) and Leedy and Ormrod (2001:202-204) suggest the following guidelines for writing effective questions or statements:

- **Construct the instrument in such a way that it reflects quality**

  A questionnaire that appears to have been put together haphazardly will not elicit high returns. During the process of constructing the questionnaire, revisions may be necessary in order to eliminate ambiguous or unnecessary items.

- **Make items clear**

  An item achieves clarity when all respondents interpret it in the same way. It often happens that perspectives, words or phrases that make perfect sense to the researcher are unclear to the respondents. Vague and ambiguous words such as "few", "sometimes" and "usually" should be avoided.

- **Avoid double-barrelled questions**

  A question should be limited to a single concept. Double-barred questions contain two or more ideas, and frequently the word "and" is used in the item.

Example: "Do you have a good relationship with your students and learning facilitator?" It is possible that the respondent will agree with one part of the statement but disagree with the other part.

- **Respondents must be competent to answer**

It is important that the respondents are able to provide reliable information, especially with questions that ask respondents to recall specific incidents.

- **Questions should be relevant**

If respondents are asked to respond to questions that are unimportant to them or which deal with things about which the respondent has insufficient information, the respondent will respond carelessly and such information will be misleading.

- **Phrase question items so that they can be understood by every respondent**

The vocabulary of the items or statements used should be non-technical and should be geared to the least-educated respondent. Construct sentences that are short and simple:

- Avoid negative items;
- Avoid biased items;
- Keep items short;
- A questionnaire is not a test;
- Pilot study the questionnaire;
- Phrase questionnaire items so as to avoid bias or prejudice that might predetermine a respondent's answer.

5.5.1.2 Types of items in the questionnaire

Questionnaires for research purposes usually consist of two or more sections:

- The biographical section, where the respondents respond to questions regarding personal issues important to the researcher; and
- The main section, where respondents respond to questions or statements directed at the issues being investigated in the research.

5.5.1.2.1 *Biographical section*

The researcher decided to design Section A as the biographical section aimed at determining the current status of in-service Economics teachers at Free State secondary schools. Figure 5.1 provides an example of the content of the biographical section of the questionnaire (Appendix A).

Figure 5.1 Example of biographical section

1. Onderwysdistrik *Educational district*	Fezile Dabi	1
	Lejweleputswa	2
	Motheo	3
	Thabo Mofutsanyane	4
	Xariep	5
2. Geslag *Gender*	Manlik / *Male*	1
	Vroulik / *Female*	2
3. Onderwyservaring (aantal jare in onderwysprofessie) *Teaching experience (number of years in teaching profession)*		
4. Onderrig ervaring van Ekonomie (aantal jare vakonderrig) *Teaching experience in Economics (number of years teaching subject)*		
5. Hoogste akademiese kwalifikasie *Highest academic qualification*	Graad 12 / *Grade 12*	1
	Ekonomie I / *Economics I*	2
	Ekonomie II / *Economics II*	3
	Ekonomie III / *Economics III*	4
	Honneurs / *Honours*	5
	Meesters / *Master's*	6
	Doktors / *Doctorate*	7
6. Hoogste professionele kwalifikasie	HOD(S) / *HED(S)*	01

Highest professional qualification	NGOS(S) / *PGCE(S)*	02
	HOD(N) / *HED(PG)*	03
	UOD / *UED*	04
	BA Ed, BA Econ Ed, B Econ Ed	05
	BEd IV	06
	B Ed Hons	07
	MEd	08
	PhD	09

5.5.1.2.2 *Main section*

There are many ways in which the main section of a questionnaire can be constructed and in which responses can be given. The type of items in the questionnaire depends on the advantages, uses and limitations of options. The following are examples of closed-ended question types (Cohen *et al.*, 2000:247-248; De Vos *et al.*, 2005:456-457; Fouché, 1998:161-173; Gray, 2004:107-109):

- Dichotomous questions (figure 5.2) have only two response possibilities, for example "YES" or "NO".

Figure 5.2 Example of dichotomous question

	YES	NO
Do you have a passion for Economics?	X	

- Ordinal (scale) questions
- Multiple-choice questions

Three or more responses are provided to the respondent. The categories would have to be discrete and would have to exhaust the possible range of responses. This type of question can be quickly coded and aggregated to give frequencies of responses. Multiple-choice questions (figure 5.3) have parallel, multiple elements of a variable.

Figure 5.3 Example of multiple-choice question

To what level have you been trained as a teacher for the NCS FET?	
Higher Diploma in Education	1
BA Ed / BCom Ed / B Econ Ed	2
Postgraduate	3
In-service training	4
None received	5

- Likert scale questions

A Likert scale (figure 5.4) is a scale in which items represent different sub-concepts of the measured object and responses are represented to indicate different degrees of agreement or disagreement with the item (Cohen *et al.*, 2000: 253-254; Fouché, 1998:171-173; Gray, 2004:400).

Figure 5.4 Example of a Likert scale

To what extent have you used the following cooperative learning techniques when presenting Economics in your classroom?				
Areas of cooperative learning technique usage	Not at all	Small extent	Large extent	Very large extent
Small-group work	1	2	3	4
Jigsaw	1	2	3	4
Group investigation	1	2	3	4
Quiz bowl	1	2	3	4
Research project	1	2	3	4
Teams-tournaments-games	1	2	3	4
Simulation	1	2	3	4
Role-play	1	2	3	4

- **Rank-order questions**

Rank-order questions (figure 5.5) identify options from which respondents can choose to identify priorities in preference or intensity. In rank ordering, a list of

items is set out and the respondent is required to arrange the items in rank order (Cohen *et al.*, 2000:252; Gray, 2004:196-197).

Figure 5.5 Example of rank-order question

The following components are important in achieving learning outcomes and assessment standards for Economics
Rank these components in order of importance by allocating a value of 1 to the most important component, a value of 2 to the second-most important component, etc.

Lesson outcomes	
Learning content	
Teaching methods	
Teaching media	
Assessment	
Subject didactics	
Demonstration of outcomes	

5.5.2 Advantages of a questionnaire

Gray (2004:206-208), Smit, Mahlangu and Hurter (in Kotzé, 1992:257-260) and Leedy and Ormrod (2001:202-2-3) highlight the following advantages of mailed questionnaires:

- As the most widely used primary data-gathering techniques, considerable space will be devoted to the design and construction of item format;
- The structured item format response questionnaires fit the objective of the research;
- Suitable for a relatively large audience in a structured standardised question response;
- Ideal for an analytical approach exploring relationships between variables;
- Low cost in terms of both time and money;
- The inflow of data is rapid and from many respondents;
- Respondents can complete the questionnaire at a time and place that suits them;

- Data analysis of structured closed questions is relatively simple, and questions can be coded quickly;
- Respondents' anonymity can be assured; and
- Respondents enjoy a high degree of freedom in completing the questionnaire.

5.5.3 Disadvantages of a questionnaire

De Vos *et al.* (2005:167) and Gray (2004:206-208) highlight the following disadvantages of mailed questionnaires:

- There can be a high rate of non-response, and the timely distribution of the questionnaires can be difficult;
- Complex questionnaires requiring in-depth thought will also show a low response rate;
- Sometimes not all posted or e-mailed questionnaires are returned or else they are returned late;
- Respondents sometimes complete the questionnaire with a laissez-faire attitude, which influences the validity and reliability of responses;
- Items and instructions in some sections of the questionnaire can be unclear and inaccurate;
- Respondents may refuse to respond to items in the questionnaire that they consider to be of a sensitive nature; and
- Lack of mail delivery and high rates of illiteracy on the part of the respondents can create problems.

5.6 DESIGN OF THE QUESTIONNAIRE FOR THIS STUDY

The researcher decided to use and design a 4-point Likert scale closed-ended questionnaire aimed at determining the current status of in-service training in the NCS and the use of cooperative learning as a teaching strategy at Free State

secondary schools. The rationale for a close-ended structured questionnaire (Appendix A) was based on an extensive study of the relevant literature. The researcher sent 300 questionnaires to Economics teachers at Free State secondary schools. To ensure that the 300 Economics teachers were representative of the Free State, the researcher drew a random sample of respondents in accordance with the EMIS database.

According to Nielsen and Buchana (1991:278) the structured questionnaire is an effective measuring instrument to determine the attitudes and opinions of respondents. The 4-point Likert scale questionnaire that was designed consisted of the following sections:

- Section A : Biographical information
- Section B : National Curriculum Statement training
- Section C : National Curriculum Statement for Economics
- Section D : Cooperative learning as a teaching strategy for Economics

5.6.1 Sampling size: Validity of the sample

According to Cohen *et al.* (2000:105), De Vos *et al.* (2005:160) and Gray (2004:407) validity is an important key to effective research measurement, which is a requirement for both quantitative and qualitative research in this study. The degree to which data in a research study is accurate and credible determines the size of the random sample.

Foddy (1993:193) points out that the validity of question construction must be borne in mind. The information required and the encoding of items in the questionnaire needs to cover the research issues that have been specified in the questionnaire. The researcher ensured validity of the sample by employing questionnaires and interviews, because the researcher intended to measure the status of the training of Economics teachers in the NCS and the extent to which

teachers were using cooperative learning when teaching Economics. According to the guidelines on sample size, as stipulated by Alexander (2004:285) and Krejcie and Morgan (1970:607-610) at least 132 (66%) of the 200 mailed questionnaires would have had to be returned to meet the validity requirement for the investigation.

The researcher purposefully distributed two hundred mailed questionnaires to secondary schools presenting Economics as a subject. This was a purposeful sampling selection of schools. The researcher received one hundred and forty-eight (148) completed questionnaires from the respondents – a return rate validity of 74%. After receiving the completed questionnaires, all questionnaires were encoded for statistical analysis at the Computer Support Services Section of the University. The outcome of the descriptive and inferential statistical analysis of the data was produced through the Statistical Package for the Social Sciences (SPSS) program.

5.7 CONCLUSION

This chapter discussed the research design in preparation of an empirical investigation employing a quantitative method of study. In the quantitative phase of the investigation, the researcher employed the reasons for applying a structured questionnaire to establish the status of in-service training of Economics teachers at Free State secondary schools. In the research design the researcher focused on preparing for the empirical investigation by seeking permission to conduct research within the geographical area, selecting respondents, using research instruments such as questionnaires and interviews for the collection of data, recording and analysing data. The information gathered during the study is statistically presented and analysed in chapter 6.

CHAPTER 6

ANALYSIS AND INTERPRETATION OF RESEARCH RESULTS

6.1 INTRODUCTION

The overall aim of this study was to design a framework as a model for the implementation of cooperative learning as a teaching strategy for Economics teachers in the Further Education and Training (FET) phase in Free State secondary schools. In the preceding chapters a literature study describes the National Curriculum Statement (NCS) for Economics with specific reference to Economics as a social science and cooperative learning as a teaching strategy.

To achieve the aim of this study, an empirical investigation was conducted to gather information on these specific research questions:

- What is the current status regarding the training of Economics teachers in the NCS in Free State secondary schools?
- To what extent do these teachers apply cooperative learning as a teaching strategy in their classrooms?

The analysis and interpretation of the research results is done by means of the measurement frequencies for respondents in the different educational districts, with data being presented in frequency tables, histograms and pie charts in accordance with the four sections of the questionnaire. Furthermore, a Pearson's r for correlation means was used to determine the statistical significance of differences between mean scores (questions 10 and 11).

6.2 ANALYSIS OF THE QUANTITATIVE INVESTIGATION

6.2.1 Demographics of Economics teachers

Questions 1 to 6 pertained to the personal particulars of respondents – such as gender, teaching experience, academic qualifications and professional qualifications – per educational district to determine the current status of Economics teachers in the FSDoE. This information is presented in table 6.1.

Table 6.1 Summary of demographics regarding Economics teachers (n=148)

Personal particulars of Economics teachers	Respondents of school (N=148)		Fezile Dabi (N=21)		Lejweleputswa (N=18)		Motheo (N=59)		Thabo Mofutsanyane (N=46)		Xariep (N=4)	
	f	%	f	%	f	%	f	%	f	%	f	%
Gender												
Male	**61**	**41.2**	11	52.4	8	44.4	15	25.4	25	54.3	2	50
Female	**87**	**58.8**	10	47.6	10	55.6	44	74.6	21	45.7	2	50
Teaching experience												
Professional												
1-10	**75**	**50.6**	13	61.9	7	38.9	33	55.9	21	45.7	1	25
11-20	**57**	**38.6**	6	28.6	10	55.5	18	30.5	20	43.5	3	75
21-30	**13**	**8.8**	2	9.5	1	5.6	7	11.9	3	6.5		
31+	**3**	**2.0**					1	1.7	2	4.3		
Subject teaching												
1-10	**111**	**75.0**	14	66.7	13	72.2	51	86.4	29	63.0	4	100
11-20	**31**	**20.9**	5	23.8	4	22.2	7	11.9	15	32.6		
21-30	**5**	**3.4**	2	9.5	1	5.6	1	1.7	1	2.2		
31+	**1**	**0.7**							1	2.2		

Academic qualification												
Grade 12	**19**	**12.8**					14	23.8	4	8.7		
Economics I	**9**	**6.1**	2	11.1	2	11.1	3	5.1	2	4.3	1	25
Economics II	**39**	**26.4**	7	33.3	9	50.0	11	18.6	11	23.9	1	25
Economics III	**70**	**47.3**	12	57.1	6	33.3	25	42.4	26	56.5	1	25
Honours	**10**	**6.8**			1	5.6	5	8.5	3	6.5	1	25
Master's	**1**	**.7**					1	1.7				
Professional qualification												
HED(S)	**37**	**25.0**	5	23.8	5	27.8	11	18.6	15	32.6	1	25
PGCE	**37**	**25.0**	11	52.3	4	22.2	6	10.2	15	32.6	1	25
UED	**49**	**33.1**	2	9.5	5	27.8	29	49.2	8	17.4	1	25
BEd Hons	**24**	**16.2**	3	14.2	4	22.2	13	22.0	8	17.4	1	25
MEd	**1**	**0.7**										

From table 6.1, the following can be ascertained:

- **Gender**

The vast majority (58.8%) of Economics teachers in the Free State Province were women, with the largest occurrence in the Motheo educational district (74.6%), which also had the lowest occurrence of male Economics teachers (25.4%). Male respondents comprised 41.2% of Economics teachers in all five educational districts of the FSDoE.

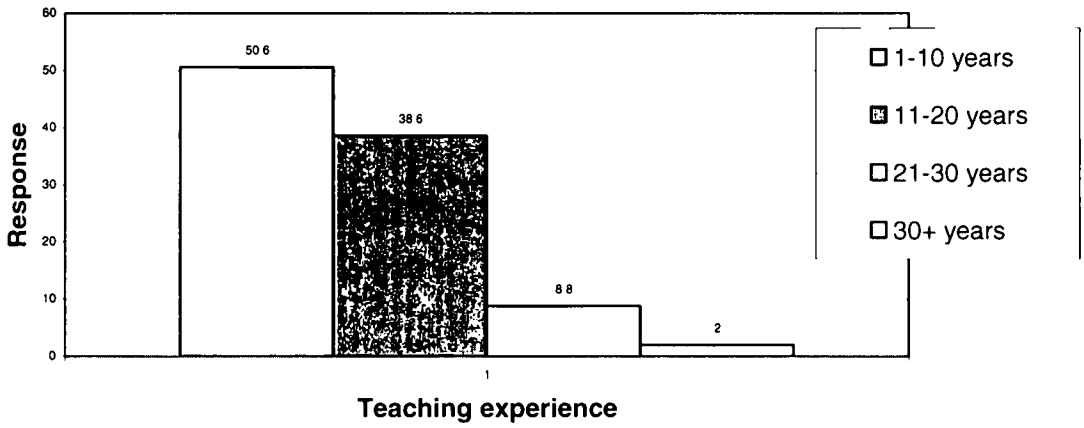
- **Professional teaching experience**

The mean score of 2.422 and the median score of 2.0 are respectively greater than and equal to the average of 2.0. Table 6.1 indicates that the majority of the respondents (50.6%) in the FSDoE had more than 10 years of professional teaching experience, with the Fezile Dabi district showing the most teaching experience with 61.9%. The Thabo Mofutsanyane educational district showed a 4.2% response rate with more than 31 years of teaching experience, which was

more teaching experience than any of the other districts. The professional teaching experience data is presented in graph 6.1.

Graph 6.1 Professional teaching experience

Mean: 2.422
Median: 2.00

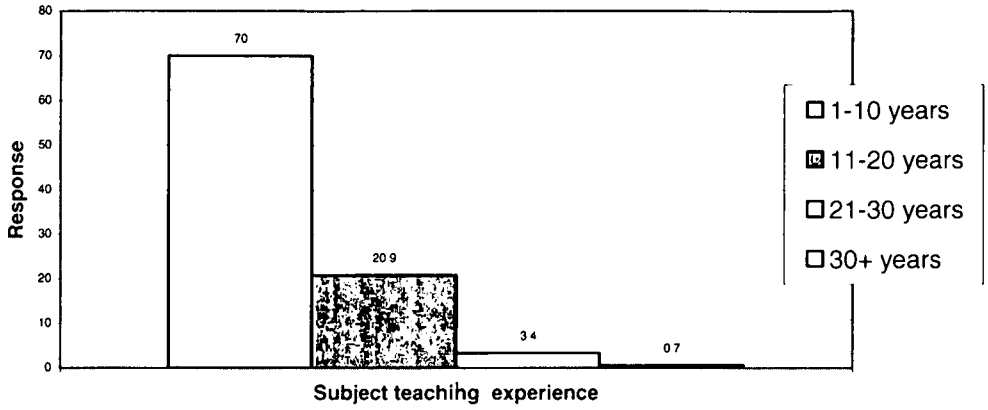


- **Subject teaching experience**

Table 6.1 and graph 6.2 indicate that most of the respondents (70%) fell within the group range of 1-10 years of subject teaching experience, implying that the majority of Economics teachers had 10 years of subject teaching experience. A second group of respondents (20.9%) fell into the 11-20 years range, followed by 3.4% in the 21-30 years range and 0.7% in the 31+ years range. According to table 6.1 the Fezile Dabi district showed the greatest majority (9.5%) of subject teaching experience of 30 years and more compared to other educational districts. The Motheo educational district showed the highest level of subject teaching experience with a response rate of 86.4% within the range of 1-10 years compared to the other districts. The mean score of 3.002 and the median score of 2.0 are respectively greater than and equal to the average of 2.0.

Graph 6.2 Subject teaching experience

Mean: 3.002
Median: 2.0



- **Academic qualifications**

The results reflected in table 6.1 clearly indicate that the majority (47.3%) of Economics teachers were qualified in Economics III, while 26.4% had Economics II, followed by 6.15% with Economics I and 12.8% with Grade 12 Economics. Only 6.8% of respondents were qualified at Honours level and 0.7% at Master's level in Economics. Respondents were generally well qualified for teaching the subject Economics within the FSDoE.

- **Professional qualifications**

The results reflected in table 6.1 clearly indicate that the majority (33.1%) of Economics teachers were professionally qualified with a University Diploma in Education (UED). Furthermore 25.0% were qualified with a Postgraduate Certificate in Education (PGCE) or a Higher Education Diploma (HED). Only 16.2% of respondents were qualified with a Baccalaureus Educationis at Honours level, while 0.7% were in possession of a Master of Education qualification. The majority of Economics teachers were well qualified to teach the subject.

6.2.2 Current status of training in the NCS

6.2.2.1 Level of training as a teacher for the NCS in the FET phase

This question (question 7) was asked to ascertain the level of training received by teachers for the NCS in the FET phase in the five educational districts. Table 6.2 and graph 6.3 illustrate the teachers' level of training for the NCS in the FET phase.

Table 6.2 Level of training as a teacher for the NCS in the FET phase

			Level of training for NCS (n=148)									
χ^2 Value	p-value (p)*	Mean	HED		B Econ Ed		Post-graduate		In-service training		No training	
			f	%	f	%	f	%	f	%	f	%
3.891	.952	3.72	5	3.4	16	10.8	19	12.8	84	56.8	24	16.2

* $p<0.05$ for significance df.8

Table 6.2 shows the significance of chi-square as .952, so the relationship between level of training as a teacher for the NCS in the FET phase and qualification is not statistically significant. This implies that there is no significance in the different levels of training for the NCS as indicated by the respondents, but there is an indication that 16.2% of respondents needed urgent training in the NCS. In graph 6.3 the mean score of 2.72 and the median score of 2.0 are respectively greater than and equal to the average of 2.0.

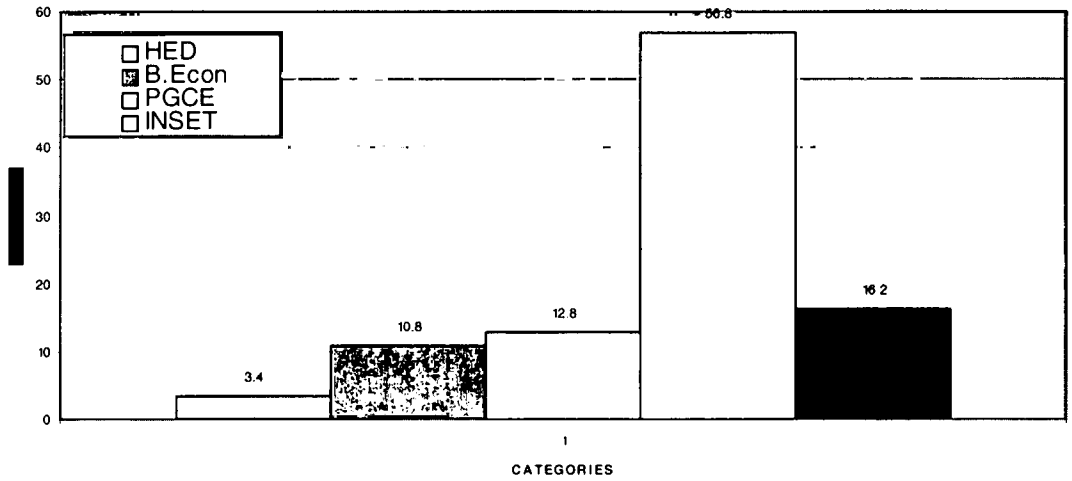
The majority (56.8%) of Economics teachers in all five educational districts indicated that they were trained (INSET) in the implementation of the NCS in the FET phase, with only 16.2% of Economics teachers indicating that they were not trained in the NCS in the FET phase. Most (56.8%) of the Economics teachers had received training through different in-service training workshops offered by the learning facilitators of the FSDoE, and only 16.2% had received training

during initial teacher training. Furthermore, 12.8% of Economics teachers indicated that no training in the NCS in the FET phase had been received.

Graph 6.3 Level of training as an Economics teacher

Mean: 2.72

Median: 2.00



6.2.2.2 Attitude towards the implementation of the NCS for Economics in the FET phase

Question 8 was asked to determine the attitude towards the implementation of the NCS for Economics in the FET phase and to partly answer the research question regarding the current status of training. Table 6.3 and graph 6.4 illustrate the attitude of Economics teachers towards the implementation of the NCS for Economics in the FET phase.

Table 6.3 Attitude towards the implementation of the NCS for Economics

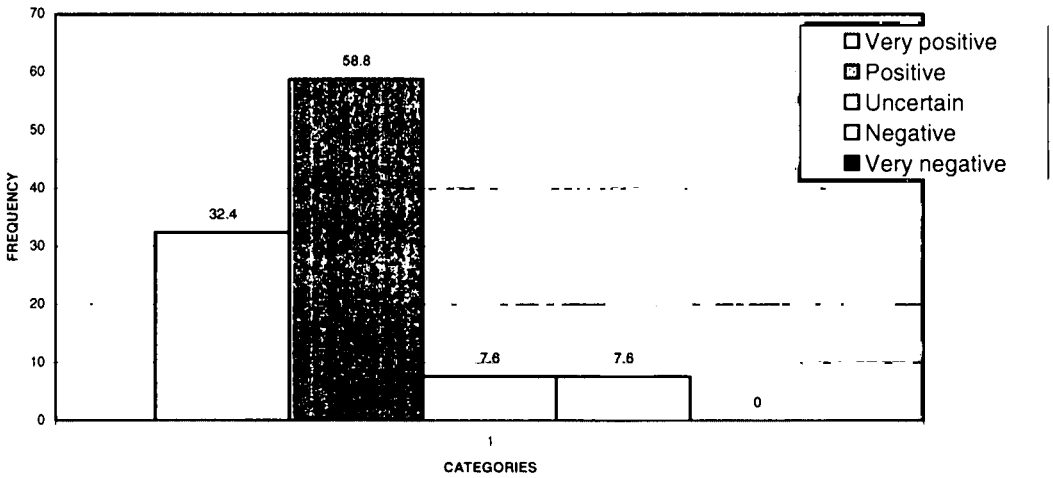
			Attitude towards implementation of NCS (n=148)									
χ^2 *Value*	p-value (p)*	Mean	Very positive (VP)		Positive (P)		**Uncertain** (U)		Negative (N)		Very negative (VN)	
			f	%	f	%	f	%	f	%	f	%
4.859	.562	1.95	39	32.4	87	58.8	11	7.6	11	7.6	0	0

* $p<0.05$ for significance df. 10

According to table 6.3, the significance of the chi-square is .562, which is more than .05, so the relationship between teachers' attitude towards the implementation of the NCS for Economics in the FET phase is not statistically significant. This implies that there is no significance in teachers' attitude towards the implementation of the NCS. Overall, 91.2% of respondents were positive about the implementation, compared to 15.2% who were negative about it. This breakdown furthermore shows that 32.4% of respondents were very positive about the implementation compared to only 7.6% who were negative about the implementation of the NCS for Economics.

Graph 6.4 Attitude towards implementation of NCS for Economics

Mean:2.651 *Median:2.000*



The mean score of 2.651 and the median score of 2.000 are respectively greater than and equal to the average of 2.0. Graph 6.4 indicates that 32.4% of Economics teachers responded very positively and 58.8% positively towards the implementation of the NCS for Economics in the FET phase. Only 7.6% of respondents were uncertain and 7.6% responded negatively towards the implementation of the NCS for Economics in the province.

6.2.2.3 Training in the implementation of the NCS for Economics

Question 9 was asked to ascertain the extent to which Economics teachers were trained to implement the NCS for Economics in their respective classrooms and the degree to which this partly answered the research question pertaining to the current status of training in the NCS for Economics.

Table 6.4 Training in the implementation of the NCS for Economics

	Respondents (n=148)			
I am sufficiently trained to implement the NCS for Economics	YES		NO	
	f	%	f	%
	92	**62.1**	56	**37.9**

The majority (62.1%) of respondents indicated that they were sufficiently trained in all aspects of the new curriculum to implement the NCS for Economics, while only 37.9% regarded themselves as insufficiently trained.

Graph 6.5 Training in the NCS for Economics

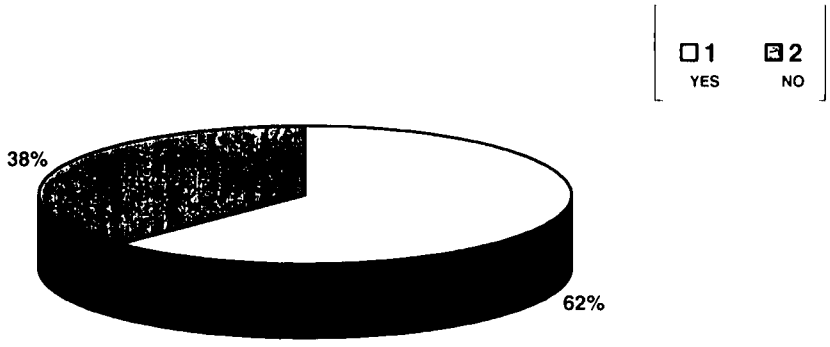


Table 6.4 and graph 6.5 reveal that 62.1% of respondents indicated in question 9 that they were sufficiently trained to implement the NCS for Economics, while 37.9% were insufficiently trained to implement the NCS for Economics.

6.2.2.4 Change in opinion about the NCS for Economics

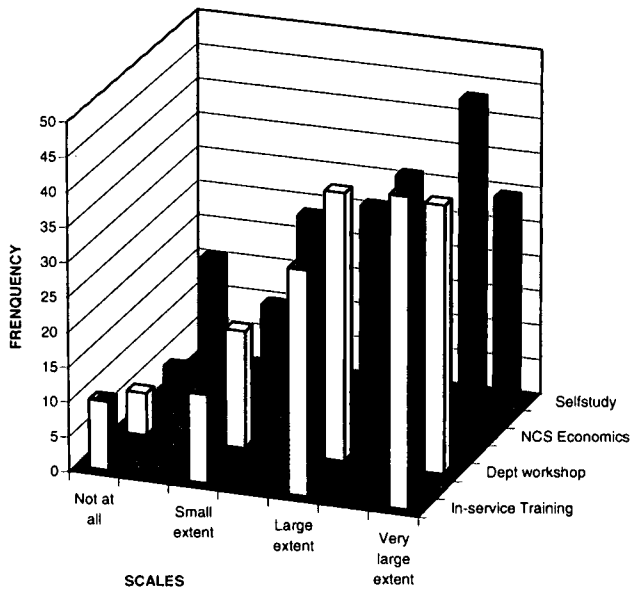
Question 10 was asked to ascertain the extent to which in-service training, departmental workshops, a course in the NCS for Economics and self-study would change Economics teachers' opinions about the NCS in the FET phase. Table 6.5 and graph 6.6 illustrate the different changes in teachers' opinions towards the curriculum of the NCS for Economics.

Table 6.5 Change in opinion about the NCS for Economics

	Respondents (n=148)							
Aspects for change	Not at all		Small extent		Large extent		Very large extent	
	f	%	f	%	F	%	f	%
In-service training	15	10.1	19	12.8	48	32.4	66	44.6
Departmental workshops	9	6.1	25	16.9	57	38.5	57	38.5
NCS Economics course	7	4.7	23	15.5	46	31.5	72	48.6
Self-study	22	15.5	35	23.6	46	31.1	44	29.7
Overall								

Graph 6.6 Change in opinion about the NCS for Economics

Mean: 2.72 Median: 2.0



The mean score of 2.72 and the median score of 2.0 are respectively greater than and equal to the average of 2.0.

The majority of Economics teachers indicated that to a very large extent in-service training (44.6%), departmental workshops (38.5%) and courses in the NCS for Economics (48.6%) would change their opinion about the NCS for Economics in the province, while to a large extent self-study (31.1%) would change their opinion in this regard.

In the following paragraph the current status regarding training in the NCS for Economics within the FSDoE is statistically analysed in order to answer the research question.

6.2.2.5 Current status regarding training in the NCS for Economics within the FSDoE

Table 6.6 Current status of training in the FSDoE and the importance of Economics teachers' responses

Training aspects	Current training	Importance	Difference in means	Significance (P)*
	(N=148)	(N=148)		
	Mean	Mean		
In-service training	2.8329	3.1800	-0.3471	0.297
Departmental workshops	3.2720	3.8391	-0.5671	0.460
NCS Economics course	3.2455	3.8921	-0.6466	0.340
Self-study	2.7441	2.8720	0.1279	0.256
Overall	**3.0236**	**3.4458**	**-0.4222**	**0.338**

The difference is statistically significant if $P < 0.05$

Table 6.6 draws a comparison between the current status and desired status regarding the training of respondents within the FSDoE. Overall, respondents indicated that the current status of training (mean = 3.0236) and the importance

of training in the NCS for Economics (mean = 3.4458) would definitely change their opinion regarding the implementation of the NCS in the FSDoE. The overall difference between the mean scores regarding the current status of training among respondents is, however, not statistically significant, while the relationship between training and the importance of the NCS for Economics aspects is also not statistically significant at .338. This indicates that the respondents did indeed understand the importance of training in the NCS for Economics, as the overall mean score is greater than 3.

Respondents also considered all of the aspects of training in the NCS for Economics to be very important, since the overall mean for this is 3.4458. Furthermore, the respondents viewed in-service training as not being an aspect that would change their opinion regarding the NCS for Economics, since the mean in this case is below 3. All the respondents perceived the importance of the different aspects covered in question 10 as being integral parts of the teaching of the NCS for Economics, since the scores for each individual aspect is greater than 3 for the evaluation of importance. Respondents indicated that training in the NCS for Economics would be important for effective teaching of the subject matter. Furthermore, in-service training and departmental workshops emerged as highly important for respondents in respect of training in the NCS for Economics.

The differences in the mean scores between training aspects and the importance of different aspects in the opinion of the respondents are statistically significant overall and for each of the listed aspects.

Table 6.7 Respondents sufficiently trained to implement the NCS for Economics

	YES (N=92)		Difference in means	Significance (P)*
	Male	Female		
	Mean	Mean		
I am sufficiently trained to implement the NCS for Economics	3.1886	3.6974	-0.5088	0.5623
	3.443			
	NO (N=56)			
	Male	Female		
	Mean	Mean		
	1.3657	2.0002	-0.6345	0.3518
	1.6829		**0.5717**	**0.4570**

The difference is statistically significant if P < 0.05

Table 6.7 shows that respondents indicated overall that they were sufficiently trained to implement the NCS for Economics (mean = 3.443), which shows a strong support of the current status of training aspects within the FSDoE.

Respondents indicated overall that they were not sufficiently trained to implement the NCS for Economics (mean = 1.6829). All the respondents perceived the importance of training and were very positive regarding the implementation of the NCS for Economics, since the score for each individual aspect is greater than 3 for the evaluation of the importance of the implementation. Male (mean = 3.1886) and female (mean = 3.6974) respondents indicated that they were sufficiently trained in the NCS for Economics.

The differences in the mean scores between "yes" and "no" regarding training to implement the NCS are not statistically significant overall, because the significance of the chi-square value is .4570, which is more than .05.

6.2.2.6 Current status of training of male respondents compared to female respondents in the NCS for Economics within the FSDoE

Table 6.8 Change in male and female respondents' opinions about the NCS for Economics compared to the current status within the FSDoE

Training aspects	Male	Female	Difference in means	χ^2 Value	p-value
	(N=60)	**(N=87)**			
	Mean	**Mean**			
In-service training	3.1142	3.1800	-0.0658	16.755	**0.033***
Departmental workshops	3.2120	3.2655	-0.0535	20.791	**0.008***
NCS Economics course	2.7012	2.8921	-0.1909	4.884	**0.020***
Self-study	2.7418	2.6733	0.0685	17.480	0.625
Overall	**2.9423**	**3.0027**	**-0.0604**		

The difference is statistically significant if $P < 0.05$

Table 6.8 compares the current status regarding the training of male and female respondents within the FSDoE. Overall, female respondents indicated a greater need for training (mean = 3.0027) than their male counterparts (mean = 2.9423). The overall difference between the mean scores regarding the current status of male and female respondents is, however, statistically significant.

Furthermore, both groups indicated that in-service training, departmental workshops and courses in the NCS for Economics ($p<0.008$; 0.020 and 0.033 – significantly high statistically) would definitely change their opinions regarding training in the NCS for Economics.

Both male and female respondents indicated that departmental workshops would change their overall opinion of the NCS for Economics. A course in the NCS for Economics and self-study were identified as the lowest priorities in terms of respondents' perceptions and opinions about the NCS for Economics for both

subgroups and there is no statistical significance in the difference of the mean scores with regard to the current status of training in the NCS. Although females showed a greater need with regard to all training aspects, it is the departmental workshop aspect that would most change their opinion of the implementation of the NCS.

6.2.2.7 Correlations: Pearson's product-moment coefficient of correlations

Pearson's product-moment coefficient of correlations was used to determine the relationship between teachers' opinions about the NCS in the FET phase and problem areas affecting the implementation of the NCS for Economics. Table 6.9 indicates the correlations of Pearson's product-moment coefficient.

Table 6. 9 Correlations: Pearson's r: Training needs and problem areas in the NCS for Economics

Question 11		Question 10			
		In-service training	**Dept. workshops**	**NCS Economics course**	**Self-study**
NCS policy documents	Pearson Correlation	.041	-.028	.120	.065
	Sig.(2-tailed)	.621	.734	.146	.431
	N	148	148	148	148
NCS principles unclear	Pearson Correlation	-.021	.021	.065	-.049
	Sig.(2-tailed)	.796	.801	.433	.555
	N	148	148	148	148
Insufficient training	Pearson Correlation	-.088	-.126	**.387****	-.104
	Sig.(2-tailed)	.290	.126	.293	.208
	N	148	148	148	148
Insufficient resources	Pearson Correlation	-.007	-.115	.027	-.062
	Sig.(2-tailed)	.928	.164	.747	.455
	N	148	148	148	148
Insufficient finances	Pearson Correlation	.015	-.052	-.087	.008
	Sig.(2-tailed)	.861	.529	.293	.918
	N	148	148	148	148

Insufficient infrastructure	Pearson Correlation	-.044	.-043	.020	-.106
	Sig.(2-tailed)	.593	.608	.808	.200
	N	148	148	148	148
Negative perceptions	Pearson Correlation	.053	.106	-.036	-.057
	Sig.(2-tailed)	.525	.063	.666	.495
	N	148	148	148	148
Insufficient training: assessment	Pearson Correlation	-.033	-.131	.064	-.065
	Sig.(2-tailed)	.686	.111	.442	.434
	N	148	148	148	148
Continuous assessment	Pearson Correlation	-.058	-.057	**.379 ****	-.036
	Sig.(2-tailed)	148	.489	.029	.668
	N		148	148	148
Setting of outcomes	Pearson Correlation	.019	-.012	-.041	.062
	Sig.(2-tailed)	.679	.886	.624	.452
	N	148	148	148	148
Selection of content	Pearson Correlation	-.073	-.114	-.043	-.085
	Sig.(2-tailed)	.483	.688	.606	.452
	N	148	148	148	148
Selection of teaching media	Pearson Correlation	-.020	-.035	**.259 ****	-.006
	Sig.(2-tailed)	.813	.675	.053	.946
	N	148	148	148	148
Selection of teaching methods	Pearson Correlation	-.029	-.046	**.377 ****	-.037
	Sig.(2-tailed)	.731	.580	.031	.653
	N	148	148	148	148

***. Correlation is significant at the 0.01 level (2-tailed)*

Table 6.9 shows that Pearson's r for insufficient training and a course in the NCS for Economics is .387. This indicates a moderate to positive, somewhat strong, relationship that is worth noting for the teaching of Economics. Furthermore, there is a correlation between insufficient training (.387) in continuous assessment (.379) and a course in the NCS for Economics (.379). This implies that there is a positive relationship and an association between the two variables. Lastly, the selection of teaching methods (.377) and a course in the NCS for Economics (.377) indicates a moderate to positive, somewhat strong, relationship that is worth noting for the teaching of Economics.

6.2.2.8 Extent of the effect of problem areas on the implementation of the NCS for Economics

Economics teachers were asked to indicate by means of question 11 what problem areas would have an effect on the successful implementation of the NCS for Economics. Table 6.10 indicates the problem areas affecting the implementation of the NCS for Economics.

Table 6.10 Extent of the effect of problem areas on the implementation of the NCS for Economics

Problem areas	Respondents (n=148)							
	Not at all		Small extent		Large extent		Very large extent	
	f	%	f	%	f	%	f	%
NCS policy documents vague	25	16.9	56	37.8	42	28.4	25	16.9
NCS principles unclear	25	16.9	56	37.8	41	27.7	26	17.6
Insufficient training	20	13.5	47	31.8	42	28.4	39	26.4
Insufficient resources	12	8.2	41	27.7	46	31.1	49	33.1
Insufficient finances	19	12.8	37	25.0	45	30.4	47	31.8
Insufficient infrastructure	18	12.2	37	25.0	51	34.5	42	28.4
Negative perceptions	15	10.1	57	38.5	49	33.1	27	18.2
Insufficient training: assessment	18	12.4	36	24.3	42	28.4	52	35.1
Continuous assessment	16	10.8	45	30.4	58	39.2	29	19.6
Setting of outcomes	19	12.8	54	36.5	47	31.8	28	18.9
Selection of content	19	12.8	48	32.5	57	38.5	24	16.2
Selection of teaching media	13	8.8	47	31.8	62	41.8	26	17.6
Selection of teaching methods	9	6.1	50	33.8	64	43.2	25	16.9

The majority of respondents indicated that to a very large extent they were insufficiently trained in assessment (11.8%) and that they were experiencing lack of resources such as LTSM (33.1%) and finances (31.8%). Furthermore, respondents indicated that continuous assessment (39.2%), selection of teaching

methods (43.2%), teaching media (41.8%), selection of content (38.5%) and infrastructure (34.5%) were to a large extent impacting on the implementation of the NCS for Economics in the province.

6.2.2.9 Means of the effect of problem areas on the implementation of the NCS for Economics

Table 6.11 Means of the effect of problem areas on the implementation of the NCS for Economics

Problem areas	Male (N=60) *Mean*	Female (N=87) *Mean*	Difference in means	χ^2 Value	p-value (p)**
NCS policy documents	2.5662	2.4368	0.1294	7.775	0.456
NCS principles unclear	2.5333	2.3333	0.2000	10.884	0.208
Insufficient training	2.9500	2.4712	0.4788	11.200	**0.031***
Insufficient resources	3.1333	2.7126	0.4207	10.242	0.248
Insufficient finances	3.1000	2.5977	0.5023	10.868	0.209
Insufficient infrastructure	2.9833	2.6781	0.3052	10.710	0.219
Negative perceptions	2.6333	2.5517	0.0816	5.000	0.758
Insufficient training: assessment	2.9500	2.7931	0.1569	5.843	**0.013***
Continuous assessment	2.7333	2.6206	0.1127	6.645	**0.029***
Setting of outcomes	2.7333	2.4482	0.2851	10.036	0.263
Selection of content	2.6166	2.5517	0.0649	4.959	0.762
Selection of teaching media	2.8500	2.5632	0.2868	6.160	0.629
Selection of teaching methods	2.8166	2.6321	0.1845	3.621	0.194

The difference is statistically significant if $P < 0.05$

Table 6.11 focuses on the problem areas impacting on the successful implementation of the NCS for Economics. Respondents indicated that insufficient training ($p < .031$) would have a definite effect on their planning regarding the implementation of the NCS for Economics documents at school

level. Furthermore, both male and female respondents indicated that they were receiving insufficient training in assessment ($p < .013$), and specifically identified continuous assessment ($p < .029$) as a highly significant problem area having an effect on the implementation of the NCS for Economics. This indicates a moderate to positive, somewhat strong, relationship that is worth noting for the training and teaching of the NCS for Economics.

6.2.3 NCS for Economics (Section C)

6.2.3.1 Essentials to be included in the NCS for Economics

Economics teachers were asked to indicate by means of question 13 what essentials should be included in the NCS for Economics. Table 6.12 and graph 6.8 indicate the essentials of the NCS for Economics.

Table 6.12 Essentials of the NCS for Economics

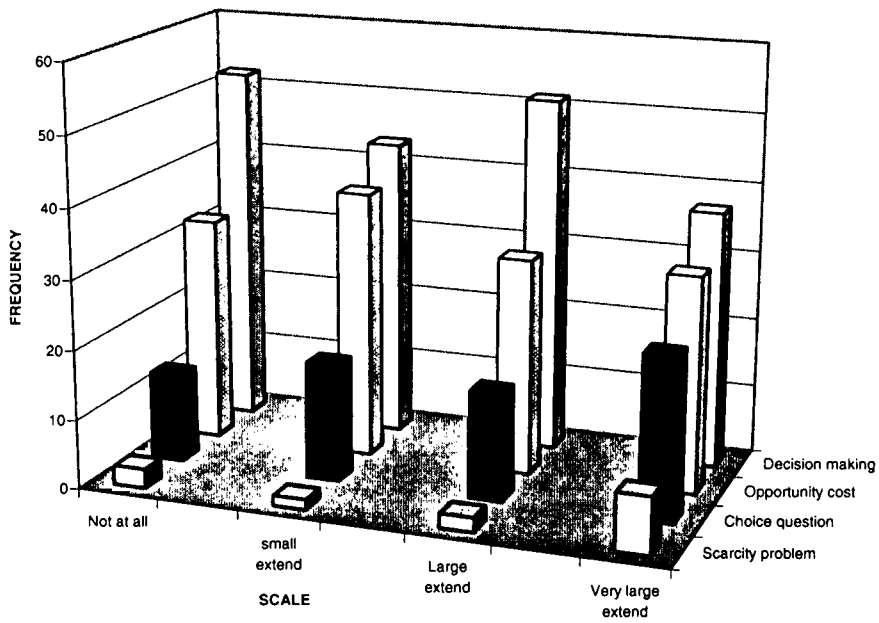
			Respondents (n=148)							
Essentials	Not at all		Small extent		Large extent		Very large extent		χ^2 Value	p-value
	f	%	f	%	f	%	f	%		
Scarcity problem	4	2.7	19	12.8	48	32.4	77	52.0	5.799	.446
Choice question	2	1.4	25	16.9	57	38.5	64	43.2	2.161	.904
Opportunity cost	3	2.0	23	15.5	46	31.1	76	51.3	6.026	.644
Decision-making	12	8.1	35	23.4	46	31.1	55	37.1	1.302	.972

The difference is statistically significant if $P < 0.05$

The mean score of 2.62 and the median score of 2.0 are respectively greater than and equal to the average of 2.0. According to table 6.12 and graph 6.7 the majority (84.4%) of respondents indicated that all the essentials of the NCS for Economics were to a large extent important for Economics teaching within the FSDoE. Only 15.6% of respondents indicated that the essentials were important to a small extent. All the p-values in table 6.12 indicate that there is no statistically significant difference at the 0.05 level. This implies that there is no significance in the respondents' attitude towards the essentials of the NCS for Economics.

Graph 6.7 Essentials of the NCS for Economics

Mean: 2.65 *Median: 2.00*



According to graph 6.7 the majority of Economics teachers in all five educational districts indicated that to a very large extent the scarcity problem (52.0%), the choice question (43.2%), the opportunity cost (51.3%) and decision-making (37.1%) were very important essentials to be included in the NCS for Economics. Some respondents indicated that to a large extent the choice question (38.75%)

and scarcity problem (32.4%) were essentials to be included in the NCS for Economics. Only twelve respondents indicated that decision-making (23.4%) was essential for inclusion in the curriculum for the NCS for Economics.

6.2.3.2 Learning outcomes for senior-phase Economic and Management Sciences (EMS)

The reason for asking question 14 was to determine to what extent the four learning outcomes for Economics must be incorporated in the learning area of Economic and Management Sciences in the senior phase of the GET band. Table 6.13 and graph 6.8 indicate the learning outcomes for senior-phase Economic and Management Sciences.

Table 6.13 Learning outcomes for senior-phase Economic and Management Sciences

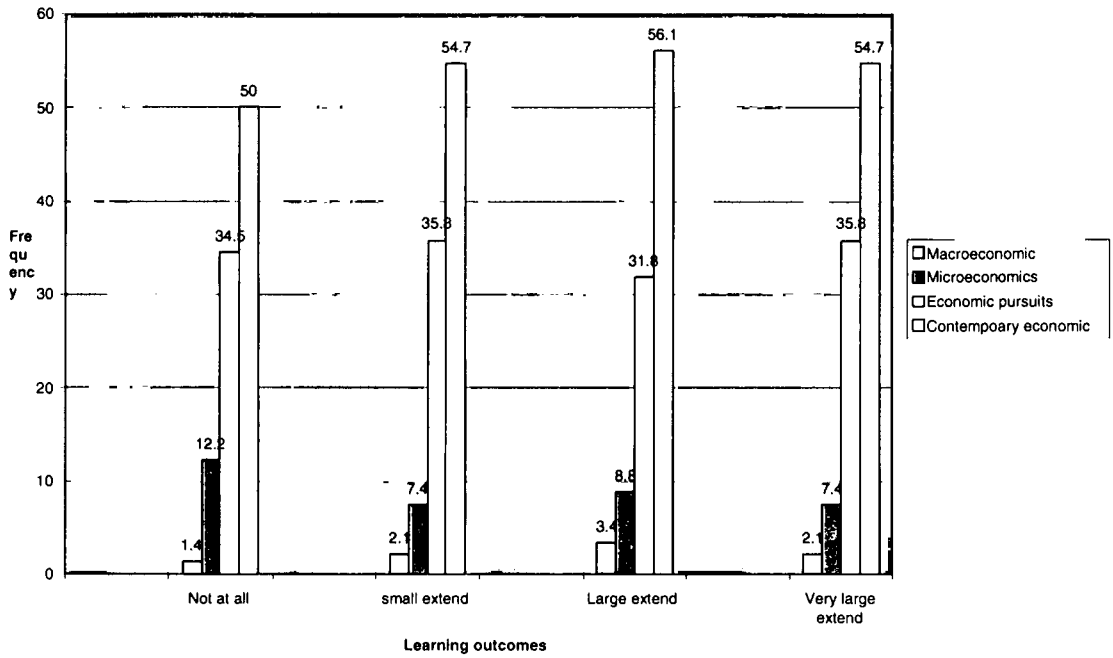
Learning outcomes in EMS (n=148)

	Not at all f		Small extent		Large extent		Very large extent		χ^2 Value	p-value
	F	%	f	%	f	%	f	%		
Macro economics	2	1.4	18	12.2	51	34.5	77	52.0	2.400	.966
Micro economics	3	2.1	11	7.4	53	35.8	81	54.7	4.642	.795
Economic pursuits	5	3.4	13	8.8	47	31.8	83	56.1	3.754	.879
Contemporary economic issues	3	2.1	11	7.4	53	35.8	81	54.7	4.053	.852

The difference is statistically significant if $P < 0.05$

In table 6.13 the significance of p-values (.966, .795, .879 and .852) is more than .05, so the relationship between learning outcomes for Economics in the FET phase and EMS in the GET phase is not statistically significant. Graph 6.8 indicates the teachers' responses in this regard.

Graph 6.8 Learning outcomes for senior-phase EMS
Mean: 2.76 *Median: 2.00*



The mean score of 2.76 and the median score of 2.0 are respectively greater than and equal to the average of 2.0. According to table 6.12 and graph 6.7 the majority of respondents indicated that macro economics (52.0%), micro economics (54.7%), economic pursuits (56.1%) and contemporary economic issues (54.7%) to a very large extent should be included in the EMS curriculum for content alignment and integration of the NCS for Economics in the FET phase. Only 53 respondents indicated that micro economics (35.8%) to a large extent must be included in the EMS curriculum in the GET band.

6.2.3.3 Learning outcomes for Economics

The reason for asking question 15 was to determine the extent to which the critical outcomes for Economics can contribute to the achievement of learning outcomes in Economics for grades 10-12. Table 6.14 and graph 6.9 indicate the role of critical outcomes in Economics.

Table 6.14 Critical outcomes for Economics

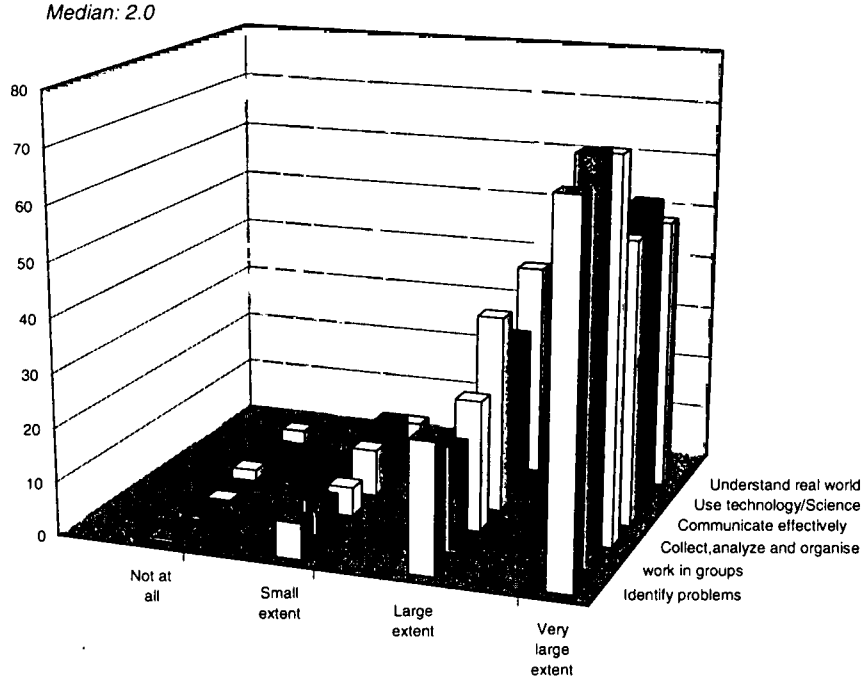
Critical outcomes for Economics (n=148)

	χ^2 Value	p-value	Not at all		Small extent		Large extent		Very large extent	
			f	%	f	%	f	%	f	%
Identifying and solving problems	3.052	.802	1	.7	10	6.8	36	24.3	101	68.2
Working effectively as a group	2.383	.967	2	1.4	10	6.8	29	19.6	107	72.3
Collecting, analysing and evaluating	3.715	.446	0	0	8	5.4	36	24.3	104	70.3
Communicating effectively	6.035	.643	3	2.1	13	8.8	54	36.5	78	52.7
Using science and technology	6.199	.625	4	2.7	16	10.8	44	29.7	84	56.8
Understanding the real world	8.336	.401	4	2.7	10	6.8	59	39.9	75	50.7

The difference is statistically significant if $P < 0.05$

In table 6.14 the significance of p-values is more than .05, so the relationship between critical outcomes for Economics in the FET phase is not statistically significant. Graph 6.8 indicates the teachers' responses in this regard.

Graph 6.9 Critical outcomes for Economics
Mean: 3.64 *Median: 2.0*



The mean score of 3.64 and the median score of 2.0 are respectively greater than and equal to the average of 2.0. According to table 6.14 and graph 6.9, in question 15 the majority of respondents indicated that all critical outcomes for Economics could to a very large extent contribute to the achievement of learning outcomes for grades 10-12. Respondents indicated that critical outcomes such as identifying and solving problems (68.2%), working effectively as a group and in a team (72.3%), and collecting, analysing and evaluating economic information (70.3%) would contribute to a very large extent to the achievement of learning outcomes for Economics.

Furthermore, communicating effectively (52.7%), applying and using science and technology (56.8%) and demonstrating an understanding of the world as a set of related systems (50.7%) would contribute to a large extent to the achievement of the learning outcomes for Economics.

6.2.3.4 Developmental outcomes for Economics

The reason for asking question 16 was to determine the extent to which the five developmental outcomes contribute to the achievement of learning outcomes in Economics for grades 10-12. Table 6.15 and graph 6.10 indicate the developmental outcomes for Economics.

Table 6.15 Developmental outcomes for Economics

			Respondents (n=148)							
Developmental outcomes	χ^2 value	p-value	Not at all		Small extent		Large extent		Very large extent	
			f	%	f	%	f	%	f	%
Reflecting on learning strategies	3.322	.768	1	.7	18	12.2	68	45.9	61	41.2
Participating as a responsible citizen	4.242	.374	0	0	23	15.5	56	37.8	69	46.6
Being culturally sensitive in social context	2.591	.628	0	0	24	16.2	68	45.9	56	37.8
Exploring career opportunities	2.635	.621	0	0	13	8.8	54	36.5	81	54.7
Exploring entrepreneurial opportunities	4.525	.340	0	0	9	6.1	36	24.3	103	69.6

The difference is statistically significant if $P < 0.05$

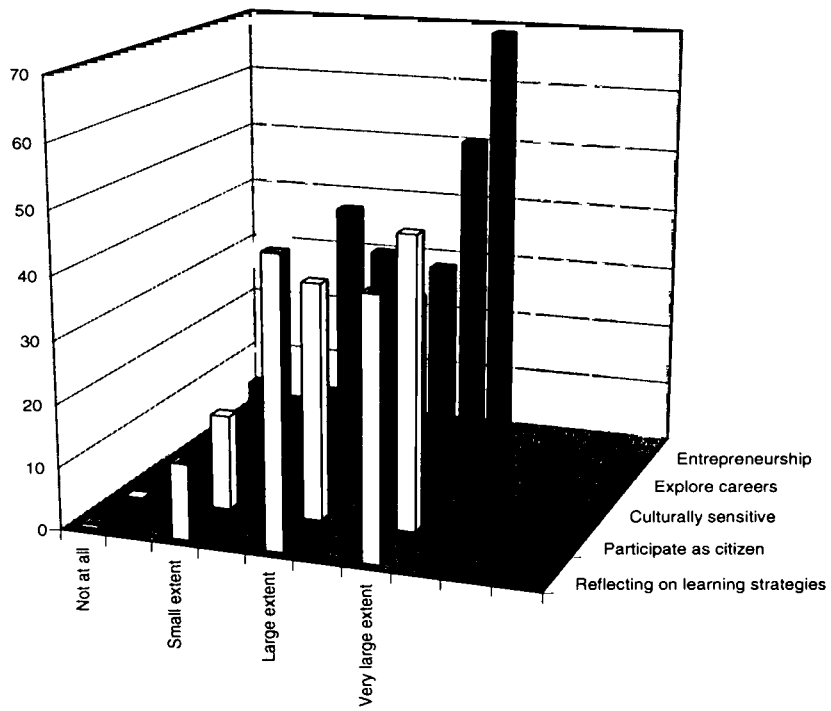
In table 6.15 the significance of p-values is more than .05, so the relationship between developmental outcomes for Economics in the FET phase is not statistically significant. The mean score of 3.61 and the median score of 2.0 are respectively greater than and equal to the average of 2.0.

In question 16, the respondents indicated that four developmental outcomes for Economics could to a very large extent (average 61.3%) contribute to the achievement of learning outcomes for grades 10-12. Respondents indicated that

developing entrepreneurial opportunities (69.6%), exploring and reflecting on a variety of learning strategies to learn more effectively (41.2%), participating as a responsible citizen in the life of the local, national and global community (46.6%), being culturally sensitive across a range of social contexts (45.9%), and exploring educational and career opportunities (54.7%) would to a very large extent enhance the achievement of learning outcomes for Economics in grades 10-12.

Graph 6.10 Developmental outcomes

Mean: 3,61 Median: 2,00



6.2.3.5 Ranking of components in teaching the Economics curriculum

The reason for asking question 17 was to determine which components are important for the achievement of learning outcomes and assessment standards for Economics. Table 6.16 and graph 6.11 indicate the rank of importance of components in teaching the Economics curriculum

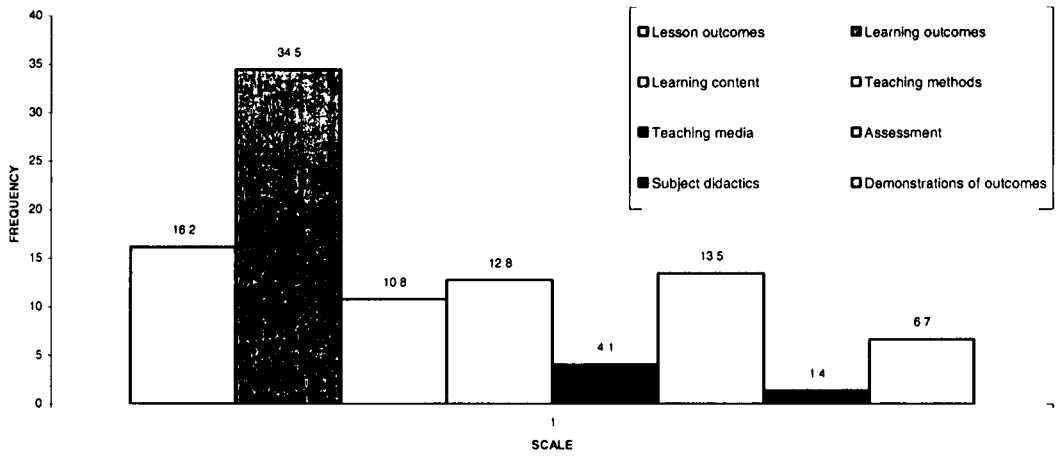
Table 6.16 Ranking of components of importance in teaching Economics

Components	N	Ranking order	Percentage
Lesson outcomes	24	2	16.2
Learning outcomes	51	1	34.5
Learning content	16	5	10.8
Teaching methods	19	4	12.8
Teaching media	6	7	4.1
Assessment	20	3	13.5
Subject didactics	2	8	1.4
Demonstration of outcomes	10	6	6.7

According to table 6.16 respondents ranked learning outcomes (34,5%) as most important component in teaching Economics because all learners must achieved the outcomes for the subject. Furthermore respondents indicated that lesson outcomes (16,2%) were also very important and it derives from the learning outcomes for teaching Economics. Respondents indicated that subject didactics (1,4%) as less important for teaching Economics.

Graph 6.11 Ranking of components of importance in teaching Economics

Mean : 2,56 *Median:2,00*



The mean score of 2.56 and the median score of 2.0 are respectively greater than and equal to the average of 2.0.

Respondents ranked learning outcomes (34.5%) as a very important component and teaching media (4.1%) as a less-important component in teaching the Economics curriculum.

6.2.3.6 Principles for the teaching of the NCS for Economics

By means of question 16, Economics teachers indicated the importance of the principles for the teaching of the NCS for Economics. Table 6.17 indicates the teachers' responses in this regard.

Table 6.17 Principles for the teaching of the NCS for Economics

Teaching principles	Respondents (n=148)							
	Not at all		Small extent		Large extent		Very large extent	
	f	%	f	%	f	%	f	%
Principle of suitability	3	2.1	12	8.1	71	48.0	62	41.9
Principle of totality	0	0	9	6.1	64	43.2	75	50.7
Principle of motivation	0	0	7	5.1	58	39.2	83	56.1
Principle of assessment	0	0	10	6.8	60	40.5	78	52.7
Principle of socialisation	0	0	14	9.5	69	46.6	64	41.2
Principle of activity	1	.7	13	8.8	63	42.6	71	48.0
Principle of individuality	1	3	29	19.6	55	37.2	61	41.2
Principle of clarity	3	2.1	24	16.2	62	41.9	59	39.9
Principle of equity	0	0	29	19.6	57	38.5	62	41.9
Principle of credibility	0	0	22	14.9	65	43.9	61	41.2
Principle of adaptability	5	3.4	22	14.9	65	43.9	56	37.8

Principle of learner centeredness	2	1.4	10	6.8	44	29.7	92	62.2
Principle of remediation	3	2.1	32	21.6	54	36.5	59	39.9
Principle of planning	10	6.8	18	12.2	49	33.1	71	48.0
Principle of mother-tongue instruction	10	6.8	25	16.9	42	28.4	71	48.0
Principle of relevance	0	0	17	11.5	62	41.9	69	46.6
Principle of differentiation	6	4.1	26	17.6	59	39.9	57	38.5
Principle of human resource development	3	2.1	17	11.5	60	40.5	68	45.6
Principle of clear focus	2	1.4	11	7.4	56	37.8	79	53.4
Principle of integration	0	0	11	7.4	57	38.5	80	54.1
Principle of progression	2	1.4	15	10.1	46	31.1	85	57.4
Principle of nation-building and non-discrimination	0	0	19	12.8	67	45.3	62	41.9
Principle of critical thinking and creativity	1	.7	7	4.7	31	20.9	109	73.6

In table 6.17, respondents indicated that to a very large extent the principles of critical thinking and creativity (73.6%), learner centeredness (62.2%) and assessment (52.7%) are extremely important in the teaching of Economics, followed by motivation (56.1%), progression (57.4%), integration (54.1%), clarity of focus (53.4%) and human resource development (45.6%), adaptability (38.7%), mother-tongue instruction (48.0%), equity and redress (41.9%) and activity-based instruction (48.0%).

6.2.3.7 Information regarding assessment in Economics

Economics teachers indicated by means of question 19 how often they were using information from components regarding assessment in Economics. Table 6.18 indicates the responses regarding information pertaining to assessment in Economics.

Table 6.18 Information regarding assessment in Economics

	χ^2 value	p-value	Assessment in Economics (n=148)							
			Not at all		Small extent		Large extent		Very large extent	
			f	%	f	%	f	%	f	%
Providing learners with marks/symbols	4.213	.648	1	.7	6	4.1	36	24.3	105	**70.9**
Feedback to learners	5.249	.512	0	0	8	5.4	32	21.6	108	**73.0**
Identifying learners with learning problems	7.806	.453	11	7.5	29	19.6	57	**38.5**	51	34.5
Diagnosing learners with learning problems	7.459	.280	9	6.1	41	27.7	59	**39.9**	39	26.4
Compiling a progress profile of learners	5.500	.481	4	2.7	13	8.8	60	40.5	71	**48.0**
Progression of learners to next grade	2.387	.684	0	0	4	2.7	53	35.8	91	**61.5**
Providing parents with information	9.320	.316	4	2.7	15	10.1	53	35.8	76	**51.4**
Effectiveness of teaching methods	8.027	.431	2	1.4	12	8.1	74	**50.0**	60	40.5
Planning effective teaching and learning situations	3.345	.765	0	0	21	14.2	69	**46.6**	58	39.2
Planning	3.494	.745	0	0	15	10.2	72	**48.6**	61	41.2

assessment techniques										
Checking whether learning outcomes/lesson outcomes are achieved	6.107	.635	4	2.8	10	6.8	62	41.9	72	**48.6**

The difference is statistically significant if $P < 0.05$

As can be seen in table 6.18, respondents indicated that feedback to learners (73.0%), providing learners with marks/symbols (70.9%), progression of learners to the next grade (61.5%) and providing parents with information regarding assessment (51.4%) are to a very large extent the most important aspects of information regarding assessment in Economics. To a large extent the effectiveness of teaching methods (50.0%), planning assessment techniques (48.6%), planning effective teaching and learning situations (46.6%), diagnosing learners with learning problems (39.5%) and identifying learners with learning problems (38.5%) are important when it comes to assessing learners in Economics. Respondents indicated that only to a small extent did they consider diagnosing (27.7%) and identifying (19.6%) learners with learning problems to be important information aspects when it comes to assessing learners.

6.2.3.7 Factor analysis between teaching principles and components for assessing Economics

The Kaiser-Meyer-Olkin (KMO) measurement was used to determine the sampling adequacy between variables in the questionnaire. This sampling adequacy for question 18 and question 19 (cf. Appendix A) was statistically analysed and would have had to be greater than 0.5 for a satisfactory analysis of the data. Tables 6.19 and 6.20 indicate the factor analysis of teaching principles and assessment in Economics according to the KMO measurement and Bartlett's test for measuring sampling adequacy.

Table 6.19 Factor analysis: Principles for the teaching of Economics

KMO measurement and Bartlett's test		
KMO measure of sampling adequacy		**.870**
Bartlett's test of sphericity	**Approx. chi-square**	1679.652
	df	253
	Sig.	**.000**

Total variance explained			
	Rotation sums of squared loadings		
Component	**Total**	**% of Variance**	**Cumulative %**
1	4.026	17.504	17.504
2	3.085	13.415	30.919
3	2.530	11.001	41.920
4	2.440	10.607	52.527
5	2.261	9.829	62.355
Extraction method: Principal component analysis			

*** . factor analysis is significant at the 0.5 level*

****. significant at the 0.05 level*

In order to assess the factorability of the data, I used Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity (cf.5.3.8) . The KMO values range from 0 to 1, with values over .870 suggesting that the data is adequate for factor analysis. The Bartlett's test of sphericity, should be significant ($p < .05$). so the KMO = .870; χx[253, N=148] = 1679.652, $p < .0001$). In table 6.19 the significance of p-value .870 is more than .05 of the five principal components of the factor analysis, so the relationship between teaching principles and assessment in Economics is statistically significant for the Kaiser-Meyer-Olkin measure of sampling adequacy. The significance of p-value (.05) for Bartlett's test of sphericity is .000, which implies that a strong relationship exists between five groupings/loading for teaching principles and assessment in Economics, which is statistically significant.

Table 6.20 Factor analysis: Components in the assessment of Economics

KMO measurement and Bartlett's test		
KMO measure of sampling adequacy		.776
Bartlett's test of sphericity	Approx. chi-square	569.220
	df	55
	Sig.	.000

Total variance explained			
	Rotation sums of squared loadings		
Component	Total	% of Variance	Cumulative %
1	3.028	27.532	27.532
2	1.970	17.908	45.439
3	1.881	17.102	62.541
Extraction method: Principal component analysis			

*** . factor analysis is significant at the 0.5 level*

****. significant at the 0.05 level*

In order to assess the factorability of the data, I used Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity (cf.5.3.8). The KMO values range from 0 to 1, with values over .776 suggesting that the data is adequate for factor analysis. The Bartlett's test of sphericity, should be significant ($p < .05$). so the KMO = .776; χx[55, N=148] = 569.220, $p < .0001$).

In table 6.20 the significance of p-value .776 is more than .5 of the three principal components of the factor analysis, so the relationship between teaching principles and assessment in Economics is statistically significant for the KMO measure of sampling adequacy. The significance of the p-value (.05) for Bartlett's test of sphericity is .000, which implies that a strong relationship exists between groupings/loadings for teaching principles and assessment in Economics, which is statistically significant.

6.2.4 Cooperative learning as a teaching strategy for Economics (Section D)

6.2.4.1 Average class time devoted to cooperative learning

Economic teachers indicated by means of question 20 how much overall class time in an average week was being devoted to cooperative learning activities in the subject.

Table 6.21 and graph 6.12 indicate the average class time being allocated to cooperative learning activities per average week.

Table 6.21 Average class time allocated to cooperative learning

Average class time	**Responses (N=148)**	
	f	%
No teaching time	89	**60.2**
1-29% of teaching time	509	**32.7**
30-59% of teaching time	9	**6.1**
60-100% of teaching time	0	**0**

Economic teachers indicated that their overall class time between 1-29% teaching time (32,7%) in an average week was being devoted to cooperative learning activities in the subject. Furthermore only 6,1% was allocated between 30-59% of teaching time to cooperative learning per average week. Lastly,

respondents indicated no teaching time (60,2%) in cooperative learning in an average week was allocated in teaching Economics.

Graph 6. 12 Average class time devoted to cooperative learning

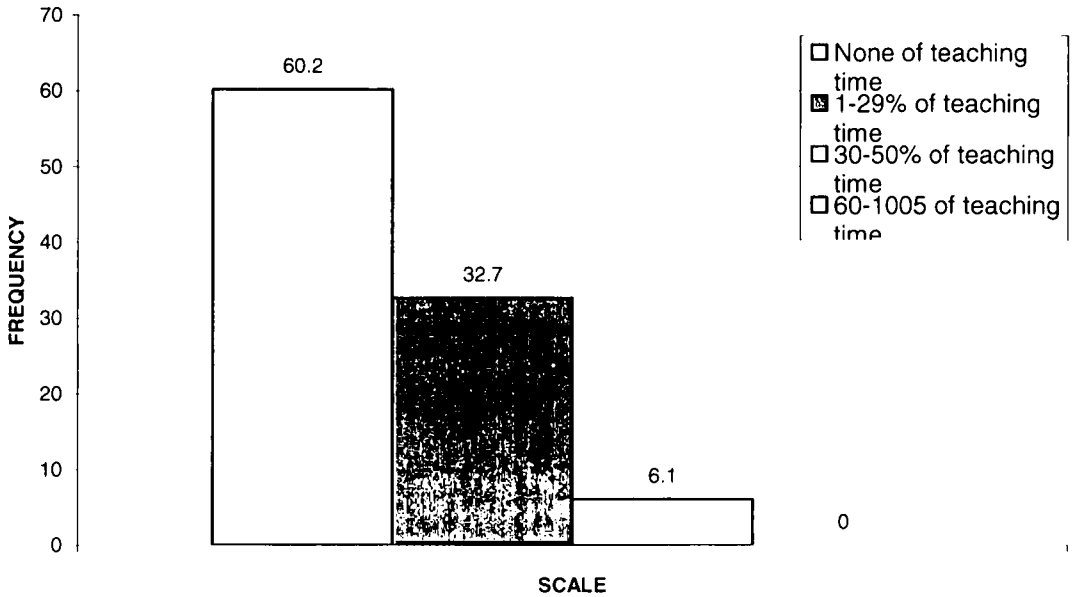


Table 6.21 and graph 6.12 show that 6.1% of respondents indicated that 30-59% of overall class time per week was being allocated to cooperative learning as a teaching strategy, while 32.7% indicated that 1-29% of overall class time per week was being allocated to cooperative learning. A majority of 60.2% of respondents indicated no teaching time in cooperative learning in an average week was allocated in teaching Economics.

6.2.4.2 <u>The role and task of the teacher in cooperative learning</u>

The reason for asking question 21 was to determine the role and task of the Economics teacher in cooperative learning. Table 6.22 indicates the responses regarding the importance of the role and task of the teacher in cooperative learning.

Table 6.22 Importance of the role and task of the teacher in cooperative learning

Role and task of the teacher in cooperative learning (n=148)

	χ^2 value	p-value	Not at all		Small extent		Large extent		Very large extent	
			f	%	f	%	f	%	f	%
Serving as facilitator	3.036	.932	3	2.1	7	4.7	30	20.3	108	73.0
Teaching social and cooperative skills	6.653	.574	2	1.4	9	6.1	34	23.0	103	69.6
Designing cooperative learning activities and dividing up groups	4.646	.590	0	0	9	6.1	47	31.8	92	62.2
Monitoring and controlling group activities	6.791	.559	2	1.4	6	4.1	37	25.0	103	69.6
Supporting group roles and responsibilities	5.211	.517	0	0	16	10.8	37	25.0	95	64.2
Supporting materials and assignments	6.349	.385	2	1.4	14	9.5	43	29.1	89	60.1
Providing for report-back sessions and rewarding group performance	9.768	.046	0	0	14	9.5	46	31.1	88	59.5

The difference is statistically significant if $P < 0.05$

In table 6.22 the significance of the p-values is more than .05, so the relationship between the importance of the role and task of the Economics teacher is not statistically significant. Table 6.22 show that the majority of respondents indicated that to a very large extent the most important roles and tasks of the Economics teacher are to facilitate learners (73.0%), empower cooperative and social skills (69.6%), design cooperative learning activities (62.2%), monitor and control group activities (69.4%), support the groups (64.2%), assign learning

materials to groups (60.1%) and report back on performance (59.5%). Some respondents indicated that to a large extent the most important roles and tasks of the Economics teacher are to design cooperative learning activities, divide learners up into groups (31.8%), hold report-back sessions and reward groups for their performance. Respondents indicated that to a small extent the roles and tasks of the Economic teacher are to support groups (10.8%) and supply them with materials and assignments (9.5%).

6.2.4.3 Cooperative learning techniques

The reason for asking question 22 was to determine the extent to which the Economics teachers were using cooperative learning techniques to achieve the learning outcomes. Table 6.23 and graph 6.13 reflect the teachers' responses in this regard.

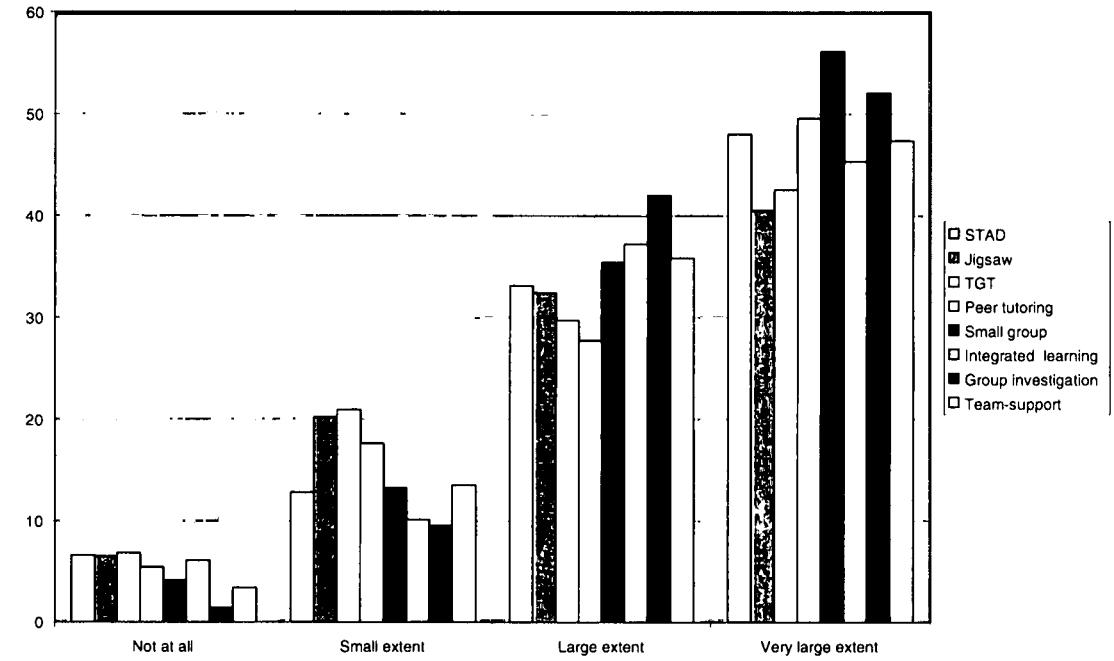
Table 6.23 Cooperative learning techniques

			Cooperative learning techniques (n=148)							
	χ^2 value	p-value	Not at all		Small extent		Large extent		Very large extent	
			f	%	f	%	f	%	f	%
Student teams-achievement divisions (STAD)	10.815	.212	9	6.1	19	12.8	49	33.1	71	48.0
Jigsaw technique	5.976	.650	9	6.1	31	20.9	48	32.4	60	40.5
Teams-games-tournaments (TGT)	20.727	**.008***	10	6.8	31	20.9	44	29.7	63	42.6
Peer tutoring	10.337	**.024***	8	5.4	26	17.6	41	27.7	73	49.3
Small-group teaching	81.374	**.000***	6	4.1	15	10.1	44	29.7	83	56.1
Cooperative integrated reading and comprehension groups	12.751	.121	9	6.1	21	14.2	51	34.5	67	45.3
Group investigations	17.414	**.026***	2	1.4	14	9.5	55	37.2	77	52.0
Team-support groups	39.599	**.000***	5	3.4	20	13.5	53	35.8	70	47.3

The difference is statistically significant if $P < 0.05$

In table 6.23 the significance of the p-values for TGT (.008 > .05), peer tutoring (.024 > .05), small-group teaching (.000 > .05), group investigations (.026>.05) and team-support groups (.000 > .05) are greater than .05, so the extent to which the Economics teachers were using cooperative learning techniques to achieve the learning outcomes is statistically significant.

Graph 6.13 Cooperative techniques
Mean: 2.33 Median: 2.00



Graph 6.13 indicates that the mean score of 2.33 and the median score of 2.0 are respectively greater than and equal to the average of 2.0. According to table 6.12 and graph 6.7 the majority of the respondents were very positive and to a very large extent indicated that all the cooperative learning techniques, such as STAD (48%), jigsaw technique (40.5%), TGT (42.6%), peer tutoring (49.3%), small-group teaching (56.1%), cooperative integrated reading and comprehension groups (45.3%), group investigations (52.0%) and team-support groups (47.3%), would definitely enhance the achievement of learning outcomes for Economics. Respondents positively indicated that to a large extent, group investigations (37.2%) and team-support groups (35.8%) would definitely

enhance the achievement of learning outcomes for Economics. Respondents indicated that to a small extent, the jigsaw technique (20.9%) and TGT (20.9%) would support the achievement of cooperative learning outcomes.

6.2.4.4 Cooperative learning outcomes for the teaching of Economics

The reason for asking question 23 was to determine to what extent cooperative learning outcomes could be achieved by implementing cooperative learning activities in the classroom. Table 6.24 indicates the teachers' responses in this regard.

Table 6.24 Cooperative learning outcomes

			Cooperative learning outcomes (n=148)							
	χ^2 value	p-value	Not at all		Small extent		Large extent		Very large extent	
			f	%	f	%	f	%	f	%
Improving learner performance	2.181	.902	1	.7	11	7.4	41	27.7	95	64.2
Enhancing inter-group relationships	3.905	.866	2	1.4	13	8.8	46	31.1	87	58.8
Positive interaction amongst learners	13.683	.090	2	1.4	10	6.8	37	25.0	99	66.9
Individual responsibilities	7.756	.458	1	.7	18	12.2	40	27.0	89	60.8
Face-to-face interaction	3.687	.719	1	.7	8	5.4	50	33.8	89	60.1
Social and small-group skills	1.520	.823	0	0	14	9.5	48	32.4	86	58.1
Reflecting on own work	6.315	.389	1	.7	8	5.4	48	32.4	91	61.5

The difference is statistically significant if $P < 0.05$

In table 6.24 the significance of the p-values for all cooperative learning outcomes is greater than .05, so the extent to which cooperative learning

classroom is not statistically significant for this question. The majority of respondents indicated that improving learner performance (64.2%), enhancing inter-group relationships (58.8%), positive interaction amongst learners (66.9%), individual responsibilities (60.8%), face-to-face interaction (60.1%), social and small-group skills (58.1%) and reflecting on own work (61.5%) can to a very large extent achieve the cooperative learning outcomes for the teaching of Economics

6.2.4.5 Advantages of continuous assessment (CASS) in achieving cooperative learning outcomes

Question 24 was asked to determine the responses regarding the advantages of continuous assessment (CASS) in achieving cooperative learning outcomes. Table 6.25 indicates the responses regarding the advantages of continuous assessment (CASS) in achieving cooperative learning outcomes.

Table 6.25 Advantages of continuous assessment (CASS)

Advantages of continuous assessment (CASS) (n=148)

	χ^2 value	p-value	Not at all		Small extent		Large extent		Very large extent	
			f	%	f	%	f	%	f	%
Providing the teacher with information	9.564	**.044***	1	.7	5	3.4	29	19.4	113	76.4
Providing the learners with perform targets	5.503	.239	0	0	4	2.7	44	29.7	100	67.6
Assessment over long periods	4.362	.625	5	3.4	16	10.8	56	37.8	71	48.0
Motivating learners to work throughout year	7.453	.489	2	1.4	5	3.4	31	20.4	110	74.3
Different assessment forms can be used	4.206	.649	1	.7	6	4.1	53	35.8	88	59.5
Enhancing knowledge, skills, values & attitudes	9.784	**.044***	1	.7	5	3.5	31	20.9	110	74.3

The difference is statistically significant if $P < 0.05$

According to table 6.25 the significance of the p-values for providing the teacher with information and enhancing knowledge, skills, values and attitudes are greater than .05, which implies that these particular advantages of CASS in achieving cooperative learning outcomes are statistically significant. The remaining advantages CASS in achieving cooperative learning outcomes are not statistically significant. Respondents indicated that providing the teacher with information (76.4%), motivating learners to work throughout the year (74,3%), enhancing knowledge, skills, values and attitudes (74.3%) and providing learners with performance targets (73.6%) to a very large extent are advantageous in achieving cooperative learning outcomes.

6.2.4.6 Experience in cooperative learning for the teaching of Economics

Question 25 was asked to ascertain the extent to which the teachers' experience in cooperative learning could enhance their teaching and contribute to the achievement of the learning outcomes. Table 6.26 indicates the teachers' responses in this regard.

Table 6.26 Economics teachers' experience in cooperative learning

Experience in cooperative learning (n=148)

	χ^2 value	p-value	Not at all		Small extent		Large extent		Very large extent	
			f	%	f	%	f	%	f	%
Discussed cooperative learning with other teachers and tried some of their ideas in the classroom	6.457	.374	66	44.6	40	27.0	34	23.0	8	5.4
Participated in an after-school in-service workshop on cooperative	12.809	**.012***	25	16.3	28	18.9	56	37.8	39	26.4

learning										
Participated in a district teachers' seminar day	3.416	.878	21	14.2	30	20.3	58	39.2	39	26.4
Took a credit course at a higher learning institute	5.373	**.017***	40	27.0	32	21.6	37	25.0	39	26.4
Attended an NGO workshop on cooperative learning	5.489	.704	42	28.4	45	30.4	31	20.9	30	20.4
Read an article on cooperative learning	4.111	**.002***	63	40.8	37	25.0	34	23.0	14	10.2

The difference is statistically significant if $P < 0.05$

According to table 6.26 the significance of the p-values for "participated in an after-school in-service workshop on cooperative learning" (.012>0.05), "took a credit course at a higher learning institute" (0.017>0.05) and "read an article on cooperative learning" (.002>.05) are statistically significant, because these teachers' experience in cooperative learning will enhance their teaching in Economics and contribute to the achievement of the learning outcomes. Respondents also indicated that to a large extent they had participated in an after-school in-service workshop on cooperative learning (37.8%) and in an educational district teachers' seminar day (39.2%), while to a very small extent they had attended an NGO workshop on cooperative learning (30.4%). Furthermore, 44.6% of respondents indicated that they had never discussed cooperative learning with other teachers or tried some of their ideas in the classroom, while 40.8% had never read an article on cooperative learning and 27.0% had not taken any credit course at a higher learning institute.

6.2.4.7 Use of cooperative learning techniques in the teaching of Economics

Question 26 was asked to ascertain the extent to which respondents were using cooperative learning techniques to teach Economics in their classrooms. Table 6.27 indicates the teachers' responses in this regard.

Table 6.27 Use of cooperative learning techniques in the teaching of Economics

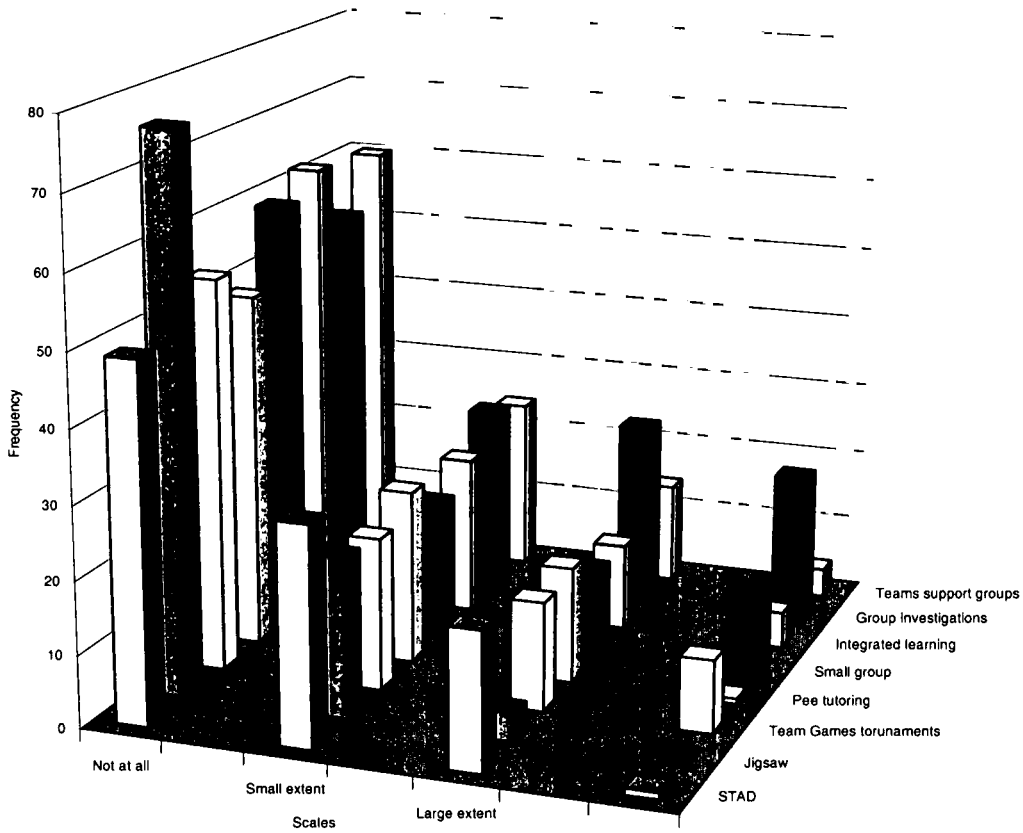
Use of cooperative learning techniques (n=148)

	χ^2 value	p-value	Not at all		Small extent		Large extent		Very large extent	
			f	%	f	%	f	%	f	%
Small-group work	7.336	.591	71	48.7	47	31.1	28	18.9	2	1.4
Jigsaw	8.755	**.031***	111	75.7	32	21.6	6	4.1	1	.7
Group investigation	2.339	.886	80	54.1	32,	21.4	22	14.9	14	9.5
Quiz bowl	75.270	**.000***	72	49.1	50	21.4	25	16.3	1	.7
Research project	4.187	.651	87	58.8	28	18.9	17	11.5	16	10.8
TGT	8.531	**.021**	91	61.5	32	21.6	17	11.5	8	5.4
Simulation	5.430	.490	78	52.7	38	25.7	38	25.7	32	21.6
Role-play	4.101	.667	88	59.5	35	23.6	20	13.5	5	3.5

The difference is statistically significant if $P < 0.05$

According to table 6.27 the significance of the p-values for jigsaw (.031>0.05), quiz bowl (.000>.05) and TGT (.021>.05) are statistically significant, because the respondents were not using these cooperative learning techniques at all in the teaching of Economics in their classrooms. Economic teachers must be trained in these cooperative learning techniques to achieve learning outcomes.

Graph 6.14 The use of cooperative learning techniques
Mean: 2,67 Median:2,00



According to graph 6.14 the mean score of 2.67 and the median score of 2.00 are respectively greater than and equal to the average of 2.0. The majority of respondents indicated that they were not at all applying any of the following cooperative learning techniques: Jigsaw (76%), TGT (62%), role-play (60%), research project (59%), group investigations (54%), simulation (53%), small-group work (49%) or quiz bowl (49%). Some respondents indicated that quiz bowls (34%) and small-group work (31%) were being used to a small extent in the teaching of Economics. Only simulations (22%) and research projects (11%) were being used by teachers to a very large extent in the teaching of Economics.

6.2.4.8 Group work in cooperative learning activities

Question 27 was asked to ascertain the extent to which respondents were using group work in cooperative learning activities. Table 6.28 reflects the teachers' responses in this regard.

Table 6.28 Group work in cooperative learning activities

			Group work in cooperative learning (n=148)							
	χ^2 value	p-value	Not at all		Small extent		Large extent		Very large extent	
			f	%	f	%	f	%	f	%
Providing the teacher with information	5.626	.466	14	9.5	46	31.1	52	35.1	36	24.3
Providing learners with performance targets	4.477	.612	13	8.8	34	23.0	63	42.6	38	25.7
Assessment over long periods	4.497	.610	6	4.1	32	21.6	70	47.3	40	27.0
Motivating learners to work throughout the year	4.121	.660	4	2.7	34	23.0	57	38.5	53	35.8
Different assessment forms can be used	4.813	.777	6	4.1	33	22.3	72	48.6	37	25.0
Enhancing knowledge, skills, values	6.824	.392	4	2.7	44	29.7	60	40.5	40	27.0

According to table 6.28 the significance of the p-values for all aspects of cooperative group work activities is not statistically significant, because respondents were not using group work at all in cooperative learning activities in the teaching of Economics in their classrooms. Respondents indicated that assessment over long periods (27.0%) was being used to a very large extent in cooperative learning activities. Furthermore, respondents indicated that to a large extent they were using performance targets for learners (42.6%), implementing different assessment forms (48.6%) and providing the teacher with information (35.1%) as long-term assessment tools.

6.2.4.9 Conclusion to the quantitative research results

The research results for respondents in the different educational districts were analysed and interpreted by means of the measurement of frequencies. A usable response rate of 74% of completed questionnaires was received from the total schools presenting Economics within the FSDoE, which can be regarded as sufficient for the purposes of this study. The statistical results of the quantitative investigation were then noted in frequency tables, histograms and pie charts and presented in an orderly fashion.

The questions were divided into four sections, namely:

- Demographics of Economics teachers (Section A)
- Responses in respect of training in the NCS for Economics (Section B)
- Responses in respect of the curriculum of the NCS for Economics in the FET phase (Section C)
- Responses in respect of the use of cooperative learning as a teaching strategy for Economics (Section D)

The results of this quantitative investigation are used in chapter 7 in view of certain findings, recommendations and conclusions.

6.3 Other problem areas that could impact on the implementation of the NCS for Economics

Question 12 of the questionnaire was asked in order to identify other problem areas that could have an impact on the successful implementation of the NCS for Economics. Respondents were provided with their previous comments or viewpoints regarding other problem areas that could have an effect on the successful implementation of the NCS for Economics:

- Poor (underdeveloped) frame of reference of learners;
- Lack of discipline in school and classroom;
- Lack of quality Economics resources in libraries;
- No culture of learning amongst learners;
- Learners' interpretation of Economics data;
- Economics books not suitable or applicable to the grades due to lack of practical aspects and activities;
- What the learners already know should be built upon;
- Excursions and field trips relating to Economic topics;
- Overload of assessment tools and tasks by learning facilitators;
- Ineffective support and follow-up by educational district;
- More time needed to learn about the OBE approach, especially at high schools;
- OBE cannot materialise as long as problems in education remain unsolved;
- Aspects of culture and environment to be investigated for the effective implementation of the NCS;
- Linking learning outcomes and subject matter in a practical and useful manner;

- DVDs and video cassettes showing suitable examples of relevant Economics topics would make the subject more interesting and cultivate interest among learners;
- More parental involvement needed;
- Teaching of Economics to integrate with other subjects;
- Class size;
- Lack of cooperation from learners;
- Social factors such as poverty amongst learners;
- Family background;
- Beginner teachers not able to give input due to lack of experience in the NCS for Economics;
- Lack of internet facilities to search for information on topics;
- Textbooks inadequate for the grade level and assessment standards;
- Too many administrative aspects resulting in loss of teaching time;
- Lack of clarity on assessment instruments: learners in skills and values;
- More effective and efficient training needed with regard to lesson demonstrations;
- Workshops being a waste of time and some workshop presenters being unprepared.

6.4 CONCLUSION

The overall aim of this study was to design a framework for the implementation of cooperative learning as a teaching strategy for Economics teachers in the FET phase in Free State secondary schools. To achieve the aim of this study an empirical investigation was conducted to gather information on the current status regarding training of Economics teachers in the NCS for Economics and the extent to which these teachers were applying cooperative learning as a teaching strategy in their classrooms in Free State secondary schools.The research results were analysed and interpreted by means of the measurement frequencies for respondents in the different educational districts, plus the presentation of

frequency tables, histograms and pie charts in accordance with the four sections of the questionnaire.

The results of the quantitative investigation are reflected in chapter 7 in view of certain findings, recommendations and conclusions.

CHAPTER 7

SUMMARY, FINDINGS AND RECOMMENDATIONS

7.1 INTRODUCTION

The primary goal of this study was to design a framework as a model for the implementation of cooperative learning as a teaching strategy for Economics teachers in the Further Education and Training (FET) phase in Free State secondary schools. This study was undertaken by means of a literature study, as well as empirical research. Therefore certain findings and recommendations can be made, taking into consideration the literature study, personal experience regarding cooperative learning, and the empirical results.

In this chapter a summary of the research is firstly given. Secondly, findings are discussed with regard to the research goals, as set out in chapter 1, by referring to the literature study reflected in chapters 2, 3 and 4, also taking into consideration the empirical research reported on in chapters 5 and 6, as well as the framework of a model for the implementation of cooperative learning as a teaching strategy for Economics teachers in the FET phase in Free State secondary schools, as contained in chapter 8. Thirdly, recommendations are made regarding the literature study, the empirical research and the framework for cooperative learning as a teaching strategy for Economics teachers.

7.2 SUMMARY

Chapter 1 provides background information on the research study, defines the problem, and outlines both the purpose of the investigation and the research design.

Questions 1-3 are addressed by means of a literature study reflected in chapters 2, 3 and 4. The answers to questions 5 and 6 are investigated on the basis of the empirical research as contained in chapter 6. Chapter 8 formulates a framework for cooperative learning as a teaching strategy for Economics teachers as an answer to question 7, with question 8 being answered in chapter 7 by means of the findings and recommendations. Research outcomes are formulated with reference to the problem questions in order to structure the research. The remainder of chapter 1 is devoted to the research design, namely the literature study and the empirical research.

Chapter 2 critically explains the similarities and the differences between an outcomes-based education (OBE) curriculum model and the National Curriculum Statement (NCS) for Economics in the FET phase.

Firstly, an attempt is made to focus on a definition and description of OBE in general. Secondly, the elements and principles of the OBE approach are discussed. Thirdly, the different OBE curriculum models are explained, and problem areas and arguments in defence of the implementation thereof in South African schools are explained. In this regard, William Spady's demonstration mountain and the shortcomings of the OBE curriculum model are also discussed in more detail. Fourthly, a multiparadigm perspective on the OBE approach is discussed. The National Qualifications Framework (NQF) and the place of the NCS in the FET phase are discussed from an OBE curriculum model point of view. The structure of the NCS for the FET phase is reflected in terms of the 12 organisational learning fields with different subject statements for the NCS for grades 10 to 12. Finally, chapter 2 highlights the underlying principles for the application of a new OBE curriculum model for South African schools. The NQF is discussed with specific reference to the FET phase, while certain characteristics and principles of the OBE model, as applicable to the FET, are explained.

Chapter 3 analyses the field of study of Economics in the FET phase and describes the interrelatedness of the components of the curriculum by referring to the NCS for Economics:

- The nature of the Economics learning field as a science;
- Economics as school subject within the framework of the NCS policy documents;
- Teaching principles applicable to Economics; and
- Assessment, with specific reference to continuous assessment in Economics.

From the literature study in chapter 3 it is evident that the Economics teacher plays an extremely critical role in ensuring the success of the NCS for Economics in the FET phase. This responsibility rests on the shoulders of every experienced and dedicated Economics teacher. If the learner is seen as the focal point of the teaching profession, and in light of the fact that the learner (as client) is purchasing a service, the NCS in the FET phase challenges every Economics teacher to make a real difference and to make a success of the process.

Chapter 4 engages in a critical investigation of cooperative learning as a teaching strategy for Economics. Cooperative learning is a successful teaching strategy in which small teams, each consisting of students with different levels of ability, use a variety of learning activities to improve their understanding of a subject. Achievement of the outcomes of cooperative learning is promoted and enhanced by means of the following critical cooperative learning techniques: Teams-groups-tournaments (TGT), student teams-achievement divisions (STAD), jigsaw groups, peer tutoring, small-group teaching, group investigation, and team-support groups.

Chapter 5 reports on the research design of the study in preparation for an empirical investigation comprising qualitative and quantitative methods. In the quantitative phase of the investigation, a structured questionnaire was used to

establish the status of in-service training of Economics teachers and the extent to which these teachers were applying cooperative learning in their classrooms in Free State secondary schools. In the research design the focus fell on the preparation of the empirical investigation by means of seeking permission to conduct research within the geographical area, selecting respondents, and using research instruments such as questionnaires and interviews for the collection, recording and analysis of data. Interviewees were reassured that confidentiality and anonymity would be respected throughout the study.

Chapter 6 reports on the empirical investigation into the training of Economics teachers and the way in which cooperative learning might be used and applied as a strategy in the teaching of Economics in Free State secondary schools. This chapter refers in introductory fashion to the purpose of the empirical research and the instrument of measurement used to obtain the research results. The analysis of the qualitative investigation outlines the response rate, the computation of data, the reliability of the research results, and the validity of these results. Moreover, the Pearson correlation and the factor analysis are described in full. The analysis and interpretation of the research results is represented by frequency tables, Pearson's correlation and the factor analysis according to the questionnaire items in order to table the teachers' responses with regard to training, as well as cooperative learning as a teaching strategy.

Chapter 8 outlines the framework of a model to be used by Economics teachers in the implementation of cooperative learning in Economics teaching in the FET phase. This framework is based on the literature study, the researcher's personal experience as an alumnus of the National Council on Economic Education (NCEE) project, and the empirical research conducted by means of this study.

The findings of this study are now presented in respect of the research questions and research outcomes put forward in chapter 1.

7.3 FINDINGS

7.3.1 Findings with regard to the first problem question and the aim of this study: Which similarities exist between OBE and the South African OBE curriculum model, with specific reference to the NCS for Economics in the FET phase?

Constructivism requires a teacher to act as a facilitator whose main function is to help learners become active participants in their learning and make meaningful connections between prior knowledge, new knowledge, and the processes involved in learning (cf. 1.1).

The NCS for South African schools – in particular for Economics – outlines the characteristics and outcomes of the subject so as to equip learners with the knowledge, skills, values and attitudes that will enable them to adjust to, participate in and survive in an economically complex society, and to empower learners in aspects such as productivity, social justice and environmental sustainability within the economic environment. The NCS for the FET phase in an OBE curriculum model is seen as the solution to the problem being experienced in education with regard to knowledge, skills, attitudes and teaching methods (cf.2.2).

In terms of the OBE approach that which learners must learn is clearly formulated; the learner's progress is based on the demonstration of different achievements; the needs of each learner are accommodated by means of a variety of teaching and assessment methods and techniques; and each learner is given the opportunity to achieve learning outcomes within a given time according to his/her own potential (cf.2.3.1-2.3.4).

In terms of the points of departure for the Economics teacher is all learners can learn and achieve success, while the rate and degree of success can differ from

learner to learner. What and if learners learn successfully is more important than when, how and from whom learners learn. Successful learning forms the basis of further success in learning. Schools and especially Economics teachers can control the conditions under which successful learning takes place. The community, parents, learners and teachers are all responsible for the successful implementation of learning outcomes. The Economics teacher must equip learners with the knowledge, skills and values necessary for success within a competitive labour market.

Secondly, the elements and principles of the OBE approach are discussed. With an OBE approach, it is important that all learners master, through lifelong learning, the necessary knowledge, skills and values or attitudes to fulfil certain roles both in and out of school context. This paradigm shift is aimed at establishing an integrated approach to teaching and education where the focal point is on the learner and his/her needs; human differences are acknowledged and accommodated; participatory and democratic decision-making is accommodated in education; the emphasis is on responsibility (both collective and individual); and all learners can and must reach their full potential (cf.2.3).

Thirdly, the different OBE curriculum models are explained, and problem areas and arguments in defence of the implementation thereof in South African schools are made. The South African curriculum model – the NCS – supports the principle of mastery learning, because certain elements come to the fore. Curriculum planning principles such as learner centeredness, differentiation, flexibility and progress are manifested in the RNCS and the NCS policy documentation (cf.2).

Although the new South African OBE curriculum model is seen as the key to problem-solving in the restructuring of education, a number of educators and curriculum experts have expressed their concern regarding certain aspects of the new curriculum model and have highlighted several shortcomings in the

teaching-learning model that those providing teacher training will definitely have to look into the needs within the curriculum. In terms of the NCS, South African schools are obliged to adapt to this new radical paradigm shift in respect of teaching and cooperative learning as a teaching strategy. Due to the unique nature of the RNCS and the NCS (GET and FET phases) and the OBE teaching approach, qualified teachers will have to be retrained. Moreover, student teachers currently receiving initial teacher training will have to be specifically trained to present the curriculum. Teacher-training providers will thus have to adapt their training programmes to the new demands if they want to train teachers who can practise successfully within the new education dispensation (cf.2.8.3-2.3.8).

Learning outcomes for Economics can be achieved by applying cooperative learning as a teaching strategy by means the developing a culture of lifelong learning among learners; promoting learning involvement; enhancing Economics skills such as calculation, processing, interpretation and analysis of economic indicators; promoting neatness, carefulness, accuracy and thoroughness; and cultivating a love of Economics (cf.2.8).

Lastly, the NQF and the place of the NCS for the FET phase are discussed from an OBE curriculum model point of view indicated that the education and training system must be focused on preparing learners who can achieve critical outcomes by the end of their school career, who can meet the expected high levels of knowledge and skills required by the community, and who have a sound foundation in general education; have the need and ability to pursue sustained, lifelong learning and to develop new knowledge, skills and technology; who are mobile between different occupations; that can accept responsibility with proficiency; that can set and achieve standards; and that can operate cooperatively.

Learners must be motivated through the provision of positive learning experiences, as well as respect for cultural diversity. Learners must be

encouraged to think about their own learning progress and to master skills on their own through multimedia learning programmes and distance education (cf.2.8.4; 2.8.4.1-2.8.4.3).

Curriculum development and the recognition of prior learning must be acknowledged, as these principles are beneficial to the self-worth and proficiency of learners.

The curriculum must be relevant and adaptable so as to meet the current and future needs of individuals, the community, trade and industry. Adaptability in learning programmes must be structured in such a way as to maximise learning opportunities and to offer learners choices as to what will be learned and at what pace. Relevance also means that basic information and know-how with regard to drug abuse, AIDS, human rights and the labour market must be included in curriculum development. Nation-building and non-discrimination are the cornerstones of the new curriculum development model in the effort to build a national identity. Learning programmes must uphold basic human rights and mutual respect, irrespective of gender, race, class, religion or age.Learning programmes must develop learners' ability to think logically, analytically, holistically and laterally. Learners must be active participants in the development process. The education system must be comparable with the rest of the global community in order to remain competitive (cf. 2.8.4.2).

Key phases in the curriculum development process:

(vi) Identifying outcomes based on the needs of the community, particularly the learners, where high levels of knowledge, skills and values are required;

(vii) Curriculum design, involving the design and development of outcomes, as well as the selection of learning content;

(viii) Determining the subject matter, learning outcomes and assessment standards in conjunction with the required learning outcomes and developmental levels of learners;

(ix) Delivering subject matter in terms of the implementation of outcomes-based learning and teaching activities; and

(x) Evaluating learning programmes (cf.2.8.4.2).

The main purpose of the NQF is to arrange the standardisation and transferability of credits and qualifications. All standards are prescribed nationally by the NQF. In practice, this means that the NQF prescribes the required standards, but that schools and provincial departments can decide for themselves how learners are supported in order to achieve these standards (2.8.4.4; 2.8.4.2.8.5.2.1-2.8.5.2.2).

Lastly, the curriculum framework for the FET phase serves as guideline for the different learning fields with specific subject areas; learning outcomes and assessment standards; learning programme guidelines for the development of learning material and resources; organisation of teaching and learning outcomes; and a framework for the assessment of learning outcomes (cf. 2.4.8 &3.4.1).

7.3.2 Findings with regard to the second problem question and the aim of this study: What is the nature and field of study of Economics as a subject?

Economics is a science, and like any other science it involves a systematic effort to determine uniform patterns of behaviour. These patterns of behaviour are used to explain what is busy happening, to predict what could possibly happen, and to help policymakers develop the most suitable policy. Moreover, Economics is also a social science, because it is directed at human behaviour (cf.3.2; 2.3.2-3.2.5).

Economics is the study of the economic activities of man in a reality that functions continuously. With the study of human behaviour in respect of economic activities, a scientific approach is taken to finding the cause-and-effect

relationship in the economic reality. The cause-and-effect relationship is summarised in economic principles, theories and models (cf.3.2.3).

The economic reality formed by the learning field of Economics has several branches. Economics has to do with the production, distribution and use of goods and services, and includes a number of economic concepts and sub-sciences. To be able to make goods and services available for use, man must combine production agents in the form of elements, labour, capital and entrepreneurship in order to produce goods and services. Three economic activities of production, distribution, and use of goods and services form the basis of man's economic activities. Economic concepts that occur in the economic reality and which also play an important role in the practice of Economics as profession form the essence of economic reality (cf.3.4.2-3.4.3).

The majority of Economics teachers interviewed in all five educational districts indicated that to a very large extent the scarcity problem (52.0%), the choice question (43.2%), the opportunity cost (51.3%) and decision-making (37.15) are very important essentials to be included in the NCS for Economics. Some respondents indicated that to a large extent the choice question (38.75%) and scarcity problem (32.4%) are essentials to be included in the NCS for Economics. Only twelve respondents indicated that decision-making (23.4%) is essential for Economics teaching and should be included in the NCS for Economics curriculum (cf.6.2.3.1 & table 6.12).

Economics as school subject is discussed within the framework of the NCS policy documents (cf.3.3.1-3.3.3.3.4.1). With regard to this study, the emphasis falls mainly on cooperative learning as a teaching strategy for Economics teachers in the FET phase (grades 10 to 12) in Free State secondary schools. As the General Education and Training (GET) phase (grades R to 9) forms the basis of the Economic and Management Sciences learning field in the FET phase, this study focuses only on Economics in the FET phase. It is important for

the Economics teacher, taking into account the outcomes to be achieved, to keep in mind aspects of reconstruction, development and economic growth in view of achieving the outcomes, such as skills, attitudes and knowledge. Only the essential subject matter needed to achieve the set outcomes must be selected and presented to learners.

Within the NQF, Economics forms part of the Business, Commerce and Management Studies learning field in the FET phase (grades 10 to 12). The restructuring of Economics as an optional subject in the FET phase includes three fields of study, namely Business, Commerce and Management Studies. The NCS for Economics in grades 10 to 12 is based on learning outcomes 1 to 4 and consists of mutual assessment standards for each learning outcome, but the degree of depth of the inherent components differs according to the learner's progress from one grade to another (cf.2.8.4.3). The respondents indicated that macro economics (52.0%), micro economics (54.7%), economic pursuits (56.1%) and contemporary economic issues (54.7%) to a very large extent should be included in the EMS curriculum for content alignment and integration of the NCS for Economics in the FET-phase (cf.6.2.3.2; table 6.13 & graph 6.8).

Furthermore, respondents indicated that the critical outcomes of identifying and solving problems (68.2%), working effectively as a group and in a team (72.3%), collecting, analysing and evaluating economic information (70.3%), communicating effectively (52.7%), applying and using science and technology (56.8%) and demonstrating an understanding of the world as a set of related systems (50.7%) will contribute to a very large extent to the achievement of the learning outcomes for Economics (cf. 6.2.3.3; table 6.14 & graph 6.9).

The Economics teacher plans the overall learning and assessment programmes, which also include the continuous assessment (CASS) of every learner. The Economics teacher draws up a year plan with all learning and assessment programmes for a particular grade. The year plan must be divided up into four

terms that include learning activities, periods, and assessment activities. The Economics teacher's planning includes different learning activities and teaching techniques; different aspects of the learning experience; which teaching techniques will be used; and time management and resources for each learning activity.

7.3.3 Findings with regard to the third problem question and the aim of this study: What are the critical components of the teaching-learning process for the NCS for Economics in the FET phase?

The overarching purpose of each lesson is the planning of each teaching-learning situation so that the planned lesson outcomes can be achieved in the most purposeful manner possible. To be able to make a responsible choice in respect of the teaching methods and strategies, as well as the educational media and assessment techniques, the teacher must have sound knowledge of the fundamental didactic principles that apply to the teaching of Economics (cf.3.5.1.1-3.5.1-25; 6.2.3.6; table 6.17). Respondents ranked learning outcomes (34.5%) as a very important component and teaching media (4.1%) as a less-important component in the teaching of the Economics curriculum (cf. table 6.17).

Purposefulness in the teaching of Economics means firstly that the teacher must know exactly what he/she wants to achieve with his/her presentation of the subject as a whole (i.e. the eventual outcomes). Secondly, the teacher must pursue specific outcomes. According to the OBE approach, it is important that programme outcomes (i.e. the teaching of Economics), course outcomes (i.e. grade 10), unit outcomes (e.g. micro economics) and specific lesson outcomes (e.g. the effect of change in demand) are derived directly from the eventual outcomes. Thirdly, the principle of purposefulness must also be applied to the act of learning. From the description of the concept of outcomes, it can be concluded that the purpose of outcomes is the demonstration of learning in context (cf. 3.7 & 3.8).

The concept of totality quickly gained popularity in education and formulates the principle of totality in the field of didactics as in according to the principle of totality, the teacher is totally involved in teaching; the learner is totally involved in teaching; and the learning process takes place by means of wholes, and the learning plan and presentation thereof must therefore work with the total image.

The application of the totality principle in the teaching-learning situation also makes certain demands on the teaching actions of the teacher. The following guidelines can be set for the teaching of Economics.At the start of the academic year, the objectives (and the eventual learning outcomes) pursued by means of the course (i.e. the course outcomes, e.g. grade 12) should be made available to the learner.The learner should be provided with the NCS, including learning outcomes (LOs) and assessment standards (ASs), the teaching method, and a full timetable. Upon commencement of teaching, a brief preview should be given of the learning outcomes to be dealt with, while the objectives specifically pursued by that section (i.e. the unit outcome) should be brought to the learner's attention. It must be ensured that every teaching session (whether a lecture, practical lesson or group work) relates meaningfully to the previous teaching session.

Upon commencement of the teaching session, a brief synoptic preview of the subject matter to be dealt with must be given, together with the goals (i.e. the specific lesson outcomes) to be achieved. Upon completion of the different process elements of the teaching session, focus should be returned to the overall structure of the lesson, and the accent should once again fall on the essences. New knowledge should be applied in as many new or unfamiliar situations as possible in view of the total mastery of the newly acquired knowledge and in accordance with the OBE approach. Upon completion of learning outcome 1 (i.e. course units, e.g. macro economics), as well as on completion of the learning outcome as a whole (e.g. grade 10), the subject matter should again be

summarised in a meaningful whole by means of a clear indication of the mutual relationship among the different sections (cf. 3.6).

The OBE approach to Economics teaching leans heavily on the principle of activity whereby the learner becomes actively involved in the acquisition and mastery of knowledge, skills and attitudes and the application thereof. Although the activity principle strongly emphasises the role of the learner in the teaching-learning situation, the role of the teacher must not be underestimated. The requirements for the successful application of the activity principle in the teaching of Economics, as can be derived from the above, can be briefly summarised as follows that the purpose (lesson outcome) of the learning activity must be made clear to the learner. The most suitable learning opportunities and learning activity (activities) that enable the learner to achieve outcomes independently must be selected. The teacher must motivate the learner and lead him/her towards activity and then guide the learner further and direct his/her activities so that the learner himself/herself can achieve the predetermined outcomes (cf. 3.7.1-3.7.2).

Besides the fact that Economics is a social science, social influence is also inherent to the teaching and learning actions of the subject. The following are some of the most important aspects for the teaching of Economics that sound social relations must be maintained in class. Strong emphasis must fall on group work where each learner is given the opportunity to work with others as a member of a group in order to achieve a common goal (outcome), although sometimes this is applied practically. Healthy competition within a group promotes motivation and encourages the individual members of the group to work harder and consequently perform better.

The purpose of differentiated education is the adaptation of the teaching-learning situation in such a way that it leads to the optimal deployment of every learner's potential in order to prepare the learner as independently and responsibly as possible for "life". This principle is one of the basic assumptions of OBE. For the

teaching of Economics it means that, as far as possible, provision must be made for the different teaching methods, learning styles and learning rates, as well as assessment (cf.3.5.1.5).

The motivation principle makes many demands of the teaching-learning situation, of which the following are most important for the teaching of Economics which are all available resources in the school and in the community should be used. Communication between teacher and learner must be in a language that the learner can understand. New subject matter must be brought into line with what is already known. The application possibilities of that which is being learned must be identified as far as possible. Subject matter must be structured systematically and in meaningful outlines, frameworks, etc. Where applicable, one should work from the concrete to the abstract. Teaching must be approached from interesting problems or situations with which the learner is familiar. Assessment must take place continuously so that the learner can determine the extent to which the outcomes have been achieved (cf.3.5.1.5 & 3.5.1.7).

In an OBE approach to cooperative learning, the teacher must determine the extent to which the predetermined outcomes have been achieved, and if any particular outcome has not been achieved, the teacher must identify the necessary remediation in order to guide the learner towards the achievement of that outcome. The principles inherent to assessment in an OBE approach to the NCS show that outcomes are stated clearly. Teaching is directed at the achievement of the outcomes. Learning is constantly monitored. Teaching and learning are continually adapted so that learners are given sufficient opportunity to master outcomes and assessment reflects the specified outcomes and affords opportunities to learn further (cf. 3.4.3).

The following important aspects can be highlighted in respect of the didactic principle of assessment and the teaching of the NCS for Economics that the Economics teacher must have a clear image of what he/she wishes to determine

by means of assessment. The Economics teacher must realise that the specified outcomes will eventually determine the assessment method. Assessment is not an isolated part of teaching and learning, but rather functions as an integrated component of teaching and learning so that optimal learning can take place. Assessment is more than proof that the learner can repeat memorised facts. The learner must demonstrate that he/she has mastered the Economics subject matter and can use it with the necessary skill in new situations (cf.3.5.1.8).

On the basis of the overall conditions that the principle of illustration sets for teaching in general, the particular demands in respect of the NCS for Economics indicated that as many senses as possible must be involved. The purpose of perception must speak clearly to the learner. The learner's attention must be focused on the perception aspects to be observed. Terminology is important, as principles are conveyed through language, whether verbal or written. Shortcomings in the formation of accurate perceptions must be identified and addressed, and misperceptions must be remedied (cf.3.5.1.9).

There are different methods that the Economics teacher can use to meet the demands of these principles, namely:

- Posing questions to the learners to determine whether they have acquired knowledge, insight and skills, and also to identify any learning problems that might exist;
- Having learners apply the work in new and unfamiliar situations;
- Problem-solving; and/or
- Diagnostic tests (cf. 3.8.1-3.8.3).

The most important guidelines applicable to the teaching of Economics to ensure optimal mastery of the subject matter can be summarised as follows:

- Summaries of the subject matter to be drawn up by the learner in order to develop intellectual capacity so as to be able to identify key points and create structure;

- Revision, where the emphasis falls on a variety of activities and problem solutions;
- Classroom and homework exercises in order to consolidate subject matter and practise certain skills;
- Active participation by the learner in both the teaching and learning processes;
- Structured presentation of subject matter during both the teaching-learning situation and the assessment and demonstration of skills, so that mastery can take place systematically and logically;
- The learner being in possession of the necessary prior knowledge, insight and skills at the beginning of the teaching-learning opportunity;
- Learning at own pace to allow time for mastery to occur;
- Self-assessment opportunities so that learners can determine their own level of mastery, can act remedially, and can adapt their learning strategies (cf. 3.9.1-3.9.3).

The following aspects must be kept in mind by the Economics teacher in order to meet the demands of the principle of clear focus:

- All teaching-learning events must be directed at the achievement of the specified learning outcome, be it knowledge, understanding or application of the subject matter.
- The planning, teaching and assessment must be of such a nature that learning is made possible for all learners and all learners can (eventually) be successful in achieving the specific outcome.
- The learning outcome to be achieved must be clearly presented to learners, and the reasons why – as well as the place where the learning outcomes fit in – must be explained to learners (cf.3.5.1.12).

It is important for the Economics teacher, taking into account the outcome to be achieved, to be able to differentiate between the "need to know" and the "nice to know" of the available subject matter. Only the truly necessary subject matter

needed to achieve the specific outcome must be selected and presented to the learner.The Economics teacher can meet the demands of the equity principle by selecting subject matter that is not prejudiced in respect of race and/or gender. Moreover, a careful approach must be taken to subject matter dealing with ethnic backlogs (for example, the distorted distribution of national income by developing countries, the developmental phases in which countries and ethnic groups in countries find themselves, etc.).Consequently the teaching of Economics will without a doubt be influenced by the language in which it is taught (cf.3.5.1.14).

The Economics teacher can attempt by means of his/her teaching to limit as far as possible any unclear, ambiguous and/or superfluous information. When unknown concepts that fall outside the experience of the learner(s) are discussed, such concepts can be concretised with the aid of educational media. Where necessary, concepts can even be explained in the learner's mother tongue, after which the learner can be guided to understand the concept in the language of instruction. The Economics teacher fulfils the important role of preparing learners for these demands by recognising that learners are themselves sources of knowledge and that the teaching-learning process, although it builds on existing prior knowledge, must be a process of pushing back the borders of knowledge. The Economics teacher can meet the demands of this principle by giving the learner the opportunity to work cooperatively and in a problem-solving way as a member of a group; Allowing learning opportunities to adapt to and build on the field of experience of the learner; discussed aspects, concepts, etc. to fall within the learner's frame of reference as far as possible; and giving the learner the opportunity to master the subject matter at his/her own pace and in his/her own way (cf. 3.5.1.23).

For the Economics teacher this means that the selection of topics for teaching and learning, teaching methods, assessment techniques and so forth must be reflective of cultural sensitivity. Learners must be equipped to acknowledge the unique multicultural situation in South Africa and to envisage the possibilities of

developing this cultural composition into a unique South African commodity, which will have positive implications for nation-building and economic and social development.

For the Economics teacher (and, based on the principle of integration, also the teachers of other Economic and Management Sciences, e.g. Business Economics, as well as subjects such as Mathematical Literacy, Entrepreneurship, etc., which incorporate components of Economics) this means that subject matter must be integrated so that specific components of the subject matter are not merely approached in a subject-typical way, but are also studied across subject boundaries (cf. 3.5.1.19).

Economics teachers must therefore differentiate in all elements of teaching and learning so that all learners can achieve success. Different teaching and learning strategies must be utilised to make provision for differences in pace and style of learning (cf.3.8.1 & 3.8.2).

It is important for the Economics teacher to constantly make learners aware of South Africa's unique national identity by, for instance, illustrating subject matter with South African examples (such as indigenous knowledge systems traded among native tribes in South Africa). The role and importance of South Africa in terms of international trade with the rest of Africa and the world must also enjoy special attention (cf.3.2.3.3).

The cause-effect relationship of Economics must be clearly presented to learners, and the consequences of the seemingly simply solution must be thoroughly explained to learners. It is only in this way that learners can be guided towards critical and creative thought in Economics, particularly when it comes to the creation of business cycles (cf.3.2.3.3). The Economics teacher must make provision for the increasing number of learning opportunities that allow learners to decide for themselves what, where, when, how and at what

pace learning will take place. The Economics teacher must compile learning programmes in such a way that progress from one class, phase or learning outcome to the next will occur logically and that subsequent learning programmes will continue to build on the existing knowledge of learners. For the Economics teacher this means that the learning programme must meet the demands and needs of the community (cf.3.5.1.21).

Respondents indicated that to a very large extent the principles of critical thinking and creativity (73.6%), learner centeredness (62,2%), assessment (52,7%), motivation (56,1%), progression (57,4%), integration (54,1%), clear focus (53,4%), human resource development (45,6%), relevance (46,6%), mother-tongue instruction (48,0%), equity and redress (41,9%) and activity-based instruction (48.0%) are of utmost importance in the achievement of the learning outcomes for the teaching of Economics (cf. 6.2.3.6 & table 6.17).

The focus of cooperative learning as a teaching strategy for Economics within an OBE curriculum falls on what learners must know (knowledge and comprehension) and do (application). The point of departure of teaching planning is thus the eventual learning result in terms of knowledge, skills and values, rather than the prescription of subject matter to be learned. Specific outcomes indicate what the learner should know and be able to do. The most important purpose of these outcomes is that the specific outcomes (and not just subject matter) are evaluated. It involves the development of basic (economic) knowledge, skills, abilities and values necessary to function in a changing society (cf.4.12.1).

In cooperative learning as a teaching strategy, subject matter is no longer central to the teaching-learning situation. The subject matter and the way in which it is taught are no longer prescribed. The teacher and learner have – relatively speaking – reasonable authority to make decisions on the subject matter and methodology, as long as the outcomes are achieved. The Economics teacher

must adhere to the subject matter must be sensitive to aspects related to culture, race, gender, disability, etc. Furthermore, it must be free from discrimination and, where possible, it must promote equal opportunities. Subject matter must place sufficient emphasis on knowledge, comprehension, skills and attitudes so that the desired outcomes can be achieved. The Economics teacher must also see to it that the subject matter must meet the needs of both the teacher and the learner and must not contain irrelevant material. It must be progress logically.Subject matter must be relevant, it must create opportunities for use in everyday life, it must promote technology and, where possible, show ties to other learning areas. Subject matter must relate to the everyday life of the learner. Subject matter must be accurate and up to date (in particular, the horizontal form of financial statements must be practically oriented). Subject matter must address a variety of skills and possibilities, e.g. cognitive skills, psychomotor skills, critical thought, etc. Subject matter must accommodate a variety of learners according to their skills and abilities, e.g. different exercises for different groups, or additional work for learners with special needs. Lastly, enrichment must include the development of knowledge, the use of higher-order thinking abilities (e.g. analysis, synthesis and evaluation), as well as independent investigation and research (cf.4.7.1 - 4.7.3 & 4.12.1).

The teaching technique is therefore determined by a wide variety of internal as well as external factors. Internal factors are inherent to the teacher, the learner, and the physical environment. Here we refer to factors such as personality, didactic skills and insight, and the motivation and creativity of both the teacher and the learner. The Economics teacher can apply cooperative learning techniques such as role-play, simulations and case studies with immense success (cf.4.11).

Educational media must therefore be carefully selected so as to constitute a meaningful and integrated part of the whole lesson and to facilitate the learning process (cf.3.8.4).

The assessment and evaluation of learners, as well as the writing of tests and examinations, are probably among the most common and everyday tasks of the measuring instruments of Economics teachers. Respondents indicated that feedback to learners (73.0%), providing learners with marks/symbols (70,9%), progression of learners to the next grade (61.5%), and providing parents with information regarding assessment (51.4%) are to a very large extent the most important aspects of information regarding assessment in Economics (cf.6.2.3.7 & table 6.18). For the Economics teacher, assessment is part of teaching and forms an integral part of the teaching-learning situation and can lead to improved learning results. The Economics teacher can make use of several different assessment methods such as diagnostic assessment;mastery assessment; criterion-directed assessment; minimum-performance assessment; domain-directed assessment; norm-directed assessment; standardised tests; performance-directed assessment; and continuous assessment (cf.3.9.4).

Respondents also indicated that to a large extent the effectiveness of teaching methods (50.0%), the planning of assessment techniques (48.6%), the planning of effective teaching and learning situations (46.6%), the diagnosis of learners with learning problems (39.5%) and the identification of learners with learning problems (38.5%) are important information aspects when it comes to assessing learners in Economics (cf.3.9.4 & table 6.18). Assessment instruments that can be applied with great success by the Economics teacher are written work assignments; articles; work maps; assessment maps; and video cassettes and DVDs. During assessment, the Economics teacher can apply different types of assessment techniques – namely subjective and objective measuring techniques – to determine whether the specific learning outcomes have been achieved. Respondents indicated that providing the teacher with information (76.4%), motivating learners to work throughout the year (74.3%), enhancing knowledge, skills, values and attitudes (74.3%) and providing performance targets for

learners (73.6%) to a very large extent are important in the achievement of cooperative learning outcomes (cf. 6.2.4.8 & table 6.28).

7.3.4 Findings with regard to the fourth problem question and the aim of this study: What is the rationale for critically analysing cooperative learning as a teaching strategy for Economics?

Cooperative learning is a successful teaching strategy in which small teams, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject. Each member of a team is responsible not only for learning what is taught but also for helping team-mates to learn, thus creating an atmosphere of achievement. Students work through the assignment until all group members successfully understand and complete it (cf. 4.5.1.-4.5.6).

Cooperative learning promotes and enhances the following critical outcomes namely:

- Promoting learners' learning and academic achievement;
- Improving learners' retention and their own learning process;
- Enhancing learners' satisfaction with their learning experience;
- Helping learners to develop skills in verbal communication;
- Developing learners' social skills;
- Promoting learners' self-esteem; and
- Helping to promote positive race relations amongst learners (cf.4.5.1-4.5.6).

The above cooperative learning outcomes can be achieved if Economic teachers creates an environment for optimal learning.

Elements and nature of cooperative learning as a teaching strategy:

Positive interdependence (Sink or swim together): Each group member's efforts are required and indispensable for group success. Each group member has a unique contribution to make to the joint effort because of his or her resources and/or role and task responsibilities. Face-to-face interaction (Promoting one another's success): Verbally explaining how to solve problems; teaching one's knowledge to other; checking for understanding; discussing concepts being learned; and connecting present and past learning. Individual and group accountability (No hitchhiking! No social loafing): Keeping the size of the group small (the smaller the size of the group, the greater the individual accountability); giving an individual test to each learner; randomly examining learners orally by calling on one student to present his or her group's work to the teacher (in the presence of the group) or to the entire class; observing each group and recording the frequency with which each member contributes to the group's work; assigning one learner in each group the role of checker (to ask other group members to explain the reasoning and rationale underlying group answers; and having learners teach someone else what they have learned. Interpersonal and small-group skills: Social skills must be taught such as leadership, decision-making, trust-building, and communication and conflict-management skills. Group processing: Group members discuss how well they are achieving their goals and maintaining effective working relationships; describing which member actions are helpful and not helpful; and making decisions about what behaviours to continue or change (cf.4.4.1-4.4.4).

Rationale for applying cooperative learning as a teaching strategy, cooperative learning is not new, and stakeholder interest in cooperative learning has seen massive growth since the 1990s. Cooperative learning is necessary in any teaching-learning situation, because this particular strategy "...can foster educational excellence for all children regardless of race, class, or gender, and can provide students and teachers with the experience and expectations of active participation in controlling and changing the spheres of their lives". Cooperative learning as a teaching strategy is one of the success stories in the

transformation of education over the past decade. Research has focused on the application of cooperative learning activities in the classroom where students jointly and creatively identify problems and generate practicable solutions. The researcher contends that this research is necessary because the NCS for Economics requires that the principle of an OBE approach, which is applicable to this teaching strategy of cooperative learning, is applied in the classroom. One of the critical outcomes of the NSC as curriculum model is that learners must be able to cooperate with other members of a team, group, organisation and community. The learner-centred approach requires that learners are not mere passive listeners as in the past. The majority of teachers who have been trained in a teacher-centred teaching approach and who are now required to make a paradigm shift to a learner-centred approach continue to struggle, despite the fact that the Department of Education has arranged several training workshops for them in the implementation of the NCS curriculum. It appears from the pilot study that Economics teachers are inadequately equipped for their task, and it is for this reason that this study is necessary – so that a model for implementing cooperative learning as a teaching strategy for the FET phase can be developed for Economics teachers so as to empower them to apply this teaching strategy with confidence in the classroom (cf.4.7).

Cooperative learning techniques being used for student learning such as teams-groups-tournaments (TGT); student teams-achievement divisions (STAD); jigsaw groups; peer tutoring; small-group teaching; group investigation; and team-support groups (cf.4.9.1.1;4.9.2.1; 4.9.3.1 & 4.9.4.1)

Classification of cooperative learning programmes are team learning consists of the following cooperative learning techniques such as TGT, STAD, group investigation, and team-support groups. Expert group structures consist of the following cooperative learning techniques: Jigsaw groups, peer tutoring, and small-group teaching (cf.4.9.1.1;4.9.2.1; 4.9.3.1 & 4.9.4.1)

Teaching techniques for the application of cooperative learning strategies in Economics teaching are Think-pair-share: This is a four-step discussion strategy that incorporates waiting time and aspects of cooperative learning. Both students and teachers have more opportunities to think and become involved in group discussion.

Three-step interview: This involves structured group activity with learners. Using interviews/listening techniques that have been modelled, one student interviews another on an announced topic. When the teacher announces that the time is up, the students switch roles as interviewer and interviewee.

Roundtable: This can be used for brainstorming, reviewing, or practising while also serving as a teambuilding exercise.

Numbered heads together: This structure is useful for quickly reviewing objective material in a fun way. The learners in each team are numbered (each team might have 4 students numbered 1, 2, 3, 4).

Pairs-check: This is a way to structure pair work on mastery-oriented worksheets. Learners in Economics work in teams of four with two sets of partners.

Send a problem: Each member of a team writes a review problem on a flashcard. The team reaches consensus on the answer and writes it on the back of the card (cf. 4.9.4.1).

7.3.5 Findings with regard to the fifth problem question and the aim of this study: What is the current status regarding training of Economics teachers in the NCS in Free State secondary schools?

7.3.5.1 Demographics of Economics teachers

- **Gender of Economics teachers**

The vast majority of Economic teachers in the Free State Province who responded to the questionnaire were women (58.8%), with the highest occurrence in the Motheo educational district (74.6%), which also had the lowest occurrence of male Economics teachers (25.4%). Male respondents comprised

41.2% of Economics teachers in all five educational districts of the FSDoE (cf.6.2.1 & table 6.1).

- **Professional teaching experience**

The majority of the respondents (50.6%) within the FSDoE had more than 10 years of professional teaching experience, with the Fezile Dabi district having the most respondents (61.9%) with more than 10 years of experience. The Thabo Mofutsanyane educational district showed a response rate of 4.2% of respondents with more than 31 years of teaching experience, which made it the district with the most professional teaching experience compared to the other districts (cf.6.2.1 & table 6.1).

- **Subject teaching experience**

The majority of respondents (70%) fell within the group range of 1-10 years of subject teaching experience. The Motheo educational district showed the highest level of subject teaching experience compared to the other districts, with a response rate of 86.4% within the range of 1-10 years of experience (cf.6.2.1 & table 6.1).

- **Academic qualification**

The majority (47.3%) of Economics teachers were qualified in Economics III, while 26.4% had Economics II, followed by 6.15% with Economics I and 12.8% with Economics as grade 12 school subject. Only 6.8% of respondents were qualified up to Honours level and 0.7% up to Master's level in Economics (cf.6.2.1 & table 6.1).

- **Professional qualification**

Only 33.1% of respondents were professionally qualified with a University Diploma in Education (UED), while 25.0% were qualified with a Postgraduate Certificate in Education (PGCE) or a Higher Education Diploma (HED). Only

16.2% of respondents were qualified with a Baccalaureus Educationis Honours and 0.7% with a Master of Education (cf.6.2.1; table 6.1 & graph 6.1).

In light of the above findings, it can be concluded that the majority of Economics teachers are women. The majority (50.6%) of the respondents within the FSDoE had more than 10 years of professional teaching experience. This correlates with the 70% of respondents falling within the group range of 1-10 years of subject teaching experience. The majority (47.3%) of respondents were qualified in Economics III, while only 33.1% were professionally qualified with a University Diploma in Education (cf.6.2.1; table 6.1 & graph 6.2).

7.3.5.2 Level of training in the NCS for Economics

A total of 56.8% of respondents in all five educational districts indicated that they had received initial professional training (IPET) in the implementation of the NCS in the FET phase, but only 16.2% of respondents indicated that they had not received IPET training in the NCS in the FET phase. A total of 56.8% of respondents had been trained by means of different in-service training workshops presented by the learning facilitators of the FSDoE, while 12.8% of respondents indicated that they had received no training whatsoever in the NCS in the FET phase (cf.6.2.2.1; table 6.2 & graph 6.3).

7.3.5.3 Attitude towards the implementation of the NCS for Economics in the FET phase

A total of 32.4% of the Economics teachers responded very positively towards the implementation of the NCS for Economics in the FET-phase, while only 7.6% of respondents were uncertain and 7.6% were negative towards the implementation of the NCS for Economics in the province (cf.6.2.2.2; table 6.3 & graph 6.4).

7.3.5.4 Current in-service training regarding the implementation of the NCS for Economics in the classroom

A total of 62.1% of respondents indicated that they were sufficiently trained to successfully implement the NCS for Economics in their classrooms, while 37.9% indicated that they were insufficiently trained in this regard (cf.6.2.2.3; table 6.4 & graph 6.5).

7.3.5.5 Change in opinion regarding the NCS in the FET phase

The majority of Economics teachers indicated that to a very large extent, in-service training (44.6%), departmental workshops (38.5%) and a course in the NCS for Economics (28.6%) would serve to change their opinion about the NCS for Economics in the province (cf.6.2.2.4; tables 6.5; 6.6; 6.7 & graph 6.6).

7.3.5.6 Problem areas likely to impact on the successful implementation of the NCS for Economics

Only 35.1% of the respondents indicated that to a very large extent they were insufficiently trained in assessment. Some respondents were experiencing a lack of resources such as LTSM (33.1%) and finances (31.8%) as major problem areas in the effective implementation of the NCS for Economics in all educational districts. Furthermore, the respondents indicated that continuous assessment (39.2%), selection of teaching methods (43.2%), teaching media (41.8%), selection of economic content (38.5%) and infrastructure (34.5%) would impact to a large extent on the implementation of the NCS for Economics in the province. Respondents indicated that aspects of the NCS for Economics (question 10) and NCS policy documents would have an effect on the implementation of the NCS for Economics (question 11). The correlations p-values of (.179>.05. .177>.05. .159>.05 and .153>.05) indicate a strong and highly positive relationship between a change in opinion about the NCS for

Economics and the problem areas that might impact on the implementation of the NCS for Economics (cf. 6.2.2.8; table 6.11).

Other problem areas that might impact on the implementation of the NCS for Economics are discipline in the school and classroom, the size of classes, lack of cooperation from learners, too many administrative aspects leading to a loss of teaching time, and more effective and efficient training regarding lesson demonstrations (cf. 6.2.2.8;6.2.2.9; tables 6.10;6.11 & 6.3).

In light of the above findings, it can be concluded that only 56.8% of respondents had been trained through IPET to implement the NCS in the FET phase. The Economics teachers responded very positively (32.4%) towards the implementation of the NCS for Economics in the FET phase, with only 7.6% of respondents being negative towards the implementation of the NCS for Economics. A total of 62.1% of respondents indicated that currently they were sufficiently trained to successfully implement the NCS for Economics (cf.6.2.2.3; table 6.4 & graph 6.5).

7.3.6 Findings with regard to the sixth problem question and the aim of this study: To what extent do these teachers apply cooperative learning as a teaching strategy in their classrooms?

- **Application of cooperative learning by Economics teachers**

The respondents were allocating only 6.1% of overall class time to cooperative learning as a teaching strategy in their respective classes. Teachers' responses indicated that no class time (60,2%) was allocated to cooperative learning activities in their respective classrooms (cf. 6.2.4.1; table 6.21 & graph 6.12)

- **Role and task of the Economics teacher**

The majority of respondents indicated that to a very large extent the most important role and task of the Economics teacher in cooperative learning is to facilitate (73.0%), empower cooperative and social skills (69.6%), design

cooperative learning activities (62.2%), monitor and control group activities (69.4%), support the groups (64.2%), assign learning materials to groups (60.1%) and 59.5% report back on performance (cf.6.2.4.2 & table 6.22)

- **Importance of cooperative learning techniques**

The majority of respondents were extremely positive that cooperative learning techniques such as STAD (48%), jigsaw technique (40,5%), TGT (42.6%), peer tutoring (49.3%), small-group teaching (56.1%), cooperative integrated reading and comprehension (CIRC) groups (45.3%), group investigation (52.0%) and team-support groups (47.3%) would definitely enhance the achievement of learning outcomes for Economics (cf. 6.2.4.3; table 6.23 & graph 6.13).

- **Use of cooperative learning techniques in the Economics classroom**

Certain cooperative learning techniques, namely STAD (81.1%), jigsaw (72.9%), TGT (72.3%), peer tutoring (77%), small-group teaching (85.5%) and team-support groups (83.1%), were not being frequently used by the Economics teachers to achieve the learning outcomes in their classrooms (cf. 6.2.4.7; table 6.27 & graph 6.14).

- **Use of group work in cooperative learning activities**

Respondents indicated that assessment over long periods (27.0%) was being used to a very large extent in cooperative learning activities. Furthermore, to a large extent the respondents were using performance targets for learners (42.6%), different assessment forms (48.6%) and information to the teacher (35.1%) as assessment tools over a long period (cf. 6.2.4.8; table 6.28).

In light of the above findings, it can be concluded that the Economics teachers in question were allocating only 6.1% of overall class time to cooperative learning as a teaching strategy in their respective classes. Most of the respondents indicated that the role and task of the Economics teacher was to facilitate (73.0%), empower cooperative and social skills (69.6%) and design cooperative

learning activities. Certain cooperative learning techniques such as STAD, jigsaw, TGT, peer tutoring, small-group teaching and team-support groups, were not being used frequently by Economics teachers to achieve the learning outcomes in their classrooms. However, the respondents were positive about the potential of the different cooperative learning techniques to enhance learning outcomes.

7.3.7 Findings with regard to the seventh problem question and the aim of this study: What components should be included in the design of a framework as a model for the implementation of cooperative learning as a teaching strategy for Economics in the FET phase?

The framework for the implementation of cooperative learning as a teaching strategy (cf. chapter 8) has been created to serve as a guideline for Economics teachers within the FSDoE to be used as a teaching strategy to achieve the learning outcomes for the subject:

This framework must be adapted by each teacher to the unique classroom situation in which he/she teaches Economics (appendix F).

7.4 RECOMMENDATIONS

7.4.1 Introduction

The researcher contends from a constructivist perspective that the primary responsibility of the teacher is to create and maintain a collaborative problem-solving environment, where students are allowed to construct their own knowledge and the teacher serves as a facilitator and guide. The NCS curriculum for South African schools offers learners and teachers a paradigm shift away from a teacher-centred educational approach towards a dynamic and active learner-centred approach. To ensure that the outcomes of Economics teaching

are achieved, Economics teachers will be compelled to consider different teaching strategies and methods. By pursuing these new strategies and methods, Economics teachers will be enabled to initiate teaching and learning effectively so that knowledge, skills and positive attitudes may be optimised among learners in their response to the economic environment. A large variety of teaching strategies, methods and techniques are available, but this study focuses on cooperative learning, which can be utilised to immense benefit in the teaching and learning situation.

Some recommendations will be made by referring to:

- The current status of training of Economics teachers in the NCS;
- The application of cooperative learning as a teaching strategy in Economics;
- The components to be included in the design of a framework for the use of cooperative learning in Economics for the FET phase.

These recommendations can be linked to the eighth problem question and the aim of this study: What recommendations can be made with regard to training in the NCS and the implementation of cooperative learning for Economics teachers in secondary schools within the Free State Department of Education?

7.4.2 Recommendations regarding OBE and the South African OBE curriculum model, with specific reference to the NCS for Economics in the FET phase

The following recommendations are made with special reference to NCS Economics in the FET phase:

- Economic teachers to act as a facilitator whose main function is to help learners become active participants in their learning and make meaningful connections between prior knowledge, new knowledge, and the processes involved in learning (cf.2.31).

- The task and role of the Economics teacher is to equip learners with the knowledge, skills, values and attitudes that will enable them to adjust to, participate in and survive in an economically complex society; and to empower learners in aspects such as productivity, social justice and environmental sustainability within the economic environment (cf. 2.3.3).
- Every Economics teacher must make the paradigm shift to establish an integrated approach to teaching and education (cf. 2.3.4).
- Economics teachers must understand that all learners can learn and achieve success, while the rate and degree of success can differ from learner to learner (cf.2.3.3).
- Economics teachers must also understand that what and if learners learn successfully is more important than when, how and from whom learners learn (cf.2.3.3).
- Economics teachers must understand that successful learning forms the basis of further success in learning (cf.2.3.3).
- Schools and especially Economics teachers can control the conditions under which successful learning takes place (cf.2.3.3).
- Economics teachers and learners must understand and promote the importance of nation-building and non-discrimination, which are the cornerstones of the new curriculum development model in the effort to build a national identity (cf.2.4.3).
- Economics teachers must prepare learners through learning programmes that uphold basic human rights and mutual respect, irrespective of gender, race, class, religion or age, in their respective classrooms (cf. 2.4.3).
- The community, parents, learners and Economics teachers are all responsible for the successful implementation of the learning outcomes of the NCS for Economics (cf.2.4.5).
- Economics teachers must adhere to, understand and apply the curriculum planning principles to achieve the outcomes such as learner centeredness, differentiation, flexibility and progress, which are

manifested in the NCS policy documentation (cf. 2.3.1-2.3.4.4; 2.4.1-2.4.5; 2.6.1-2.6.4 & 2.8.1-2.8.7).

7.4.3 Recommendations regarding the nature and field of study of Economics as a subject

The following recommendations are made regarding the nature and field of study of Economics as a school subject:

- The Economics teacher must prepare learners to understand that Economics is the study of the economic activities of man in a reality that functions continuously (cf.3.2.1; 3.2.2 & 3.3.3).
- In respect of economic activities, learners and teachers must take a scientific approach to finding the cause-and-effect relationship in the economic reality for a global economy (cf.3.2.3.1).
- The Economics teacher must teach economic concepts that occur in the economic reality and which also play an important role in the practice of Economics as profession, thus forming the essence of economic reality (cf.3.2.4; 3.2.5 & 3.3.2).
- It is important for the Economics teacher, taking into account the outcomes to be achieved, to keep in mind aspects of reconstruction, development and economic growth in view of achieving outcomes such as skills, attitudes and knowledge (cf. 3.2.4).
- The Economics teacher must plan the overall learning and assessment programmes, which also include the continuous assessment (CASS) of every learner. The Economics teacher draws up a year plan with all learning and assessment programmes for a particular grade (cf.3.3.4;3.4.2 & 3.9).
- The Economics teacher must include macro economics, micro economics, economic pursuits and contemporary economic issues in the EMS curriculum for content alignment and integration of the NCS for Economics in the FET phase in order to lay the foundation for the continuation of sound economic knowledge (cf.3.3.3).

7.4.4 Recommendations regarding the critical components of the teaching-learning process for the NCS for Economics in the FET phase

The following recommendations are made regarding the critical components of the teaching-learning process for the Economics teacher :

- At the start of the academic year, the objectives (and the eventual learning outcomes) pursued by means of the course (i.e. the course outcomes, e.g. grade 12) should be made available to the learner (cf. 3.6 & 3.7.1).
- The learner should be provided with the NCS, including learning outcomes (LOs) and assessment standards (ASs), the teaching methods, and a full timetable (cf.3.3.3; 3.3.4.1;3.4.3 & table 3.2).
- Upon commencement of teaching, a brief preview should be given of the learning outcomes to be dealt with, while the objectives specifically pursued by that section (i.e. the unit outcome) should be brought to the learner's attention (cf.3.3.3; 3.3.4.1 & table3.2.
- It must be ensured that every teaching session (whether a question-and-answer session, practical lesson, simulation or group work) relates meaningfully to the previous teaching session (cf.3.3.4.3).
- Upon commencement of the teaching session, a brief synoptic preview of the subject matter to be dealt with must be given, together with the specific lesson outcomes to be achieved (cf.3.7.13.7.2)
- Upon completion of the different process elements of the teaching session, focus should be returned to the overall structure of the lesson, and the accent should once again fall on the essences (cf.3.3.4 & 3.4.2).
- New knowledge should be applied in as many new or unfamiliar situations as possible in view of the total mastery of the newly acquired knowledge and in accordance with the OBE approach (cf.3.42).
- Upon completion of learning outcome 1 (i.e. learning units, e.g. macro economics), as well as on completion of the learning outcome as a whole

(e.g. grade 10), the subject matter should again be summarised/debriefed in a meaningful whole by means of a clear indication of the mutual relationship among the different sections (cf.3.3.3; 3.3.4.1;3.4.3 & table 3.2).

7.4.5 Recommendations regarding the rationale for critically analysing cooperative learning as a teaching strategy for Economics

The following recommendations are made regarding the cooperative learning in Economics teaching :

Economics teachers can use cooperative learning because it is a successful teaching strategy in which small teams, each consisting of students of different levels of ability, use a variety of learning activities to improve their understanding of a subject (cf.4.5.1; 4.5.2;4.5.4.4.6 & 4.7).

The outcomes of cooperative learning promote and enhance the following critical outcomes:

- Promoting learners' learning and academic achievement;
- Improving learners' retention and their own learning process;
- Enhancing learners' satisfaction with their learning experience;
- Helping learners to develop skills in verbal communication;
- Developing learners' social skills;
- Promoting learners' self-esteem; and
- Helping to promote positive race relations amongst learners (cf.4.5.1; 4.5.2 & 4.5.4.4.6).

Economics teachers can use the following effective cooperative learning techniques to enhance outcomes:

- TGT (cf.4.9.1.1; table 4.2 & figure 4.2);
- STAD (cf.4.9.1.2)
- Jigsaw (cf.4.9.2.1 & figure 4.3);

- Peer tutoring (cf.4.9.2.2)
- Small-group teaching (cf.4.9.3.1)
- Group investigation (cf.4.9.4.1)
- Team-support groups (cf.4.9.2.2)

Cooperative learning must be implemented by Economics teachers because it is necessary in any teaching-learning situation, since this particular strategy "...can foster educational excellence for all children regardless of race, class, or gender, and can provide students and teachers with the experience and expectations of active participation in controlling and changing the spheres of their lives" (cf.4.4 & 4.6).

Cooperative learning as a teaching strategy is one of the success stories in the transformation of education over the past decade. Research has focused on the application of cooperative learning activities in the classroom where students jointly and creatively identify problems and generate practicable solutions (cf.4.3 & 4.7).

Cooperative learning is necessary because the NCS for Economics requires that the principle of an OBE approach, which is applicable to this teaching strategy of cooperative learning, is applied in the classroom (cf. 4.3 & 4.7).

One of the critical outcomes of the NSC as curriculum model is that learners must be able to cooperate with other members of a team, group, organisation and community. The learner-centred approach requires that learners are not mere passive listeners as in the past. The majority of teachers who have been trained in a teacher-centred teaching approach and who are now required to make a paradigm shift to a learner-centred approach continue to struggle, despite the fact that the Department of Education has arranged several training workshops for them in the implementation of the NCS curriculum. It appears from the pilot study that Economics teachers are inadequately equipped for their task,

and it is for this reason that this study is necessary – so that a model for implementing cooperative learning as a teaching strategy for the FET phase can be developed for Economics teachers so as to empower them to apply this teaching strategy with confidence in the classroom (cf.1.8.2.1; 6.2.4.7 & table 4.27).

7.4.6 Recommendations regarding the current status of training in the NCS for Economics in the FET phase

Recommendations are made in respect of the following:

- Newly appointed beginner Economics teachers (IPET);
- Current in-service (INSET) Economics teachers retrained and reskilled in the NCS for Economics;
- Human resource development training programmes;
- Classroom management and discipline strategies; and
- Career opportunities for learners.

7.4.6.1 Newly appointed beginner Economics teachers (IPET)

Principals, heads of Economics departments or the heads of subject didactics must identify all newly appointed beginner Economics teachers at their respective schools and submit the names to their respective learning facilitators for immediate cluster training. Furthermore, a training needs analysis plan with specific aspects of the NCS for Economics must be identified and beginner teachers must be trained in the following NCS curriculum aspects:

- Subject framework for the NCS for Economics, reflecting the planning of the learning programme, content, progression, integration and resources;
- Work schedule showing progression and integration alignment with lesson planning in reflective teaching, debriefing, and teaching media;
- Subject assessment guidelines pertaining to strategies and tools such as the design of assessment rubrics (cf.6.2.2.1; table 6.2; graph 6.3 & 6.2.4.6).

7.4.6.2 Current in-service (INSET) Economics teachers retrained and reskilled in the NCS for Economics

Such teachers must be trained in the following aspects:

- The elements and principles of the OBE approach in making a paradigm shift towards teaching the new NCS curriculum in the FET phase;
- Different learning fields with specific subject areas, learning outcomes and assessment standards, as well as learning programme guidelines for the development of learning material and resources, the organisation of teaching and learning outcomes, and a framework for the assessment of learning outcomes (cf.6.2.2.1; table 6.2; graph 6.3; 6.2.2.3;table 6.4 & graph 6.5).

In addition, more financial support and LTSM resources must be made available to schools for the effective and efficient implementation of the NCS for Economics (cf.6.2.).

7.4.6.3 Human resource development training programmes

- Economics teachers must be identified and communication channels set up with higher institutions in the province regarding short credit-bearing training courses in Economic and Management Sciences for grades 8-9 and for grade 10-12 Economics teachers, which will be credited as professional development points (PDPs) for career paths.
- Short credit courses must be structured, designed and tailor-made in accordance with the human resource development skills plan of the educational districts of the FSDoE.
- Economics teachers who failed to attend any district workshops or seminars between 2002 and 2007 must be identified to attend specific

training workshops on the planning of subject framework, work schedule and CASS.

- Specific performance indicators must be compiled to reach the Economics level-1 subject didactics teachers (15.7%).
- An ongoing in-service training plan should be implemented in accordance with the respective district human resource and skills development plans for the year.
- Skills development workshops should be presented for the 12.8% of specific INSET Economics teachers being planned, implemented and monitored for effective teaching-learning at school level.
- An educational district support programme (QEDSP) should be designed for the future training of grade 12 teachers in particular, with greater focus on the new National Senior Certificate.
- Learning facilitators must be appointed to monitor and provide ongoing support to teachers in the respective clusters in all five educational districts.
- More education qualification bursaries should be made available to INSET Economics level-1 and level-2 teachers to allow them to study further.
- Such teachers should upgrade their qualifications through an Advanced Certificate in Education (ACE) in Economic and Management Sciences (EMS) or Economics at any institution of higher learning.
- The Training of Teachers project (NCEE partnership) should expose and train more Economics teachers over the next three years in order to expand the multiplier effect so as to enhance the economic literacy levels of teachers.

7.4.6.4 Classroom management and discipline strategies

- Economics teachers need to attend in-service training workshops on constructive conflict management.

- Economics teachers must receive training in alternative and effective discipline strategies and classroom management.
- A needs analysis is required in respect of the following challenges facing Economics teachers:
    - Teaching-learning at school level;
    - Dealing with and controlling class size, especially in the case of large classes;
    - Identifying and supporting learners displaying disruptive behaviour;
    - Applying non-cooperation strategies to deal with disinterested learners.

7.4.6.5 Career opportunities for learners

- More advocacy and advertising strategies must be used to market study and career opportunities in the field of Economics to prospective learners between grades 9 and 12.
- Learning facilitators must identify prospective learners and provide them with bursaries or financial support to allow them to study Economics at an institution of higher learning in order to increase the number of Economics teachers within the FSDoE.

7.4.7 Recommendations regarding the extent to which Economic teachers apply cooperative learning as a teaching strategy in their classrooms

The following recommendations are made regarding the extend to which Economic teachers use cooperative learning in Economics teaching :

- Economics teachers must use and apply cooperative learning as a teaching strategy on a regular basis in their respective classrooms. The Economics teachers surveyed during this study revealed that they were only allocating 6.1% of overall class time to cooperative learning as a

teaching strategy in their respective classes (cf.6.2.4.7; 4.1.27; 4.7.1; 4.7.2; 4.7.3; 4.7.4; 4.7.5 & 4.7.6).

- More overall class time must be devoted to cooperative learning activities in Economics (cf.6.2.4.1; table 6.21 & graph 6.12).
- Cooperative learning as a teaching strategy is here to stay, because it is the most advanced and researched teaching strategy to use (cf. 4.7.1;4.7.2;4.7.3;4.7.4,4.7.5 & 4.7.6).
- Economics teachers must be sure to understand their roles and responsibilities regarding cooperative learning as a teaching strategy (cf. 4.12.4).
- Economics teachers must adhere to the contextual analysis as a prerequisite for the implementation of cooperative learning as a teaching strategy in Economics (cf.4.12.4).
- Economics teachers must understand the NCS principles underpinning the achievement of the learning outcomes for the subject (cf.4.12.7.1).
- Economics teachers must to ensure that the elements and principles of the NCS in the FET phase are aligned with the OBE approach (cf.4.1.27.1 & 6.2.4.7).
- Economics teachers must be aware that their role and task is to facilitate, empower cooperative and social skills, design cooperative learning activities, monitor and control group activities, support cooperative learning groups, assign learning materials to groups, and report back to groups on their performance (cf.4.12.4).
- Economics teachers must understand the effectiveness and the use of cooperative learning techniques such as "think-pair-share" and "send a problem" (cf.4.11).
- Economics teachers must use cooperative learning techniques such as STAD, jigsaw groups, TGT, peer tutoring, small-group teaching, CIRC groups, group investigations and team-support groups as a means to enhance the achievement of the learning outcomes for Economics (cf. 4.7; 4.9.1; 4.9.24; 4.9.3; 4.9.4; 4.10 & 7.3.6).

7.5 COMPONENTS OF A FRAMEWORK FOR THE IMPLEMENTATION OF COOPERATIVE LEARNING AS A TEACHING STRATEGY FOR ECONOMICS

The following components of a framework for the implementation of cooperative learning in Economics are recommended:

- Cooperative learning contextual analysis (cf.4.12.2);
- Cooperative outcomes for Economics teams and tasks (cf.4.12.7.1);
- Cooperative learning instructional decision (cf.4.12.2);
- Presentation of cooperative learning lesson for Economics (cf. 4.12.4);
- Post-cooperative learning integrated assessment in Economics (cf.8.8.2.1-8.2.5).

7.6 RECOMMENDATIONS FOR FURTHER RESEARCH

The following aspects of cooperative learning as a teaching strategy are recommended for further research:

7.6.1 Cooperative learning as a teaching strategy

- The application and impact of cooperative learning as a teaching strategy for Economics teachers in the FET phase;
- The design and application of cooperative activities to enhance critical thinking in the Economics classroom;
- Strategies for designing group work in the Economics classroom;
- Small-group learning and teaching in Economics;
- Cooperative learning as a teaching strategy for the inclusive classroom.

7.6.2 Cooperative learning techniques

- The use and application of STAD to enhance academic performance in Economics;
- The impact of the jigsaw cooperative learning technique on interpersonal relationships and academic achievement in Economics;
- The impact of the jigsaw cooperative learning technique on racial attitudes and academic achievement in Economics;
- The use and application of TGT to enhance academic performance in Economics;
- The use and application of peer tutoring to enhance interpersonal relationships and academic performance in Economics;
- The use and application of group investigation and team support to enhance academic performance in Economics.

7.6.3 Cooperative learning as a professional development strategy

- The impact of cooperative professional development in a peer-centred approach on the growth of Economics teachers;
- The use and application of a colleague consultation approach in professional development;
- The use and application of a peer coaching programme in professional development for Economics teachers.

7.7 CONCLUSION

The thesis has thus far provided an overview of the literature study regarding the NCS curriculum model for South African schools, Economics as a school subject, and cooperative learning as a teaching strategy for Economics. The findings and recommendations in respect of the aim of this study have been identified in view of the design of a framework for the implementation of cooperative learning as a

teaching strategy for Economics teachers in secondary schools within the FSDoE.

The pressure on teachers with regard to learners' academic performance in Economics is steadily increasing and therefore urgent attention must be given to the training needs of teachers in terms of teaching and learning.

The next chapter contains a framework designed for, and recommended for use, by Economics teachers use of cooperative learning as a teaching strategy in the FET phase in Free State secondary schools, based on the literature review (cf. chapters 2, 3 and 4) and the outcomes of the empirical research (cf. chapters 5 and 6).

CHAPTER 8

FRAMEWORK FOR THE USE OF COOPERATIVE LEARNING IN ECONOMICS IN THE FURTHER EDUCATION AND TRAINING PHASE

8.1 INTRODUCTION

The overall aim of this study was to design a framework for use of cooperative learning in Economics in the Further Education and Training (FET) phase in the Free State Province.

The recommended components of a framework for the use of cooperative learning as a teaching strategy described in this chapter were compiled from information gathered as follows:

- Literature study (cf. chapters 2, 3 and 4);
- Empirical research (cf. chapters 5 and 6);
- Personal experience as Economics teacher and lecturer;
- Conversations with colleagues over the years;
- Informal interviews with subject advisors and experienced Economics teachers.

This framework serves as a guideline for Economics teachers in the FET phase and will require adjustment according to personal circumstances. The framework is structured according to the components for the implementation of cooperative learning as a teaching strategy for Economics, as set out in figure 8.1. (cf. Appendix E)

8.2 COMPONENTS OF A FRAMEWORK FOR THE USE OF COOPERATIVE LEARNING AS A TEACHING STRATEGY FOR ECONOMICS

The framework is structured around the undermentioned components for the implementation of cooperative learning as a teaching strategy for Economics. The Economics teacher first study these critical components for implementation before design a lesson plan (cf. 4.12.4 & 8.2.1.1).The recommended components of a framework for the implementation of cooperative learning as a teaching strategy are discussed:

8.2.1 Contextual analysis of cooperative learning

In the context of cooperative learning, the following components are discussed as prerequisites for the framework: the teacher, the learners, the school, the classroom, diversity, and the learning context (cf. 4.12; 4.12.2 & 4.12.3).

8.2.2 Cooperative outcomes for Economics teams and tasks

The Economics teacher determines the cooperative outcomes by means of the integration of the outcomes and specific skills (cf. 4.5.1- 4.5.4.5.6).

8.2.3 Cooperative learning instructional content

The NCS-Economics policy subject framework consists of learning outcomes and assessment standards for grades 10-12. Economics teachers must study the NCS for Economics policy document (cf.3.3.3; table 3.2 & 3.6-3.7) .

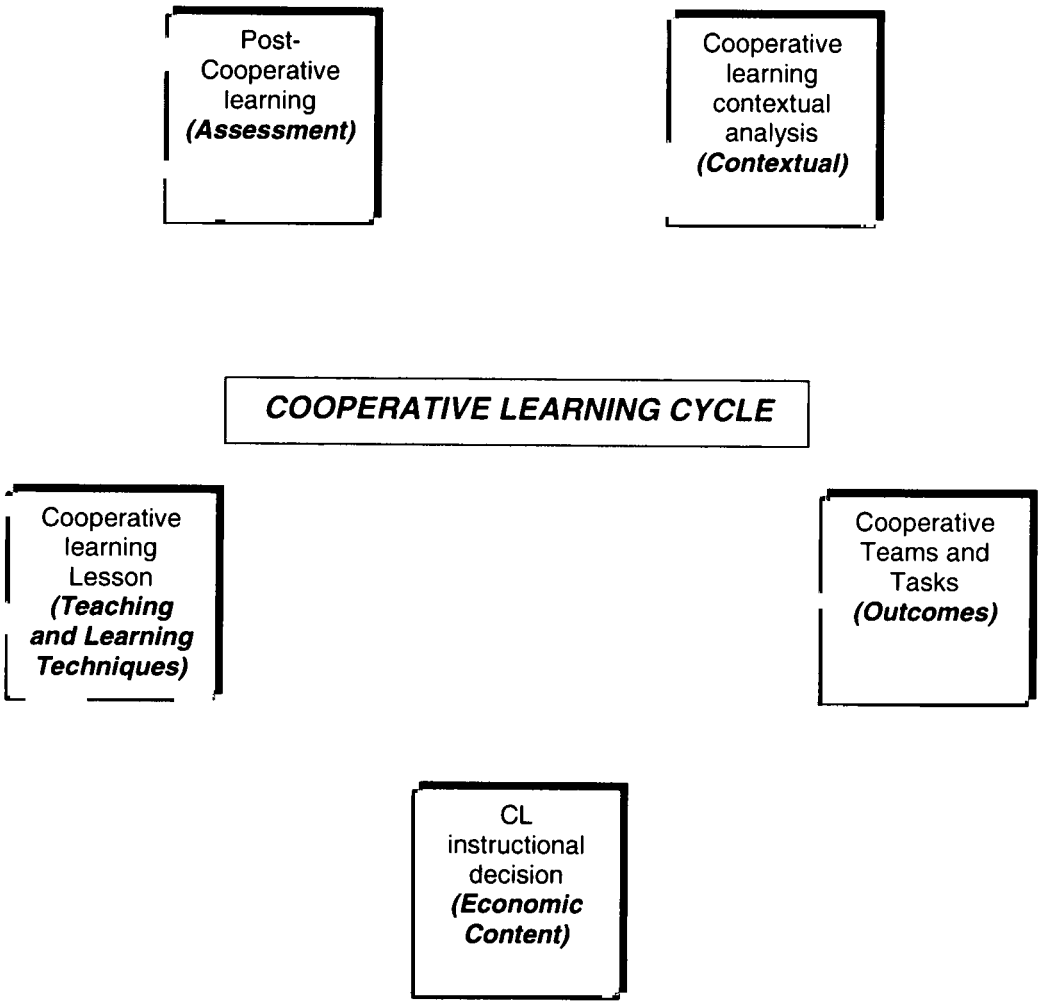
8.2.4 Presentation of cooperative learning lessons in Economics

In preparation for presentation of a cooperative learning lesson, Economic teachers can use the step by step formulas for successfully implementation of Economics in STAD (cf. 4.9.1.2); Jigsaw (cf. 4.9.2.1); TGT (cf. 4.9.1.1) , Group investigation (cf. 4.9.4.1), Small group work (cf. 4.9.3.1) and simulations(cf. 4.11) in their respective classes (cf. 4.9.1; 4.9.2; 4.9.3; 4.12.6; 4.12.7.1 & 4.12.7.2).

8.2.5 Post-cooperative learning integrated assessment in Economics

Economics teachers can apply different types of assessment strategies, debriefing and reflection during cooperative learning activities (cf. 3.9.1; 3.9.2; 3.9.3; 3.9.4 & figure 8.1).

Figure 8.1 Cooperative learning framework for Economics



Adapted and modified from Jacobs *et al.* (2004:62) and Killen (2007:45)

8.2.1 Contextual analysis of cooperative learning

In the context of cooperative learning, the following components are discussed as prerequisites for the framework: The teacher, the learners, the school, the classroom, diversity, and the learning context are important components before setting outcomes for a cooperative learning activitiy (cf. 4.12; 4.12.2 & 4.12.3).

8.2.1.1 The Economics teacher

Different teachers organise learning experiences for optimal participation and involvement of the learners differently. When preparing lessons, Economic teachers should know to what extend their own abilities and personalities enable them to provide effective guidelines and information to the learners in groups. The Economics teacher must know their respective roles and responsibilities. Appart from their roles, is also their teaching styles. The most effective Economic teachers are those whose teaching styles are flexible and adaptable who can adapt their teaching styles to the classroom context.

It is recommended that Economics teachers approach the contextual analysis of cooperative learning in the following manner:

- Economics teachers must understand their roles and responsibilities with regard to cooperative learning as a teaching strategy (cf. 4.12.4).
- The contextual analysis must be a prerequisite for the implementation of cooperative learning as a teaching strategy in Economics (cf. 4.12; 4.12.2 & 4.12.3).
- NCS principles underpinning the achievement of learning outcomes for the subject must be understood (cf. 3.3.2 & 3.3.3).
- The elements and principles of the NCS in the FET phase must be aligned with the OBE approach (cf. 2.8.5.1 & 3.3.3).
- The critical conditions of an OBE approach, which are also applicable to Economics, must be observed (cf. 2.8.3).

- Economics teachers must be aware that the learning outcomes for Economics can be achieved through the application of mastery learning (cf. 2.4.3).
- Economics teachers must be aware that successful teaching and learning depends on the viewpoint of the Economics teacher as the basis for teaching (cf.4.12.4).
- Economics teachers must be aware of the framework for the NCS in the FET phase (cf.2.8.5.2; 2.8.6.1 & figure 2.7).
- Economics teachers must understand that assessment is one of the most important processes in education (cf.2.8.7; 3.10.1; 3.10.2 & 3.10.3).

Economics teachers must see the contextual analysis as an integral part of their teaching task in achieving the learning outcomes for the subject.

8.2.1.2 <u>The learners (cf. 4.12.5)</u>

- Knowing and understanding learners is very important for Economics teachers when planning cooperative learning activities (cf.4.12.5 & 4.13.1).
- Economics teachers should give learners the opportunity to participate actively in their own learning (cf. 4.12.5).
- Economics lessons should be planned and adjusted to accommodate all learners (cf. 4.8.1)
- Economics teachers must observe the learners and gather and interpret as much information as possible about their social and cultural backgrounds (cf.4.12.5).

8.2.1.2.1 *The seven roles of the Economics teacher*

The teacher is a determining factor in classroom activities. Whether or not participation in cooperative and reflective learning occurs in the classroom

depends entirely on the teacher's personal theoretical framework regarding what teaching is about and how learners learn in the Economics classroom (cf.4.12.3). It is recommended that Economics teachers recognise the vital roles they play in respect of the following:

8.2.1.2.1.1 The Economics teacher as mediator of learning

The Economics teacher must mediate learning in a manner that is sensitive to the diverse needs of learners (including those with barriers to learning), construct learning environments that are appropriately contextualised and inspirational, and communicate effectively showing recognition of and respect for the differences of others. In addition the teacher must demonstrate sound knowledge of Economics content and skill and the various principles, strategies and resources applicable to teaching Economics in a South African context. According to Jacobs *et al.* (2004:25-26), within the learning context the teacher is a negotiator, diplomat, peacemaker, referee, umpire and moderator on economic issues like unemployment, labour and productivity in view of achieving the desired outcomes. In this regard the teacher is expected to play this enabling role to ensure that the learning task in Economics is successful within a given learning context. In this context the Economics teacher must have adequate knowledge, skills and values in respect of the subject and effective teaching strategies in order to succeed as a mediator of learning (cf.4.12.4).

8.2.1.2.1.2 The Economics teacher as interpreter and designer of learning programmes and materials

The Economics teacher must understand and interpret a given learning programme, design an original learning programme, identify the requirements for a specific context of learning, and select and prepare suitable textual and visual resources for learning. The Economics teacher must also select, sequence and pace the learning in a manner sensitive to the differing needs of the subject and

learners. According to Jacobs *et al.* (2004:26) the subject matter presented by each teacher is an entity to assist learners in gaining a better understanding of life and to establish a solid foundation from which to operate as learners in interaction with the world (cf. 4.12.4).

8.2.1.2.1.3 The Economics teacher as leader, administrator and manager

The Economics teacher must make decisions appropriate to the level of learning, manage learning in the classroom, perform classroom administrative duties efficiently, and participate in school decision-making structures. These competences must be performed in ways that are democratic, which support learners and colleagues, and which demonstrate the teacher's responsiveness to changing circumstances and needs.

8.2.1.2.1.4 The Economics teacher as scholar, researcher and lifelong learner

The Economics teacher must achieve ongoing personal, academic, occupational and professional growth through the pursuit of reflective study and research in his/her learning area, in broader professional and educational matters, and in other related fields, especially in the subject Economics (cf. 4.12.4).

8.2.1.2.1.5 The Economics teacher in a community, citizenship and pastoral role

The Economics teacher must practise and promote a critical, committed and ethical attitude towards the development of a sense of respect and responsibility towards others. The Economics teacher must uphold the constitution and promote democratic values and practices in schools and society. Within the school, the teacher must demonstrate an ability to develop a supportive and empowering environment for the learners and respond to the educational and other needs of learners and fellow teachers (cf. 4.12.5).

Furthermore, the Economics teacher must develop supportive relationships with parents and other key persons and organisations based on a critical understanding of community and environmental developmental issues. One critical dimension of this role is HIV/AIDS education.

8.2.1.2.1.6 The Economics teacher as assessor

The Economics teacher must understand that assessment is an essential feature of the teaching and learning process and know how to integrate it into this process. The Economics teacher must have an understanding of the purpose, method and effect of assessment and be able to provide helpful feedback to learners. The teacher must design and manage both formative and summative assessment in ways that are appropriate to the level and purpose of the learning and meet the requirements of accrediting bodies. The teacher must keep detailed and diagnostic records of assessment. The Economics teacher must understand how to interpret and use assessment results to feed into processes for the improvement of learning programmes (cf. 3.9.1 & 3.5.1.8).

8.2.1.2.1.7 The Economics teacher as learning area / subject / discipline / phase specialist

The Economics teacher must be well grounded in the knowledge, skills, values, principles, methods and procedures relevant to Economics as a subject or in professional or occupational practice. The teacher must be familiar with different approaches to teaching and learning (and, where appropriate, research and management), and how these may be used in ways that are appropriate to the learners and the context. The Economics teacher must have a well-developed understanding of the knowledge appropriate to the field of specialisation (cf. 3.3.3)

8.2.1.3 Classroom management

Good lesson planning, wise selection of content, specific cooperative learning techniques, media and physical classroom organisation of the way the lesson is to be presented are prerequisites for smooth running of the cooperative learning lesson in a diverse classroom activities (cf.4.12.7). It is recommended that Economics teachers use the following classroom management aspects in the manner specified:

8.2.1.3.1 *The Economics teacher as facilitator*

The Economics teacher should act more as a facilitator of learning than a dispenser of knowledge. In the Economics classroom the teacher is required to create situations that allow learners to learn on their own or in cooperative groups. The Economics teacher's role is expected to arouse an inquiring mind, critical thinking and creativity amongst learners in the classroom.

The task of the Economics teacher as a facilitator in classroom management will be as follows:

- Giving clear instructions to the whole class when introducing new economic content before learners commence with group activities (cf.4.12.2; 4.12.4);
- Assigning learners to cooperative learning groups (cf.4.12.2; 4.12.5; 4.12.7.2; 4.13.1.1;4.13.1.2 & 4.13.1.3);
- Seeing to it that learners work individually on a research assignment (cf.4.4.12.3);
- Creating and maintaining effective learning situations in the classrooms. An Economics teacher who can succeed in this is not a magician but rather a good classroom manager. An Economics teacher who adopts the cooperative learning approach in the classroom stands a better chance of securing the cooperation of learners (cf.4.12.7.3; 4.12.7.4; 4.12.7.5 & 4.12.1.4).

8.2.1.3.2 Classroom management approaches

Economic teachers may develop similar classroom management skills by trying out strategies that are reported to have worked successfully for others. The undermentioned approaches must be adopted to suit individual teaching styles. The following are recommendations in respect of the development of different classroom management skills for Economics teachers:

- Implementing an assertive classroom approach by showing the learners the way and giving clear directions (cf. 4.12.7) ;
- Applying a business-academic approach whereby learners are fully engaged in meaningful classroom activities through feedback (cf.4.12.7.5);
- Introducing a behavioural-modification approach that indicates to learners what is acceptable behaviour and what the reward for classroom activities will be if they are successful in their assignments (cf.4.12.7.4);
- Applying a group managerial approach to develop a sense of allegiance to the group amongst all learners (cf. 4.13.1.3);
- Implementing a group-guidance approach whereby the group members are responsible for one another's behaviour (cf.4.13.1.4);
- Introducing an acceptance approach whereby learners find acceptance amongst their peers or elders (cf.4.13.1.4); and
- Applying the success approach whereby the teacher's acceptance constitutes success for the learners (cf.4.12.7.5).

8.2.1.3.3 Creating an effective Economics learning environment

The physical condition of the classroom environment affects the dynamics of learning. Economic teachers can either facilitate easy movement or depending on the manner in which the classroom are structured for a specific objective in teaching Economics. It is recommended that Economics teachers create an effective classroom environment by reflecting on the following:

- The Economics teacher, obviously, plays the most important role in the cooperative learning process. The teacher determines the final grouping of students, plans tasks with very specific outcomes in mind, determines the value point system for completion of certain tasks, and determines assessment tools and the ways in which they will be used (cf. 4.12.4).
- In addition, the Economics teacher serves as facilitator, resource and observer during all cooperative learning activities. It is expected that the teacher will remain actively involved by circulating among the groups and by joining groups for brief periods of time to facilitate, not to dominate. It is the teacher who signals the conclusion of the cooperative learning activity by initiating sharing (cf.4.12.4).
- Finally, the teacher should be prepared for noise levels above those to which he/she is normally accustomed. Cooperative learning at its best generates much discussion, sometimes all at once. However, the excitement generated by learners who are taking an active and responsible role in their learning is infectious and wonderful to behold and to hear (cf.4.12.7.4).
- Initially, the Economics teacher carefully designs meaningful tasks that require active participation by each learner in the group towards a common goal. At the beginning of a cooperative lesson, the teacher's role, often in cooperation with the class, is that of "task setter". As groups work on their tasks, the Economics teacher acts as a facilitator/coach moving from group to group to monitor the learning process. The Economics teacher also provides learners with ongoing feedback on and assessment of the group's progress (cf.4.12.7.2).

8.2.1.3.4 *Class participation rules applicable to Economics activities*

In order to ensure successful classroom management, the Economics teacher should set certain class participation and group participation rules:

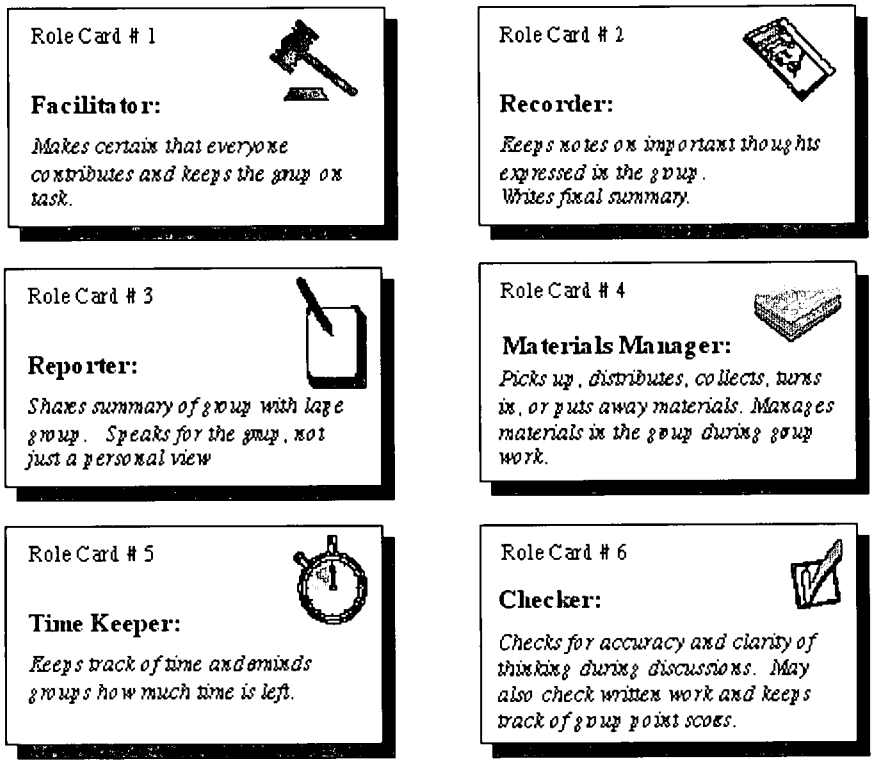
- Every learner must contribute to the discussion on an Economics topic (cf. 4.12.7.3).
- Every learner must be non-judgmental of other learners' opinions (cf. 4.12.7.3).
- Every learner must have the opportunity to express his or her ideas without being attacked (cf. 4.12.7.3 & 4.13.1.2).
- Every learner must ask questions when an idea or fact is presented that they do not understand (cf.4.12.7.3).
- Each member of the group must contribute to the Economics research project (cf. 4.12.3).
- Each member must avoid using derogatory language (cf.4.12.5).
- Each member must get to know and learn to trust others in group demonstrations (cf. 4.12.5).
- Each member must communicate accurately and unambiguously (cf. 4.12.5 & 4.12.3).
- Each member must accept and support other learners during role-play (cf. 4.12.3).
- Each member must resolve conflicts constructively (cf. 4.12.5).
- Each member of the group must speak and interact only with his/her group (cf. 4.12.5).
- Each member of the group must be present and ready to work (cf. 4.12.5).
- Each member of the group must do the research or work assigned (cf. 4.12.3).
- Each member of the group must be present for group presentations to avoid a lowering of his/her grade. If the absent group member does not wish to have his/her grade lowered, group members can come in on their own time and deliver an oral presentation (cf. 4.12.5).

8.2.1.3.5 *Roles and responsibilities of cooperative groups* (cf.4.13.1)

Before ant teaching take plac, the teacher outlines the different roles and responsibilities of different groups. Each group must know the outcomes of the tasks before starting in their respective groups. These specific roles and responsiblirties can be rotate amongst cooperative group members (cf. 4.12.5 & 4.13.1). It is recommended that Economics teachers approach cooperative learning roles and responsibilities in the following manner:

While working in cooperative learning groups it is necessary for each member of the group to be **assigned a task and be given a role**. Once a decision has been made as to the number of groups and the roles that will be needed in the completion of the task, a set of role cards, similar to the ones in figure 8.2 (cf. table 4.3) below, should be constructed for each team member. Before roles are assigned, the Economics teacher should explain and model the individual tasks and roles for learners so that they know and understand how their individual task and role will contribute to the success of the group. Roles should be rotated on a regular basis so that all learners become proficient in each task (cf.4.13.1).

Figure 8.2 Cooperative learning role cards



8.2.2 Cooperative teamwork and team tasks: Outcomes

Outcomes enable learners to develop a range of competencies that will influence them for the rest of their lives. These competencies helps the Economics learner provide the teacher with the crucial knowledge needed to steer them in the right direction to achieve the cooperative learning outcomes (cf.4.5.1 & figure 4.1). It is recommended that Economics teachers identify the cooperative learning teamwork outcomes prior to presenting the lesson:

8.2.2.1 Cooperative outcomes

The Economics teacher determines the cooperative outcomes by means of the integration of the outcomes and specific skills, namely:

(1) The outcomes in terms of specific skills;

(2) The outcomes being taught by means of instructional experience;

(3) Different assessment strategies being used to determine whether the learners have indeed mastered the outcomes;
(4) Certification once the desired outcomes have been achieved;
(5) Adaptable training programme managed in a sensitive way to provide optimal guidance to the learner.

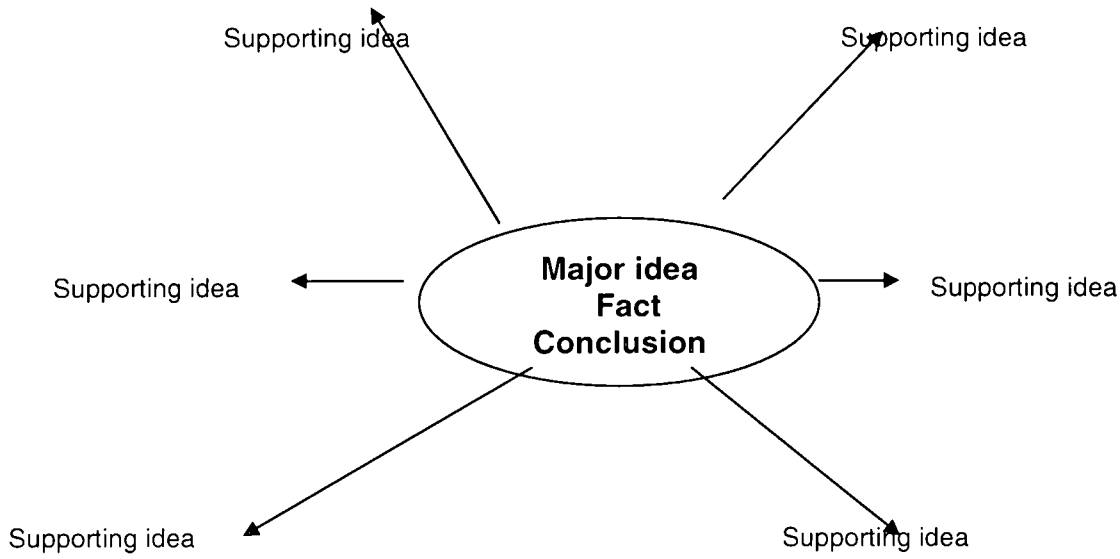
It is recommended that Economics teachers identify the specific outcomes:

- The Economics teacher explains the academic tasks and outcomes to the groups before the lesson commences.
- The outcomes for the assignment must be clear to all groups.
- Measurable tasks must be assigned so groups know what to expect before starting with the task.
- The Economics teacher explains the principles and concepts of the subject matter and the strategies to be followed by the groups.
- The Economics teacher explains the procedures for learners to follow in completing the tasks (cf. 4.4; 4.5.1 & 4.12.7)

8.2.2.2 Structural teaching organisers

- The Economics teacher must provide groups with visual organisers to structure their thoughts on any concept. These visual organisers are blank illustrations using lines, arrows, boxes or events as a means of demonstrating ideas on the tasks.
- These visual tasks can be in the format of a web network or mind map (cf. figure 8.3).

Figure 8.3 Web network / mind map



8.2.2.3 Criteria and expectations relating to the task and teamwork

While explaining to groups the academic tasks they are to complete, the teacher must also communicate the level of performance expected from the group members. It is recommended that in cooperative learning, Economics teachers use criterion-based assessment such as judgments, whereby a fixed set of standards is adopted and group members are judged according to that standard. Every learner in the group who performs above that standard progresses to the next level of the outcomes set. At the beginning of the lesson, the Economics teacher may want to meet with learners in groups and establish expectations for the lesson (cf.4.5.1 & figure 4.1).

It is furthermore recommended that the Economics teacher creates an expectation and promotes criteria for success by means of the following:

- Focused discussion pairs in the Economics class where each learner in the pair formulates an answer, shares his/her answer, listens carefully to

the other learner's answer, and creates new and better answers by building, associating and synthesising in a pair.

- Advanced preparation papers on economic topics per group, where the groups write short essays on contemporary economic topics from the daily business newspapers. The advanced preparation papers are read and the other groups edit and criticise one another's papers and complete an assessment form for each paper (cf. 4.12.3 & 4.12.7).

It is furthermore recommended that the Economics teacher use the example of a preparation paper assessment form for the different groups when presenting contemporary economic issues in the class (cf. table 8.1).

Table 8.1 Example of a preparation paper assessment form

Possible marks	Criteria for paper	Marks allocated/ received
5	Has a clear, accurate and descriptive title	
10	Begins with a position statement	
10	Each paragraph begins with a topic sentence	
10	Appearance, punctuation and spelling	
10	Includes information from least 3 sources	
10	Includes persuasive and supportive sentences	
15	Includes analysis and critical thinking	
10	Ends with positive comments	
Total 100		

8.2.3 Structuring positive interdependence

It is recommended that Economics teachers structure positive interdependence of the cooperative learning contextual analysis in the following manner:

8.2.3.1 Structuring positive interdependence in respect of outcomes

After explaining the outcomes of the academic task to groups, the following steps can be structured around positive interdependence in the cooperative learning groups:

- Structuring positive interdependence (cf.4.4.1 & 4.8.1); and
- Supplementing and strengthening positive goal interdependence by adding more resources, roles, identities and other forms of interdependence (cf. 4.13.1).

8.2.3.2 Positive goal interdependence uniting all groups around a common goal

The following steps can be followed in the structuring of interdependence in groups:

- **Step 1** All members scoring above a specific criterion when tested individually
- **Step 2** All members improving their performance over their previous scores
- **Step 3** The overall group score being above a specified criterion
- **Step 4** One product successfully completed by the group

After successfully completing all assignments, the groups sign their Economics results.

8.2.3.3 Other types of interdependence

These include resource interdependence, reward interdependence, role interdependence, identity interdependence, and the need to be recognised, observed and celebrated

8.2.3.4 Structuring inter-group interdependence

Structuring Economics in terms of inter-group interdependence extends the positive outcomes of cooperative learning throughout the class by establishing class goals, as well as individual and group interdependence goals. Once Economics groups have completed their activities, they can be awarded extra points.

8.2.3.4.1 *Structuring individual accountability*

In cooperative learning groups, members share responsibility for joint project outcomes. Each group member takes personal responsibility for contributing to the accomplishment of the group's goals and helping other group members to do the same. The greater the positive interdependence within a cooperative learning group, the greater the learners' feeling of responsibility (cf.4.12.7).

8.2.3.4.2 *Cooperative learning behaviours of groups*

It is recommended that Economics teachers set specific outcomes for the behaviour of cooperative learning groups. The following cooperative learning group outcomes can be used by the Economics teacher:

8.2.3.4.2.1 Outcomes for cooperative group learning (cf.4.5.6)

- **Understanding**

The Economics teacher can help learners to consolidate and enhance their understanding of a subject / learning area by clarifying economic concepts, theories and procedures for Economics projects. Furthermore, the teacher can also reflect on inter-connections with the integration of Accounting and Business Studies for purposes of understanding. Lastly, Economics teachers can set outcomes by testing the learners' understanding through case studies, assignments and simulations (cf. 4.12.3).

- **Critical thinking skills**

Economics teachers can also help learners to develop their capacity for thinking critically and analytically by giving related tasks in reviewing evidence in light of economic theories. Learners can be taught to set and solve economic problems, such as unemployment in South Africa or in their respective province. The Economics teacher can also enhance the learners' capacity for logical reasoning and formal argument in respect of daily and relevant topics, for example the impact of HIV/Aids in the workplace, or the global crude-oil crisis and the impact thereof on fuel prices in South Africa.

Teachers can develop the following skills amongst learners:

- Personal growth by helping learners to develop and mature as individuals;
- Communication skills by helping learners to learn how to communicate effectively with others;
- Group and teamwork skills by helping learners to learn how to collaborate and work together as an effective group or team;
- Self-direction in learning by helping learners to take progressively greater responsibility for their learning (cf.4.12.2 & 4.12.7.1).

8.2.3.4.2.2 Cooperative learning skills for Economics (cf.4.12.7.1)

- **Selecting teamwork skills**

The following cooperative learning skills are forming, functioning, formulating and fermenting in nature and are very important in the teaching of Economics:

- **Teaching teamwork skills**

For teams to work effectively and efficiently, they need an opportunity to work together cooperatively, to be motivated to engage in teamwork skills, and to develop some proficiency skills in using teamwork.

- **Steps in teaching teamwork skills**

Step 1	Establish the need for the skill
Step 2	Define the skill for groups
Step 3	Guide the practising of the skill
Step 4	Guide feedback and reflection
Step 5	Repeat steps 3 and 4 frequently

To conclude, it is recommended that Economics teachers structure positive interdependence and set specific outcomes for cooperative learning groups' behavior that will enable learners to demonstrate and achieve the outcomes.

8.2.4 Economic content

The following recommendations are made in respect of the successful application of Economic content by the Economics teacher, integrated with other subjects per grade in both the learning plan and the NCS for the FET phase. The NCS learning plan consists of learning outcomes and assessment standards for grades 10-12 (cf. 3.3.3 & table 3.2). Economics teachers must study the NCS for Economics policy document in respect of the following:

- Subject matter must be sensitive to aspects relating to culture, race, gender, disability, etc. Furthermore, it must be free from discrimination and, where possible, it must promote equal opportunities.
- Subject matter must place sufficient emphasis on knowledge, comprehension, skills and attitudes so that the desired outcomes can be achieved.
- Subject matter must meet the needs of both the teacher and the learner and must not contain irrelevant material.
- Subject matter must progress logically.
- Subject matter must be relevant, it must create opportunities for use in everyday life, it must promote technology and, where possible, show ties to other learning areas.
- Subject matter must relate to the everyday life of the learner.
- Subject matter must be accurate and up to date (in particular, the horizontal form of financial statements must be practically oriented).
- Subject matter must address a variety of skills and possibilities, e.g. cognitive skills, psychomotor skills, critical thought, etc.
- Subject matter must accommodate a variety of learners according to their skills and abilities, e.g. different exercises for different groups, or additional work for learners with special needs.
- Enrichment must include the following: The development of knowledge, the use of higher-order thinking abilities, e.g. analysis, synthesis and evaluation, as well as independent investigation and research (cf.3.3.3; 3.4.2; 3.7 & table 3.2).

The LOs and ASs of the NCS curriculum for Economics can be found in (cf. table 3.2). The objectives of teaching and learning are, however, more clearly described here in terms of outcomes. Before presentation of any lesson, Economic teachers must study their LO's and AS's (cf. 3.3.3; 3.4.2 & Appendix E : Examples of lesson plans)

In paragraph 8.2.5 is the preparation for presentation and implementation of a BUILD rubric for cooperative learning teaching in Economics. Furthermore STAD, Jigsaw,TGT, Group investigation, Small group work and simulations will be step by step describe for implementation in the Economic class.

8.2.5 Presentation of cooperative learning

It is recommended that Economic teachers study the learning outcomes and assessment standards for the FET phase and integrate these with the BUILD rubric (table 8.2) to achieve the critical outcomes in both the learning plan and the NCS for the FET phase. This template can be use by Economics teachers with great effect to help learners achieve the LOs and ASs for a specific grade.

Table 8.2 BUILD rubric for teaching cooperative learning in Economics

B	**U**	**I**	**L**	**D**
Build in higher-order thinking	***Unite teams***	***Insure individual learning***	***Look over and discuss***	***Develop social skills***
Problem-solving Decision-making Creative ideation	Build trust and teamwork	Insure individual learning and responsibility	Plan Monitor Assess	Communication Leadership Conflict-resolution
Problem-solving	*Sharing materials*	*Assigned roles in group*	*Outcomes of groups*	*Encourage other member*
Critical thinking	*Consensus*	*Economic quiz*	*Teacher observation sheet*	*Affirm* *Brainstorming*
Creative thinking	*Jigsaw*	*Individual application*	*Demonstrations of learning*	*Clarity*
Decision-making	*Group identity*	*Homework*	*Groups observation*	*Reach consensus*
Application	*Group rewards*	*Tests/ Examins*		*Paraphrase*

Evaluation	*Projects*			

It is recommended that Economics teachers approach the presentation of cooperative learning by referring to the steps for implementing cooperative learning techniques in Economics teaching (cf.4.12.2):

8.2.5.1 Student teams-achievement divisions (STAD)

It is recommended that Economics teachers use the steps for the implementation of STAD as a cooperative learning technique together with the example of the grade lesson plan (cf. 4.9.1.2):

Steps in the implementation of STAD in the Economics classroom:

Step 1 Divide the learners into **groups of four or five**.

Step 2 Give the learners an **outline of what they will be learning** and why.

Step 3 **Present new academic information** to the learners either verbally or in writing, or through other means such as a video or DVD.

Step 4 **Give the learners worksheets** or other study materials to help them master the academic materials. The worksheets must guide them through the materials and show them how they can help one another learn through tutoring, quizzing one another or team discussions.

Step 5 **Give the learners sufficient time** to work together to understand the ideas you have presented.

Step 6 **Test the learners** to see whether they have learned what you wanted them to learn – knowledge, skills and values. These tests are quizzes (questions and answers).

Step 7 **Score the quizzes and give each learner an improvement score.** Emphasise to the learners that the more they learn, the

more their individual improvement scores will increase their teams' scores.

8.2.5.2 Teams-games-tournaments (TGT)

It is recommended that Economics teachers use the steps for the implementation of TGT as a cooperative learning technique (cf.4.9.1.1 & figure 4.2):

Steps in the implementation of TGT in the Economics classroom:

Step 1 Follow steps 1-5 of STAD

Step 2 While the learners are learning in their groups, review your records of their learning progress over the past few lessons, so that you classify each learner to low or medium or high achievers

Step 3 When it is time to check on what the learners have learned, select three at a time for the tournament. The three learners should be from the same category but from different groups. The learners do not need to know how you make these selections.

Step 4 Pose a series of questions to the contestants who will be trying to be the first to answer the (just like on a television quiz show).

Step 5 At the end of the round (after four questions, or more if you need a tiebreaker), the winner earns one point for the team, regardless of how many questions he/she answers correctly or how difficult the questions were.

8.2.5.3 Jigsaw

It is recommended that Economics teachers use the steps for the implementation of jigsaw as a cooperative learning technique (cf.4.9.2.1):

Steps in the implementation of jigsaw in the Economics classroom:

Step 1 **Focus on the outcomes** and divide the class into teams of three to five learners.

Step 2 **Organise the learning materials** for the learners in which they will find the outcomes to achieve.

Step 3 **Assign the learners to groups** by devising two to five different team assignments. The number of different assignments depends on how many teams you want, because each team will receive a different assignment. You might give teams different reading assignments, different data sets, samples, maps or problems, different issues for discussion, different field sites, and so on.

Step 4 With a small class, give a different assignment to each team. If there are four different assignments, there will be four teams. For a larger class, create several #1 teams, several #2 teams, and so on. Give all the #1 teams the same assignment, etc.

Step 5 Unless you plan to give teams time to work during class, ask each student to prepare individually before class. One effective way to prepare students is to give them focus questions to accompany the assignment and require that students prepare written responses to those questions. If you do not do something like this, some students will not come prepared to class. Rather than asking students to prepare ahead of time, you can set aside time during class for students to work in teams to do the reading/analysis (this works if the reading/analysis is short or involves equipment that is not accessible to students outside of class and *does* guarantee that all students do the reading or analyse the data). If there are several teams of the same number (*e.g.*, four #1 teams), each team should meet separately, not as a large group.

Step 6 Give each team time in class to discuss the preparation and to develop a strategy for teaching the material to members of other teams. It is the responsibility of each team to make sure that all of its

members understand the material thoroughly and are prepared to teach it. It helps to provide guidelines for what you mean by "teach".

Step 7 Do not assume that individual teams will head in the right direction without some guidance. You need to make sure that each team is prepared to teach a mixed group and that students will make the points that you want them to make. You or an assistant needs to check in with each team at least once during the discussion session to make sure that the team has not missed the boat. Be gentle and *listen* – nudge, don't pontificate. Resist the temptation to direct too strongly. As long as the team is on the right track and is prepared to address the main issue adequately, let them digress and explore. What strikes them as significant might open your eyes to something you have missed.

Step 8 When all teams are ready, reassemble the class in groups. There should be enough groups so that each group has one member from each team. Odd numbers may mean that a few groups have one extra member. In a class of 64 with four different assignments, for example, there might have been four #1 teams each with four people, four #2 teams each with four people, and so on. Each mixed group would have a #1, a #2, a #3, and a #4, for a total of four people. There would be 16 mixed groups in such a class.

Step 9 Each member of the group will then teach the rest of the group whatever was discussed or prepared by his/her team. The rationale, of course, is that a person only really learns something well when he/she has to teach it to someone else. Each person in the group is responsible for learning from the others in the group.

Step 10 Some type of written assignment should result from the peer tutoring effort, and students should have that assignment in mind as they work in their groups. A written assignment might involve comparing work done by a student's own team with that done by a different team. Alternatively, an assignment might ask a student to take all of

the information presented by each team and use it to address a new/different/summary issue.

Step 11 If the size of the class permits, evaluate students in the group setting. Sit in on a group session, and evaluate each person's ability to teach the rest of the group. Fill out the evaluation form during the session so that students can have feedback immediately after class. This is a very useful tool for helping students improve, particularly if you outline clearly what your criteria are for assigning each level in your grading scale. Knowing that they could be evaluated at any time gives students a real incentive to come prepared, and a carefully done evaluation gives them suggestions on how to improve. It helps if you and several student assistants can simultaneously evaluate several groups in order to evaluate as many students as possible during a single session, but you can evaluate one group at each session by yourself. In a larger class, you simply won't evaluate any individual as often. If you can work out a way to evaluate everyone at every session early in the course, however, you will see faster progress in students' abilities to teach one another.

Step 12 Have each group complete a task that requires the group to bring all of the pieces together to form the "picture". This might be a comparison of information from each team or it might be an entirely new task that requires information from each of the teams to solve. *This is a crucial aspect of the jigsaw.* Without a culminating group task, the exercise is little more than four mini-presentations by individual students without incentive for students to teach or learn from each other.

Step 13 Bring everyone back together toward the end of the class, and ask each group for its most important point. Make a list of main points on the board, going around a second time to each group if people still have points to make. Use the time to elaborate (a little! don't turn it into a lecture!) or to emphasize important issues. You can be sure

this way that you drive home the most important points. This also serves to confirm for the students that they have done a good job in recognising the important points. If you have student assistants, ask them for additional points. This is a way to give your student assistants credibility and also to have a "plant" in the audience in case (and it *does* happen) one of the important points is not raised by one of the groups. As an aside, keep careful track of those points, because, for one reason or another, students have missed them and will need different reading or direction the next time in order to catch the point, if it is indeed as important as you had originally thought (cf. 4.9.2.1)

8.2.5.4 Group investigation / small-group investigation / peer tutoring

It is recommended that Economics teachers use the steps for the implementation of group investigation / small-group investigation / peer tutoring as a cooperative learning technique (cf. 4.9.2.2; 4.9.3.1; 4.9.3.2; 4.9.4.1 & figure 4.4) .

Steps in the implementation of group investigation / small-group investigation / peer tutoring in the Economics classroom:

Step 1 Focus on learning outcomes
Step 2 Select a topic
Step 3 Cooperative learning planning phase
Step 4 Implementation
Step 5 Analysis and synthesis
Step 6 Presentation of final product
Step 7 Evaluation
Step 8 Assessment

8.2.5.5 Simulations

It is recommended that Economics teachers use the guidelines for the implementation of simulation exercises as a cooperative learning technique:

- Keep activities short and simple
- Arrange the classroom before students arrive.
- Give students clear directions and communicate expectations.
- Know when to stop and take advantage of the "teachable moment" (cf.4.11).

Another teaching strategy involves the use of response groups. In order to ensure the success of group work, effective classroom arrangement is critical. Arrange desks so that students can talk and listen to each other. An overhead transparency or a flipchart should be prepared which contains a seating diagram. List group members' names so that students know where to sit and who is in their group. Be patient, but expect your students to get it right! Select a facilitator and a recorder for each group. Quickly explain the roles of each. In the beginning, when you use response groups set a relatively brief time limit to promote focused discussion.

8.2.5.6 Think-pair-share

It is recommended that Economics teachers use the guidelines for the implementation of think-pair-share as a cooperative learning technique (cf.4.11).

This is a four-step discussion strategy that incorporates waiting-time and aspects of cooperative learning. Students (and teachers) learn to LISTEN while a question is posed, THINK (without raising hands) of a response, PAIR with a neighbour to discuss responses, and SHARE their responses with the whole class. Time limits and transition cues help discussions move smoothly. Students are able to rehearse responses mentally and verbally, and all students have an opportunity to talk. Both students and teachers have increased opportunities to think and become involved in group discussion.

8.2.5.7 Three-step interview

It is recommended that Economics teachers use the guidelines for the implementation of the three-step interview as a cooperative learning technique.

This involves structured group activity with students. Using interviews/listening techniques that have been modelled, one student interviews another about an announced topic. When time is up, students switch roles as interviewer and interviewee. Pairs then join to form groups of four. Students take turns introducing their pair partners and sharing what the pair partners had to say. This structure can be used as a team-builder, and also for opinion questions, predicting, evaluation, sharing book reports, etc (cf. 4.11).

8.2.5.8 Roundtable

It is recommended that Economics teachers use the guidelines for the implementation of roundtable exercises as a cooperative learning technique.

Roundtable can be used for brainstorming, reviewing, or practising while also serving as a team-builder. Sequential form: Students sit in teams of 3 or more, with one piece of paper and one pencil. The teacher asks a question that has multiple answers. Students take turns writing one answer on the paper, then passing the paper and pencil clockwise to the next person. When time is called, teams with the most correct answers are recognised. Teams reflect on their strategies and consider ways they could improve. Simultaneous form: Each student starts a piece of paper, writes one answer, and passes it, so several papers are moving at once (cf. 4.11).

8.2.5.9 Numbered-heads-together

It is recommended that Economic teachers use the guidelines for the implementation of numbered-heads-together exercises as a cooperative learning technique.

This structure is useful for quickly reviewing objective material in a fun way. The students in each team are numbered (each team might have 4 students numbered 1, 2, 3, 4). Students coach one another on material to be mastered. Teachers pose a question and call a number. Only the students with that number are eligible to answer and earn points for their team, building both individual accountability and positive interdependence. This may be done with only one student in the class responding (sequential form), or with all the number 3s for instance, responding using an Every Pupil Response technique such as cards or hand signals (cf.4.11).

8.2.5.10 Pairs-check

It is recommended that Economics teachers use the guidelines for the implementation of pairs-check as a cooperative learning technique.

This is a way to structure pair work on mastery-oriented worksheets. Students work in teams of four with two sets of partners. The worksheet is set up with problems presented in pairs. The first person in each partnership does the first problem with the pair partner serving as coach, and offering exaggerated praise. After the first problem is done, partners change roles. After each pair of problems, teams of four check one another's work and, if they agree, give a team cheer or handshake. In this way students stay on task, working together toward mastery (cf. 4.11).

8.2.5.11 Send-a-problem

It is recommended that Economics teachers use the guidelines for the implementation of send-a-problem exercises as a cooperative learning technique.

Each student on a team writes a review problem on a flashcard. Teams reach consensus on answers and write them on the backs of the cards. Each group's stack of questions passes to another group, which attempts to answer them and checks to see if they agree with the sending group. If not, they write their answer as an alternative. Stacks of cards can be sent to a third and fourth group. Stacks of cards are finally returned to the senders, who may discuss the alternative answers (cf. 4.11).

8.2.5.12 Closure of the lesson

It is recommended that Economics teachers use the guidelines for the closure of a cooperative learning lesson.

- This time will create or reinforce your concept of "a good group member" and be motivational to learners at all ability levels. It is well worth the **time** investment.
- Ask your students for examples of other learners in their group they observed doing a good job of those things in your "good group member" concept (e.g. things that you consider important to making a successful group such as positive attitude, consistently making an effort, being cooperative, doing their role, working through conflict, working through a problem, or whatever you think makes a group learn, succeed at the task,

and function well). Ask for one specific area at a time, and encourage students to give specific examples of what they saw that was so valuable.

- This exercise provides learners with an opportunity to compliment one another, which makes both the person giving the compliment and the person receiving the compliment feel good, and builds community in the class.
- It provides for groups to hear how other groups functioned (i.e. better, worse, different approach), so that they can hear very specific behaviours that will help them in their efforts in the future (cf. 4.12.7.5)

To conclude, it is recommended that Economics teachers study the learning outcomes and assessment standards for the FET phase and integrate these with other subjects per grade in both the learning plan and the NCS in the FET phase. The NCS learning plan consists of learning outcomes and assessment standards for grades 10-12 Economics teachers. Economics teachers explore and use the different cooperative learning techniques for learners to demonstrate the outcomes.

8.2.6 Post-cooperative lesson activities (integrated assessment)

It is recommended that Economics teachers use the integrated assessment plan for quality of learning in Economics in the following manner:

8.2.6.1 Assessment plan for quality and quantity of learning

Economics teachers must design an assessment plan strategy that includes the following:

- The total quality management of learning (TQML) focusing on the most important processes in improving learning rather than outcomes (the TQML continuously improves the quality and quantity of learners in Economics) (cf.4.12.7);

- Assigning learners to cooperative learning teams for the quality of members' work (cf. 4.12.4);
- Teaching groups the principles for assessing groups (cf. 4.13.1.2);
- Cooperative teams learning how to define and organise the work progress (cf.4.13.1.1 & 4.13.1.2);
- Assessing the quality of the processes by recording indicators of progress (cf.4.12.7.3);
- Placing all measures on a quality chart to evaluate the effectiveness of the assessment tools (cf.4.13.1.4).

8.2.6.2 Assessment rules for groups

The following recommendations are made in respect of successful classroom assessment rules for the Economics teacher. Before Economic teachers implement any assessment methods, tools or instruments, the following rules apply:

- Conduct all assessment and evaluation in the context of learning teams. Assess and evaluate each learner's achievement (cf. 3.9.5).
- Assess, assess, assess again. Learning groups need regular feedback on each member's level of learning.
- Directly involve all learners in assessing one another's level of learning (cf.3.9.1 & 3.9.5).
- Use a criterion-referred system for all assessment and evaluation. Avoid all comparisons of learners' levels of achievement (cf.3.9.2).
- Use a variety of assessment forms (cf. 3.10.5 & 3.10.4).

8.2.6.3 Assessment methods

The following recommendations are made in respect of the successful use of assessment methods as a measuring instrument:

- Which learners are experiencing problems or have not yet achieved the outcomes;
- When to diagnose remediation or adjust the teaching approach to help learners achieve the outcomes;
- Which learners are doing well, are on track to achieving the outcomes, or have already achieved the outcomes;
- How learners are progressing;
- Whether there is a problem with the learning material or curriculum that could be preventing learners from achieving the outcomes; and
- Whether there is a communication problem between the teacher and the learners (cf. 3.9.5).

Economics teachers can use different assessment strategies during cooperative learning activities namely the diagnostic assessment (observation), formative assessment (informal) and summative assessment (cf. 2.8.7.3).

8.2.6.4 Processing and recording group effectiveness

It is recommended that Economics teachers process group effectiveness by analysing the effectiveness of groups and reflecting on group sessions:

- Economics teachers must ensure that each learner and each group receives feedback on the effectiveness of tasks and teamwork.
- Economics teachers must ensure that learners and groups analyse and reflect on the feedback sessions they receive.
- Economics teachers must help individual group members to improve their work.
- Economics teachers must encourage the celebration of members' hard work and the group's success (cf. 2.8.7 & 4.12.7.5).

It is recommended that Economics teachers use the following guidelines and feedback checklist when giving and receiving feedback:

- Focus feedback on behaviours rather on personality traits.
- Be descriptive not judgmental in comments.
- Be specific and concrete, not general or abstract.
- Make feedback immediate, not delayed.
- Focus on positive actions.
- Present feedback visually on a graph or chart and verbally (cf.4.12.7.5).

Figure 8.4 Feedback checklist

Feedback	Yes	No. Start over
Is feedback given?		Was not given or received. Start over.
Is feedback generating energy in the group?		Learners in groups are indifferent. Start over.
Is energy directed towards identifying and solving problems so performance is improved?		Energy used to resist, deny, avoid feedback. Start over.
Do learners have opportunities to take action to improve performance?		No, learners are frustrated and feel like failures. Start over.

8.2.6.5 Debriefing and reflective teaching

It is recommended that Economics teachers use the following guidelines for debriefing when giving and receiving feedback:

- Economics teachers should use and implement debriefing and reflection after the lesson as a reflective process.
- Economics teachers aught to think back on the experience of teaching.
- Economics teachers should set semi-structured questions, parallel to those used for planning.
- Economics teachers should focus on significant aspects of the lesson, particularly the decisions and choices he or she made during the class. This gives rise to other questions that stimulate further ideas and discussion.

Emphasis is on increasing the teaching faculty's awareness of instructional decisions made, their impact on the learners, and how they assisted or hindered in achieving instructional outcomes (cf. 4.12.7.5).

Figure 8.5 Self-reflective teaching checklist: Economics

No.	Details on self-reflection	Yes	No
1	Is there sufficient probing of the learner knowledge, skills and attitudes?		
2	To what extent does my questioning foster critical and creative thinking?		
3	Do I encourage the learners' questioning and inquiry skills?		
4	Do I encourage the learners to rethink, reorganise and refine their communication skills?		
5	Am I providing sufficient opportunities and time for the learners to work in pairs and groups on a problem?		
6	Am I encouraging the learners to listen and respond to remarks of their peers during large- and small-group discussions?		
7	Does my classroom environment encourage the learners to take risks during speaking and writing activities?		
8	Are the assessment techniques appropriate to the type and quality of the learners' responses and assignments?		
9	Do the learners complete the assessment activities under conditions promoting the best possible performance?		
10	Do I encourage and enable learners to access and use a wide variety of resources for their research assignment?		
11	Do I provide a variety of resources / references and experiences to meet the needs of all learners?		
12	To what extent are my assessment techniques fair and appropriate for evaluating progress and providing remediation and support to learners with learning barriers?		
13	To what extent are my materials/resources gender sensitive?		
14	Do my learners demonstrate cognitive, affective and psychomotor skills at the end of each learning experience?		

To conclude, it is recommended that Economics teachers use the integrated assessment plan for quality of learning, design of an assessment plan strategy and use of assessment methods in Economics. Economics teachers can explore

and use different assessment methods in the cooperative learning strategy in Economics to enable learners to demonstrate the outcomes.

8.3 CONCLUDING REMARKS

This framework for the implementation of cooperative learning as a teaching strategy for Economics teachers in the FET phase consists of recommended guidelines only and serves to provide a broad model that must be considered in context within the existing literature (cf. chapters 2, 3, and 4). Thereafter every Economics teacher should plan, use and implement these guidelines for the successful teaching of Economics in view of the achievement of the learning outcomes.

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APPENDIX A

Ph. D VRAELYS / Ph. D QUESTIONNAIRE

Ph. D VRAELYS /Ph. D QUESTIONNAIRE

INLIGTING MET BETREKKING TOT 'n RAAMWERK VIR DIE IMPLEMENTERING VAN KOöPERATIEWE LEER AS 'n ONDERRIGSTRATEGIE VIR EKONOMIEI IN DIE VERDERE ONDERWYS EN OPLEIDINGSFASE

INFORMATION REGARDING A FRAMEWORK FOR THE IMPLEMENTATION OF COOPERATIVE LEARNING AS A TEACHING STRATEGY FOR ECONOMICS IN THE FURTHER EDUCATIONAND TRAINING PHASE

Dit behoort nie langer as 30 minute te neem om die vraelys te voltooi nie.

It should not take you longer than 30 minutes to complete this questionnaire.

Instruksies vir die voltooiing van die vraelys .

Instructions to completing of questionnaire

Hierdie vraelys is uitsluitlik vir navorsingsdoeleindes.

This questionnaire is strictly for research purposes.

Moenie u naam verskaf nie. U eerlike respons sal daarom van groot waarde wees vir die navorsing en opreg waardeer word.

Please do not supply your name. Your honest response will be of great value and appreciated.

Alle inligting sal vertroulik hanteer word.

All information will be treated confidentially

Die vraelys moet deur die Ekonomie vakonderwyser voltooi word.

The questionnaire must be completed by the Economics teacher.

Voltooi alle afdelings volledig

Please complete all four sections in full.

Pos die vraelys terug in die gefrankeerde koevert teen die **31 May 2007.**

*Please mail back in the addressed envelope immediately by **31 May 2007***

Beantwoord asseblief die vrae deur die syfer van u keuse in die blokkie te *omkring* of deur die verlangde inligting in te skrywe. Please answer the following questions by *encircling* the appropriate number or by writing the necessary information in the allowed space.

AFDELING A/*SECTION A*			*For use*
Rekordnommer/Record number:			
1.Onderwysdistrik : Educational district	Fezile Dabi	1	
	Lejweleputswa	2	
	Motheo	3	
	Thabo Mofutsanyane	4	
	Xariep	5	
2.Geslag *Gender*	Manlik/Male	1	
	Vroulik/Female	2	
3.Onderwyservaring (aantal jare in onderwysprofessie) Teaching experience (*number of years in teaching profession)*	1-10		
	11-20		
	21-30		
	31+		
4.Onderrig ervaring van Ekonomie (aantal jare vakonderrig) *Teaching experience in Economics(*number years subject teaching*)*	1-10		
	11-20		
	21-30		
	31+		
5. Hoogste akademiese kwalifikasie *Highest academic qualification*	Graad 12/Grade 12	1	
	Ekonomie I/Economics I	2	
	Ekonomie I/Economics II	3	
	Ekonomie I/Economics III	4	
	Honneurs/Honnours	5	
	Meesters/Masters	6	
	Doktors/Doctoral	7	
6. Hoogste professionele kwalifikasie *Highest professional qualification*	HOD(S)/HED(S)	01	
	NGOS(S)/PGCE(S)	02	
	HOD(N)/HED(PG)	03	
	UOD/UED	04	
	BAEd/BAEconEd/BEconEd	05	
	BEd IV/BEd IV	06	
	B Ed Hons	07	
	M.Ed	08	
	PhD	09	
AFDELING B/*SECTION B* NKV-OPLEIDING/NCS- *TRAINING*			
7. Tot op watter vlak het u opleiding in NKV –VOO ontvang?			

To what level were you trained as a teacher for the NCS-FET?

HOD/HED	1	
BAEd/Bcom Ed/Becon Ed	2	
Nagraads/Post graduate	3	
Indiensopleiding/In-service training	4	
Geen ontvang/None received	5	16

8. Wat is u houding teenoor die implementering van NKV vir Ekonomie in die VOO-fase/*What is your attitude towards the implementation of NCS for Economics in the FET-phase?*

Baie positief/Very positive	1	
Positief/Positive	2	
Onseker/Uncertain	3	
Negatief/Negative	4	
Baie negatief/Very negative	5	17

For office use

9. Ek is voldoende opgelei om NKV vir Ekonomie te implementeer/*I am sufficiently trained to implement NCS for Economics*

Yes	1	
No	2	18

10. In watter mate sal die volgende aspekte u mening van NKV-Ekonomie verander?/ *To what extent will the following aspects change your opinion about NCS-Economics?*

Aspekte/Aspects	Geensins/Not at all	Geringe mate/Small extent	Groot mate/Large extent	Baie groot mate/Very large extent	
Indiensopleiding/In-service training	1	2	3	4	19
Dept werkswinkels/Dept workshops	1	2	3	4	20
NKV Ekonomie-kursus/NCS Economics courses	1	2	3	4	21
Selfstudie/Self study	1	2	3	4	22

11. Dui aan in watter mate die volgende probleeamareas 'n invloed kan hê met die implementering van NKV vir Ekonomie?/*Indicate to what extent the following problem areas will have an effect on the implementation of NCS for Economics.*

Probleemarea/*Problem area*	Geensins/Not at all	Geringe mate/Small extent	Groot mate/Large extent	Baie groot mate/Very large extent	
NKV-beleidsdokument is vaag/NCS *policy document is vague*	1	2	3	4	23
NKV-beginsels is onduidelik t.ov Ekonomie/NCS *principles are not clear regard Economics*	1	2	3	4	24

Onvoldoende opleiding/*Insufficient training*	1	2	3	4
Onvoldoende bronne (LOM)/*Insufficient resources (LSM)*	1	2	3	4
Onvoldoende finansies/*Insuffficient finance*	1	2	3	4
Onvoldoende infrastruktuur/*Insufficient infrastructure*	1	2	3	4
Negatiewe persepsies oor NKV/*Negative perceptions of NCS*	1	2	3	4
Onvoldoende opleiding t.o.v assessering/*Insufficient training in assessment*	1	2	3	4
Deurlopende assessering/*Continuous assessment*	1	2	3	4
Stel van uitkomste/*Setting of outcomes*	1	2	3	4
Seleksie van inhoude/*Selection of contents*	1	2	3	4
Seleksie van onderwysmedia/*Selection of teaching media*	1	2	3	4
Seleksie van onderwysmetodes/*Selection of teaching methods*	1	2	3	4

12. Watter **ander** probleemareas sou volgens u 'n rol by die implementering van NKV vir Ekonomie kon speel? (Dui die belangrikste twee aan)/*According to you, which* ***other*** *Problem areas will influence the implementation of NCS for Economics?(Indicate the* two *most important*)

(a).....

.....

(b).....

AFDELING C/*SECTION C*
NASIONALE KURRIKULUMVERKLARING VIR EKONOMIE/
NATIONAL CURRICULUM STATEMENTS FOR *ECONOMICS*

For o use

13. In watter mate behoort die volgende essensies by die NKV vir Ekonomie ingesluit te word?/*To what extent should the following essentials be included in the NCS of Economics?*

Essensies/Essentials	Geensins/Not at all	Geringe mate/Small extent	Groot mate/Large extent	Baie groot mate/Very large extent
Skaarsheidsprobleem/*Scarcity problem*	1	2	3	4
Keusevraagstuk/*Choice question*	1	2	3	4
Geleentheidskoste/*Opportunity cost*	1	2	3	4
Besluitneming/*Decision making*	1	2	3	4

14. In watter mate behoort die volgende leeruitkomste by die leerarea Ekonomiese en Bestuurswetenskappe in die Algemene Onderwys- en Opleidingsfase (AOO) ingesluit te word/*To what extent will the following learning outcomes be incorporated in the Learning area Economics and Management Science in the General Education and Training phase (GET)*

Leeruitkomste/Learning outcomes	Geensins/Not at all	Geringe mate/Small extent	Groot mate/Large extent	Baie groot mate/Very large extent

Makro-ekonomie/*Macro economics*	1	2	3	4	42
Mikro-ekonomie/*Micro economics*	1	2	3	4	43
Ekonomiese aangeleenthede/*Economic pursuits*	1	2	3	4	44
Kontemporêre ekonomiese aangeleenthede/ *Contemporary economic issues*	1	2	3	4	45

15. In watter mate kan die **leeruitkomste** vir Ekonomie in graad 10 – 12 'n bydrae lewer tot die bereiking van die volgende kritiese uitkomste/*To what extent will the following* ***learning outcomes*** *for Economics in grades 10-12 contribute in achieving the next critical outcomes*

Kritiese uitkomste/Critical outcomes	Geensins/Not at all	Geringe mate/Small extent	Groot mate/Large extent	Baie groot mate/Very large extent	
Identifisering en los probleme op, neem besluite deur van kritiese en kreatiewe denke gebruik te maak/*Identify and solve problems and make decisions using critical and creative thinking*	1	2	3	4	46
Werk effektief saam met lede van 'n groep, span, organisasie en gemeenskap/*Work effectively with others as members of a team, group, organization and community*	1	2	3	4	47
Versamel, ontleed, organiseer en evalueer krities inligting/*Collect, analyse, organise and critically evaluate information*	1	2	3	4	48
Kommunikeer effektief deur gebruik te maak van visuele, simboliese en taalvaardighede in verskillende mediums /*Communicate effectively using visual, symbolic and language skills in various modes*	1	2	3	4	49
Gebruik wetenskap en tegnologie effektief en krities, toon verantwoordelikheid teenoor omgewing en gesondheid van ander/*Use scienceand technology effectively and critically, showing responsibility towards the environment and the health of others*	1	2	3	4	50
Kritiese uitkomste/Critical outcomes	Geensins /Not at all	Geringe mate/Small extent	Groot mate/Large extent	Baie groot mate/Very	*For office use*
Demonstreer begrip vir die bestaan van die wêreld as deel van 'n stel verwante sisteme en herken dat probleemoplossing nie in isolasie bestaan nie/*Demonstrate an understanding of the world as a set of related systems by recognising that problem solving context do not exist in isolation*	1	2	3	4	51

16. In watter mate kan die volgende **ontwikkelingsuitkomstes** vir NKV deur die onderrig in Ekonomie bereik word/*To what extent will the following* ***developmental outcomes*** *for* NCS *through teaching in Economics be achieved*

Ontwikkelingsuitkomstes/Developmental outcomes	Geensins/Not at all	Geringe mate/Small extent	Groot mate/Large extent	Baie groot mate/Very large extent
Verken en beoordeel verskeie strategieë om meer effektief te leer/*Explore and reflect on a variety of strategies to learn more effectively*	1	2	3	4
Neem as verantwoordelike burger deel aan plaaslike, nasionale en internasionale gemeenskappe/*Participate as responsible citizen in the life of local, national and global communities*	1	2	3	4
Kultureel en esteties sensitief oor 'n breë sosiale konteks te wees/*Be culturally and aesthetically sensitive across a range of social context*	1	2	3	4
Verkenning van onderwys- en beroepsgeleenthede/*Explore education and career opportunities*	1	2	3	4
Ontwikkel entrepeneuriese geleenthede /*Develop entrepreneurial opportunities*	1	2	3	4

17. Die volgende komponente is belangrik vir die bereiking van leeruitkomste en assesseringstandaarde in Ekonomie. Rangskik hierdie komponente in volgorde van belangrikheid deur die waarde 1 in die blokkie teenoor die belangrikste komponent, waarde 2 teenoor die tweede belangrikste, ens., te skryf./*The following components are important to achieve learning outcomes and assessment standards for Economics. Rank in order of importance these components by allocating a value of 1 to the most important a value of 2 to the second most important component, etc.*

Lesuitkomste/*Lesson outcomes*	
Leerinhoude/*Learning content*	
Onderrigmetodes/*Teaching methods*	
Onderwysmedia/*Teaching media*	
Assessering/*Assessment*	
Vakdidaktiek/*Subject didactic*	
Demonstrasie van uitkomste/*Demonstration of outcomes*	

18. Hoe belangrik is die volgende beginsels vir die onderrig van NKV Ekonomie?/*How important are the following principles for the teaching ofNCS Economics?-*

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use

Onderrigbeginsels/Teaching principles	Geensins/Not at all	Geringe mate/Small extent	Groot mate/Large extent	Baie groot mate/Very large extent
Doelmatigheidsbeginsel/*Principle of suitability*	1	2	3	4
Totaliteitsbeginsel/*Priciple of totality*	1	2	3	4
Motiveringsbeginsel/*Principle of motivation*	1	2	3	4
Assesseringsbeginsel/*Principle of assessment*	1	2	3	4
Sosialiseringsbeginsel/*Principle of socialization*	1	2	3	4

Aktiwiteitsbeginsel/*Principle of activity*	1	2	3	4	69
Individualiseringsbeginsel/ *Principle of individuality*	1	2	3	4	70
Helderheidsbeginsel/ *Principle of clarity*	1	2	3	4	71
Gelykheidsbeginsel/ *Principle of equity*	1	2	3	4	72
Kredietwaardigheidsbeginsel/ *Principle of creditability*	1	2	3	4	73
Aanpasbaarheidsbeginsel/ *Principle of adaptability*	1	2	3	4	74
Beginsel van leerdergesentreerdheid/ *Principle of learner centredness*	1	2	3	4	75
Remediëringsbeginsel/ *Principle of remedial*	1	2	3	4	76
Beginsel van afwaartse beplanning/ *Principle of planning*	1	2	3	4	77
Beginsel van moedertaalonderrig/ *Principle of mother tongue instruction*	1	2	3	4	78
Beginsel van relevansie/ *Principle of relevance*	1	2	3	4	79
Differensiasiebeginsel/ *Principle of diffirentiation*	1	2	3	4	80
Beginsel van menslike hulpbron-ontwikkeling/ *Principle of human resource development*	1	2	3	4	81
Beginsel van duidelike fokus/ *Principle of clear focus*	1	2	3	4	82
Beginsel van integrasie/ *Principle of integration*	1	2	3	4	83
Beginsel van progressie/ *Principle of progression*	1	2	3	4	84
Beginsel van nasiebou en nie-diskriminasie/ *Principle of nation building and non-discrimination*	1	2	3	4	85
Beginsel van kritiese denke en kreatiwiteit/ *Principle of critical thinking and creativity*	1	2	3	4	86

19. Hoe gereeld gebruik u inligting van die volgende komponente vir die assessering van Ekonomie?/*How often do you use the information from the following components for your assessment in Economics?*

Inligting vir assessering /Information for assessment	Nooit/ *Never*	Selde/ *Seldom*	Soms/ *Sometimes*	Altyd/ *Always*	
Verskaf punte/simbole aan leerders/ *Provide learners with marks/symbols*	1	2	3	4	87
Terugvoer aan leerders/*Feedback to learners*	1	2	3	4	88
Identifiseer leerders met leerprobleme/ *Identify learners with learning problems*	1	2	3	4	89
Diagnosering van leerders met leerprobleme/ *Diagnose learners with learning problems*	1	2	3	4	90
Opbou van 'n vorderingsprofiel van leerders/*Compilation of a progress profile of learners*	1	2	3	4	91
Bevordering van leerders na volgende graad/*Progression of learners to next grade*	1	2	3	4	92

Inligting vir assessering /Information for assessment	Nooit/ *Never*	Selde/ *Seldom*	Soms/ *Sometmes*	Altyd/ *Always*	*For use*
Verskaf inligting aan ouers/ *Provide parents with information*	1	2	3	4	
Effektiwiteit van onderrigmetodes/ *Effectiveness of teaching methods*	1	2	3	4	
Beplanning van effektiewe onderrig-leersituasies/ *Planning of effective teaching and learning situations*	1	2	3	4	
Beplanning van assesseringstegnieke/ *Planning of assessment techniques*	1	2	3	4	
Bepaal of leeruitkomste/lesuitkomste bereik is/ *Check if learning outcomes/lesson uotcomes are achieved*	1	2	3	4	

AFDELING D/*SECTION D*
KOöRPORATIEWE LEER AS ONDERRIGSTARTEGIE VIR EKONOMIE
COOPERATIVE LEARNING AS A TEACHING STRATEGY FOR ECONOMICS

20. In geheel, hoeveel onderrigtyd spandeer u per week gemiddeld aan koöperatiewe leeraktiwiteite in u vak? (Dui aan wat op u van toepassing is)

Overall, how much class time in an average week is devoted to cooperative learning activities in you subject?(Please indicate what are applicable to you)

Geen /None	1	
1 –29% van onderrigtyd / of teaching time	*2*	
30 –59% van onderrigtyd / of teaching time	*3*	
60- 100% van onderrigtyd / of teaching time	4	

21. Die rol en taak van die onderwyser in koöperatiewe leer verskil van die onderwysgesentreerde benadering. In watter mate dra die volgende aspekte by tot die belangrikheid van die onderwyser se rol/The *role and task of the teacher in cooperative learning differentiate from a teacher centered approach. To what extendwill the following aspects contribute to the importance of the teachers' role?*

Aspekte/Aspects	Geensins/Not at all	Geringe mate/Small extent	Groot mate/Large extent	Baie groot mate/Very large extent	
Onderwyser is die fasiliteerder/*Teacher is the*	1	2	3	4	

facilitator					
Onderwyser moet onderrig in sosiale en koöperatiewe vaardighede gee/*Teacher must teach social and cooperative skills*	1	2	3	4	100
Skepping van koöperatiewe leeraktiwiteite en groeps-indeling/*Design of cooperative learning activities and dividing of groups*	1	2	3	4	101
Monitering en kontrolering van groepsaktiwiteite/ *Monitoring and controlling of group activities*	1	2	3	4	102
Hulpverlening tov groepsrolle en verantwoordelikhede /*Support towards group roles and responsibilities*	1	2	3	4	103
Hulpverlening tov materiaal en werksopdragte/*Support towards materials and assignments*	1	2	3	4	104
Voorsiening maak vir terugrapporteringsessies en beloon groepe vir prestasies/*Provision for report back sessions and rewards groups for performances*	1	2	3	4	105

22 In watter mate kan die volgende koöperatiewe leertegnieke 'n bydrae lewer in die bereiking van die leeruitkomste vir Ekonomie?/*To what extend will the following cooperative teaching techniques be used to obtain the learning outcomes for Economics?*

Koöperatiewe leertegnieke/Cooperative learning techniques	Geensins/Not at all	Geringe mate/Small extent	Groot mate/Large extent	Baie groot mate/Very large extent	
Vasvragroepe/ *Student Teams Achievement Divisions (STAD)*	1	2	3	4	106
Legkaarttegniek/*Jigsaw technique*	1	2	3	4	107
Toernooigroepe/*Teams Games Tournaments*	1	2	3	4	108
Makkeronderrig/*Peer tutoring*	1	2	3	4	109
Kleingroeponderrig/*Small group teaching*	1	2	3	4	110
Geïntegreerde koöperatiewe lees- en skryfgroepe/ *Integrated cooperative reading and writing groups*	1	2	3	4	111
Groepondersoeke/*Group investigations*	1	2	3	4	112
Spanondersteuningsgroepe/*Teams support groups*	1	2	3	4	113

23. In watter mate kan die volgende leeruitkomste bereik word deur die implementering van koöperatiewe leeraktiwiteite in die klaskamer?/*To what extend will the following learning outcomes be achieved by implementing cooperative learning activities in the class room?*

Koöperatiewe leeruitkomste/Cooperative learning outcomes	Geensins/Not at all	Geringe mate/Small extent	Groot mate/Large extent	Baie groot mate/Very large extent	
Verbeterde leerderprestasie/*Improvement in learner performance*	1	2	3	4	
Bevordering van intergroepsverhoudinge/*Enhancement of intergroup relationships*	1	2	3	4	
Positiewe interafhanklikheid onder leerders/*Positive interactions among learners*	1	2	3	4	
Individuele verantwoordelikheid/ *Individual responsibilities*	1	2	3	4	
Aangesig-tot-aangesig interaksie/*Face to face interactions*	1	2	3	4	
Sosiale en kleingroepvaardighede/*Social and small group skills*	1	2	3	4	
Reflektering oor eie werk/*Reflection on own work*	1	2	3	4	

24. In watter mate kan die volgende voordele van deurlopende assessering (DASS) 'n bydrae lewer tot die bereiking van koöperatiewe leeruitkomste as onderrigstrategie vir Ekonomie?/*To what extend will the following advantages of continuous assessment (CASS) contribute to the achievement of cooperative learning outcomes as a teaching strategy in Economics?*					*For c use*
DASS/CASS	Geensins/Not at all	Geringe mate/Small extent	Groot mate/Large extent	Baie groot mate/Very large extent	
Verskaf inligting aan die onderwyser/*Provide information to the teacher*	1	2	3	4	1
Verskaf prestasieteikens vir leerders/*Provide performance targets for learners*	1	2	3	4	1
Assessering oor lang periodes/*Assessment over long periods*	1	2	3	4	1
Motiveer leerders om deur die jaar te werk/*Motivate learners to work throughout the year*	1	2	3	4	1
Verskeie assesseringsvorme kan gebruik word/*Different assessment forms can be used*	1	2	3	4	1
Bevordering van kennis, vaardighede, waardes en houdings/*Enhance knowledge, skills, values and attitudes*	1	2	3	4	1

25. In watter mate kan die volgende ervaring in koöperatiewe leer u onderrig verbeter om die leeruitkomste vir Ekonomie te bereik?

To what extend will the following experience in cooperative learning your teaching in Economics contribute to achieved learning outcomes?

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Ervaring van Koöperatiewe leer ***Experience of Cooperative learning***	Geensins/Not at all	Geringe mate/Small extent	Groot mate/Large extent	Baie groot mate/Very large extent	
Ek bespreek Koöperatiewe leer met ander onderwysers en probeer hul idees in die klaskamer/ *I have discussed cooperative learning with other teachers and tried some of their ideas in the classroom*	1	2	3	4	127
Ek neem deel na-skool indienswerkswinkel oor Koöperatiewe leer wat georganiseer was deur NCEE Alumni van die Opleiding van opleiersprogram/ I have participated in an after school inservice workshop on cooperative learnnig organised by Alumi of NCEE Train the Trainers programme	1	2	3	4	128
Ek het deelgeneem in n indiensopleidingswerkswinkel oor kooperatiewe leer as deel van my Disitrik onderwyserseminaardag I have participated in an in-service training on cooperative learning as part of a District teachers seminarday	1	2	3	4	129
Ek het deelgeneem aan 'n volle kredietmodule aan 'n hoëronderwysinstelling I have participated in a full module at a higher learning institute in a credit course on cooperative learning	1	2	3	4	130
Ek het deelgeneem in n opleidingswerkswinkel oor kooperatiewe leer I have participated in a workshop on cooperative learning	1	2	3	4	131
Ek het 'n artikel gelees oor kooperatiewe leer in die bilblioteek of Internet I read a article on cooperative learning in the library or Internet	1	2	3	4	132

26 Tot watter mate maak u gebruik van die areas van koöperatiewe leertegnieke tydens u aanbieding van Ekonomie?

To what extend have you used cooperative learning presenting Economics in any of the following cooperative techniques in your classroom?

Areas van Koöperatiewe leertegnieke gebruike/ **Areas of cooperative learning techniques usage**	Geensins/Not at all	Geringe mate/Small extent	Groot mate/Large extent	Baie groot mate/Very large extent
Kleingroepwerk/ Small groupwork	1	2	3	4
Legkaart/ Jigsaw	1	2	3	4
Groep-ondersoeke/ Group investigation	1	2	3	4
Flinkdink/Quizz bowl	1	2	3	4
Navorsingsprojekte/ Research project	1	2	3	4
Spantoernooispele / TeamTournments Games	1	2	3	4
Simulasies/ Simulation	1	2	3	4
Rolspel/ Role play	1	2	3	4

27. Wanneer leerders in u klas groepwerk doen, hoe dikwels gebruik u die volgende om koöperatiewe leeraktiwiteite te organiseer en te bevorder?
When learners work together in groups in your class, how often do you use the following to organise and encourage cooperative learning activity?

Effektiewe gebruiksmaking van *Koöperatiewe groepe* ***Effective use of Cooperative learning***	Geensins/Not at all	Geringe mate/Small extent	Groot mate/Large extent	Baie groot mate/Very large extent
Voorsien groepe met die minimum leermateriale om hul te dwing om mededeelsaam te wees. Provide groups with limited materials to force members to share materials	1	2	3	4
Voorsien groepe met die spesiale leermateriale om hul te dwing om mededeelsaam te wees om die taak suksesvol te voltooi. Provied individual group members with special materials to force sharing if there is to be a successful completion of the group task	1	2	3	4

Toekenning van spesifieke rolle aan sekere groepe om te verseker dat hul 'n gesamentlike finale produk moet voltooi Assign special roles to certain group members to ensure that all must work together to produce a final product	1	2	3	4	143
Voorsien punte of toekennings aan individuele groepe gebaseer op prestasies van die hele groep Provide marks or rewards to individuals group members based on the performance of the entire group	1	2	3	4	144
Monitor en ingryping in groepsaktiwiteite om groepe te bemoedig om deel te neem om samewerking te stimuleer Monitor and intervene in group activities to encourage balanced participation and to stimulate cooperation	1	2	3	4	145
Gee terugvoering aan groepe oor my waarnemings van groepsgedrag en gebruik van koöperatiewe vaardighede Usually provide groups with feedback on my observations of group behaviour and the use of cooperative skills	1	2	3	4	146
Een groeplid word afgevaardig om groepsaksies te monitor en verslag te doen oor groepsaktiwiteite One group member is designated to observe group actions and to report on group activities	1	2	3	4	147
Voorsien groepe oor tyd om 'n samevatting te doen oor aktiwiteite en terugvoering te doen na-voltooiing van projekte Provide groups time to summarise activities and to hold debriefing sessions after groups projects are completed	1	2	3	4	148

BAIE DANKIE VIR U TYD EN SAMEWERKING

THANK YOU FOR YOUR TIME AND CO-OPERATION

APPENDIX B

LETTER FROM PROMOTER

UNIVERSITEIT VAN DIE VRYSTAAT
UNIVERSITY OF THE FREE STATE
YUNIVESITHI YA FREISTATA

Fakulteit Geesteswetenskappe
Skool vir Opvoedkunde
Dept Kurrikulumstudie

Faculty of the Humanities
School of Education
Dept Curriculum Studies

04 May 2005

Miss. M .Gaberone
Chief Educationalist Specialist: IRRISS
Room 1204
Provincial Government Building
Free State Department of Education
Private Bag X20565
BLOEMFONTEIN
9300

RE: REGISTRATION OF MR. MM VAN WYK (1995658844) FOR Ph.D DEGREE

I Prof. R van der Merwe, hereby confirmed that mr. Micheal Moos van Wyk (Student no. 1995658844) has been registered as a Ph.D –student in the Department of Curriculum Studies.
He is currently conducting research on different teaching methods in Economics. The title of his thesis is **"The use of cooperative learning in Economics in the Further Education and Training phase in the Free State Province."**

With this research my student hope to contribute to the effectiveness of teaching Economics at school level.

It is further hoped that when the outcomes (recommendations and conclusions) of this study is completed, the findings thereof may be of great importance for the empowerment of teachers in the Free State Department of Education.

Regards

Prof. R van der Merwe
Promoter
Department of Curriculum Studies

339, Bloemfontein 9300, (051) 401 2523, (051) 401 9456, casaleggiod.hum@ufs.ac.za
Republiek van Suid-Afrika, Republic of South Africa

APPENDIX C

LETTER FROM FREE STATE DEPARTMENT OF EDUCATION

FREE STATE PROVINCE

Enquiries : Ms. Gaborone MMA
Reference no. : 16/4/1/4-2006

Tel (051) 404 8658
Fax (051) 447 7318

2006-02-15

Mr. M.M. van Wyk
36 Comandant Erwee Street
Wilgehof
BLOEMFONTEIN

Dear Mr. Van Wyk

REGISTRATION OF RESEARCH PROJECT

1. This letter is in reply to your application for the registration of your research project.

2. **Research topic: A critical investigation of cooperative learning as a teaching strategy for Economics in the Further Education and Training Phase.**

3. Your research project has been registered with the Free State Education Department and you may conduct research in the Free State Department of Education under the following conditions:

   3.1 Educators and learners, participate voluntarily in the project.
   3.2 The names of all schools, educators, and learners involved remain confidential.
   3.3 The questionnaires are completed and the interviews are conducted outside normal tuition time.
   3.4 This letter is shown to all participating persons.
   3.5 Suggested changes are considered.

4. You are requested to donate a report on this study to the Free State Department of Education. It will be placed in the Education Library, Bloemfontein. It will be appreciated if you would also bring a summary of the report on a computer disc, so that it may be placed on the website of the Department.

5. Once your project is complete, you may be invited to present your findings to the relevant persons in the FS Department of Education. This will increase the possibility of implementing your findings wherever possible.

6. **You are requested to confirm acceptance of the above conditions in writing to:**

   The Head: Education, for attention:
   DIRECTOR : QUALITY ASSURANCE
   Room 401, Syfrets Building
   Private Bag X20565, BLOEMFONTEIN, 9301

We wish you every success with your research:

Yours sincerely

FR SELLO
DIRECTOR : QUALITY ASSURANCE

APPENDIX D

FRAMEWORK FOR THE USE OF COOPERATIVE LEARNING IN ECONOMICS

APPENDIX E

COMPONENTS FOR THE IMPLEMENTATION OF COOPERATIVE LEARNING TEACHING MODEL FOR ECONOMICS

Cooperative learning teaching ***(Contextual analysis)***	***Cooperative decision-making*** ***(Teaching environment)***	***Cooperative teams and taks*** ***(Outcomes)***	***Presentation of Cooperative learning lesson*** ***(Teaching strategy)***	***Post – Cooperative lesson activities*** ***(Integrated Assessment)***
Eduactor Learners Learning content Community School Environment Classroom managment	Teachers role in cooperative environment Cooperative groups Classroom management Cooperative learning roles and responsibilities	Assigning of teamwork and task outcomes Structuring positive interdependence Specific desired taks activities	Setting of specific teaching techniques Procedures of the Cooperative learning lesson presentation Monitoring Learners' Behaviour Closure of lesson	Holistic Assessment of the quality and quantity of learning Processing and recording group effectiveness Debriefing and Reflective teaching

APPENDIX E

EXAMPLES OF LESSON PLANS

EXAMPLE: GRADE 11

Learning outcome 2:

The learner is able to demonstrate knowledge, understanding and the appropriate skills in analysing the dynamics of markets

Assessment standard:

We know this when the learner is able to:

Explain price elasticity, illustrate the presentation on the aid of graphs, and calculate their values

THEME / TOPIC:

UNTIL THE LAST UNIT EQUALS. . .

INTRODUCTION

Marginalism is an important concept in both personal and social decision-making. Choices are rarely all-or-nothing propositions, but instead usually deal with incremental (marginal) changes – giving up a little of one thing to get a little more of something else. Should a firm produce a few more or a few less units of output? Should a consumer buy a bit more of this and a bit less of that? Are the additional revenues generated by hiring another worker equal to or greater than the additional cost? Should the government increase taxes to hire a few more teachers so class sizes can be lowered by three to five students? All of these decisions are made "at the margin" – with clear marginal costs and marginal benefits to be compared. And surprisingly, comparing marginal benefits and costs turns out to be an effective and relatively easy way to maximise a consumer's total level of satisfaction, or a business' level of total profits, or the net benefits of a government programme or policy.

Nevertheless, the marginalist way of thinking is not widely taught or appreciated, and it takes some practise to master. In fact, although marginalism is now one of the cornerstones of economic analysis and the economic way of thinking, not even economists understood the approach until the late nineteenth century, more than a century after the development of economics as a formal and separate discipline.

CONCEPTS

Marginalism

Diminishing returns

Marginal product

Marginal cost

Marginal utility

Diminishing marginal utility

Lesson outcomes

After completion of this lesson, learners will be able to:

- Apply marginal analysis in economic decision-making;
- Define marginal product as the additional output produced by each successive unit of an input;
- Explain that as one input increases (keeping others the same), the marginal product of the input will eventually decrease (i.e. the law of diminishing returns);
- Explain that marginal cost is the extra cost of producing an additional unit of output;
- Explain that marginal cost increases as more labour is added because of diminishing returns;
- Explain that for most, if not all, goods and services, the additional satisfaction or marginal utility a consumer gets from purchasing each additional unit of a product will eventually decrease.

LESSON DESCRIPTION

Several learners participate in an activity in which they purchase and consume marshmallows up to the point where the value they place on the additional satisfaction they receive from eating one more marshmallow is less than what they must pay for it. Learners share examples from their own experiences in which they have used marginal analysis as consumers. They then participate in a Left-Foot Pattern Factory production simulation, and use marginal analysis to decide on the number of workers to hire to

maximise profits (or minimise losses). Finally, they use marginal analysis to discuss whether they will be hired for a summer job.

TIME REQUIRED

One-and-a-half class periods. Day one (half-day) – procedures 1-7. Day two – procedures 8-27 and assessment.

MATERIALS

- Large bag of marshmallows
- R20 in small change
- Large supply of scrap paper
- One pencil
- Masking-tape
- Activity 1: Left-Foot Pattern Production Table, one per learner, and a transparency
- Activity 2: Assessment, one per learner

PROCEDURES

1. Explain that the purpose of this lesson is to show that people, businesses, and the government make decisions at the margin. Producers (including government agencies) must decide whether to produce a few more or a few less units of the goods and services they provide. Consumers must decide whether to buy a few more or a few less units of hundreds of different goods and services. The government must decide how many miles of streets and highways to pave, how many schools and military aircraft to build, etc.

2. Ask for three volunteers to participate in an activity that involves eating marshmallows.

3. Give each of the three volunteers 15 nickels. Tell them they may purchase marshmallows to eat at a price of 20 cents per marshmallow. They must immediately eat each marshmallow they buy, and once they stop buying marshmallows they may not start buying them again. They can keep any change they do not spend on marshmallows.

4. Begin selling marshmallows, one at a time, to the learners. After they eat each marshmallow, ask them if they would like to purchase and eat another one. Continue selling marshmallows until each learner decides not to purchase another one. The volunteers will probably consume different amounts of marshmallows.

5. Ask: Why did each of you stop buying marshmallows? (*Most learners will stop before eating 15 marshmallows, but some may not. Point out that different people have different tastes and preferences – and different stomach capacities. Also, some learners may not have eaten as much at breakfast or lunch as others. For almost everyone, however, after eating several marshmallows, the next marshmallow won't be as appealing as the first ones they ate. Eventually, buying one more marshmallow is not worth it.*) Ask the three learners, "How many more marshmallows will you eat at a price of zero?" (*Some may eat a few more marshmallows at the lower price, but eventually they will stop even at a price of zero.*)

6. Explain to learners that their decision to purchase additional marshmallows depended on the additional satisfaction, or **marginal utility,** they expected to gain from each marshmallow. Their total satisfaction increased with each one they bought, but at some point the additional satisfaction began to diminish with each additional marshmallow. This illustrates the law of **diminishing marginal utility**. Because of that economic law, people stop buying an item when the value of the satisfaction from the next unit of the same item becomes less than the price they must pay for it. (Note that for some products, such as houses, cars, or smallpox vaccinations, this usually happens after only one or two units are purchased. For other kinds of products, such as shirts or French fries, people usually buy many more units. Both price and marginal utility are important in determining how many units are purchased.)

7. Ask learners for examples of where they have used marginal analysis when buying goods or services. (*Examples may include deciding whether to buy one more soda at a ballgame on a hot day; to super-size an order of fast food; or to take advantage of a "buy one, get one at half price" offer.*) Suggest other examples, such as selling

newspapers from vending machines that allow people to take more than one paper – but one reason they usually don't is because the marginal utility of a second paper is very low, and maybe even zero or negative. Contrast that with vending machines for candy and chewing gum, which do not let people take "seconds" unless they put in more coins. Note that for these products, the marginal utility of a second unit of the product is usually higher than it is for a second newspaper.

8. Tell learners that like consumers, producers use marginal analysis when making production decisions. Announce that to illustrate this point they are going to participate as workers in the Left-Foot Pattern Factory.

9. Use masking-tape to mark off an area on the floor approximately 36 mm square. Tell learners that this space represents the Left-Foot Pattern Factory, in which the class will produce left-foot shoe, boot, and sandal patterns. Demonstrate by standing inside the square, placing your left foot on a piece of scrap paper, and tracing your foot with a pencil.

10. Place a large supply of scrap paper inside the factory with a pencil. Select one learner to produce left-foot tracings. Inform the class that you will be the quality control inspector, who ensures left-foot pattern standards. Instruct the learner worker to produce as many left-foot patterns as possible in three minutes.

11. Begin the production period. Stop after three minutes and inspect each left-foot pattern. Keep and count only those of good quality.

12. Distribute a copy of Activity 1 to each learner. Usng a visual of Activity 1, show learner how to complete the table for zero workers and for one worker. Discard all left-foot patterns produced in round 1.

13. Select a second learner worker to join the first worker in the Left-Foot Pattern Factory. Instruct both workers to produce as many left-foot patterns as possible in three minutes. They may only use the scrap paper, one pencil, and the factory work space.

14. Begin production. After three minutes, stop production and inspect the left-foot patterns. Discard those that fail to meet quality standards. Instruct learner to fill in the new information in column 2 on Activity 1.

15. Repeat the same procedure adding one more worker for four more rounds. Remind learners to complete column 2 on Activity 1 after each round. Remind learners that they must work inside the factory walls (the masking tape).

16. After six rounds, stop production and ask the class to fill in column 3 with the number of additional left-foot patterns produced in the **Marginal Product** column. Explain that this column shows how many additional left-foot patterns were produced each time one more worker was hired. For example, using data from the sample, you might say, "The first worker produced 7 left-foot patterns; therefore, the additional left-foot patterns produced compared with no workers at all is 7. Hiring a second worker brings the total number of left-foot patterns to 15. Thus, the second worker accounts for the production of 8 more left-foot patterns than when only one worker is used. The marginal or additional product is 8." Continue along these lines as shown in the table following procedure 21. Substitute numbers from the class simulation in column 3,

Activity 1

17. Ask and discuss the following questions:

A. What happened to the total number of left-foot patterns produced as additional workers were hired? (*increased*)

B. What happened to marginal product as additional workers were hired? (*It probably increased initially, then decreased.*)

C. Why do you think this occurred? (*At first, having more workers may increase efficiency as they help each other and specialize. Soon, however, there is not enough space, tasks, or capital equipment (pencil and factory space) to keep all workers busy all of the time. Marginal product begins to diminish.*) Point out to learners that this is an example of the law of diminishing returns.

18. Explain that the law of **diminishing returns** states that as more units of a variable input are added to one or more fixed inputs, eventually the number of additional units of output produced will begin to fall. This occurs because the fixed input is spread more and more thinly across the growing number of variable inputs.

19. Divide the class into management teams of four to five learners each. Ask each team to decide how many workers it will hire and to prepare a justification for its decision.

20. After allowing time for the learners to reach decisions, ask each group to announce its decision and give its justification. (Many times, groups will stop hiring workers as soon as marginal product starts to diminish. Later, they will see that this decision is incorrect.)

21. Tell the groups that you have additional information for them that might make them change their decisions. Tell them to label column 4, "Value of Additional Left-Foot Patterns Produced." Explain that each left-foot pattern is worth 2 cent. Thus, the "Value of Additional Left-Foot Patterns" produced is the marginal product of the last worker hired times 2 cent. For example, the value of the second worker to the firm is that worker's marginal product times 2 cent, and so on. Have students label column 5, "**Marginal Cost** of Labor (3 min. worked)." Tell students that workers earn 12 cent for each three minutes worked. Therefore, the additional labor cost of the first worker compared to having no workers at all is 12 cent. In fact, the marginal cost of each worker (for three minutes of work) is 12 cent.

LEFT-FOOT PATTERN PRODUCTION TABLE (SAMPLE)

# of Workers (1)	Left-Foot Patterns Produced (2)	**Marginal Product** (3)	**Value of Additional Left- Foot Patterns Produced** (4)	**Marginal Cost of Labour (3 min. worked)** (5)
0	0	—	0	0
1	7	7	14 cents	12 cents
2	15	8	.16	.12
3	23	8	.16	.12
4	30	7	.14	.12
5	33	3	.06	.12
6	34	1	.02	.12

22. Allow the management teams time to decide how many workers to hire. Then ask each team for its new decision and justification. Teams should stop hiring workers at the point where the marginal cost of hiring the next worker exceeds the additional (marginal) value of what that worker produces. In the sample, four workers should be hired.

23. Explain the hiring rule: "Additional workers will be hired as long as the additional (marginal) value of the output of the next worker employed exceeds the additional (marginal) cost of hiring that worker." Ask learners to discuss why this happens. (With a set wage rate and falling marginal product, it eventually costs more to hire an additional worker than the worker adds to revenues. Note that additional workers are not as productive because they have less equipment and space to work with, not because the later workers hired are less motivated or diligent than those hired earlier. In fact, in terms of doing this kind of simple job, we can assume the workers are essentially identical and interchangeable – we could switch the first and last workers hired and still see the same general production patterns – which is why they are all paid the same wage.)

24. Ask learners how many workers should be hired if labor costs increase to 15 cent per three minutes of work. (Using the sample data, three workers should be hired.)

25. Ask learners what happens to the per unit costs of producing left-foot patterns, once the law of diminishing returns sets in. (With the constant wage rate per worker and diminishing returns in production, the per unit cost of producing additional left-foot patterns increases. You may want to show that by dividing the total costs of the workers hired by the number of left-foot patterns produced at each employment level after diminishing returns set in.)

26. Because per unit production costs rise as output levels increase in the range of diminishing returns, what must happen to product price in order to make producers willing to produce and sell more units? (The price must rise to cover the higher per unit costs. This is, in fact, a key rationale for the law of supply – quantity supplied increases as price increases – because the higher price allows producers to cover their higher per unit production costs as output levels increase.)

27. Present this problem to the class: Three Service Club members work in the snack stand selling snacks for 30 minutes at half time during each high school basketball game. Because a large number of customers don't get served in 30 minutes, the club has decided that nine members should work at the next home game. Do you believe that, with three times as many workers, the club will be able to serve three times as many customers? Explain. (Probably not, because the work space and equipment remains the same, so diminishing returns will likely set in.)

CLOSURE

1. What is marginal utility? (The additional satisfaction a consumer receives from purchasing or using an additional unit of a product.)

2. What is diminishing marginal utility? (For most goods and services, the extra satisfaction a person gets from consuming one more unit of a product will eventually become lower and lower.)

3. How does diminishing marginal utility affect consumer decision-making? (Because satisfaction decreases as more and more units of a product are used, consumers reach a point where the additional satisfaction or marginal utility received from one additional unit of a product is less than the price of the additional unit.) Give an example. (No matter how satisfying the first chocolate candy bar is, satisfaction received from additional candy bars eventually declines. For example, at a price of 70 cents per candy bar, you buy four candy bars. The value you place on the additional satisfaction of the fifth candy bar is less than 70 cent, so you use the 70 cents to buy something else that will give you more satisfaction.)

4. What is marginal product? (the extra or additional output produced by each additional unit of input)

5. What is the law of diminishing returns? (The law of diminishing returns states that the marginal product of a variable input will eventually fall when at least one other input is held constant, or fixed.)

6. What is marginal cost? (the additional cost of producing one additional unit of output)

7. What eventually happens to marginal cost as production levels continue to increase? (At first it may decrease, but ultimately it increases) Why? (Even though they are paid the same wage rate, eventually, additional workers are not as productive as workers hired earlier because of the law of diminishing returns. Therefore, the cost of producing additional products increases.)

ASSESSMENT

8. Distribute copies of Activity 2 to each learner. Instruct learners to use marginal analysis to answer the questions.

9. Assessment Answer: As shown in the table below, the student will be hired, but the friend will not. The additional (marginal) cost of hiring the friend – the fifth worker who applied – would exceed the value of the additional (marginal) product produced by the fifth worker.

# of Workers (1)	# of Rolls of Grip Tape Produced Each Day (2)	Marginal Product (Additional Rolls of Grip Tape Produced Per Day) (3)	Value of Additional Grip Tape Rolls Produced Per Day (4)	Marginal Labour Cost Per Day (5)
1	20	20	R60	R40
2	50	30	90	40
3	70	20	60	40
4	85	15	45	40
5	95	10	30	40
6	100	5	15	40

10. Answers will vary but most learners will purchase less than five pairs of jeans, because at some point the additional satisfaction they receive from one more pair of jeans will be less than R150. They will choose to save the remaining money or spend it on something else.

The following are activities for assessment of this lesson plan.

Activity 1

Left-Foot Pattern Production Table

# of Workers (1)	Left-Foot Patterns Produced (2)	(3)	(4)	(5)
0				
1				
2				
3				
4				
5				
6				

Activity 2

Assessment

1. SUMMER JOBS IN THE SKATEBOARD GRIP TAPE FACTORY

You and your friend have applied for a summer job at RAD SPORTS, which manufactures skateboard grip tape. RAD has selected a pool of six qualified applicants from which to choose summer employees. Summer employees are hired from this pool

of applicants on a first-come-first-served basis. You were the fourth applicant to apply and your friend was the fifth.

RAD's skateboard grip tape is manufactured by people working with two machines. RAD sells its grip tape for R15 a roll and can sell as many rolls as it can produce at that price, but very few rolls if it increases price even a little. It pays its workers R250 per day. The following table shows how many rolls of grip tape are produced per day with each additional summer employee hired – up to six workers.

# Summer employees	# Rolls of tape produced per day
0	0
1	20
2	50
3	70
4	85
5	95
6	100

Will you and your friend be hired by RAD SPORTS this summer? Explain your answer.

2. HOW MANY TO BUY?

You have received R750 as a birthday gift and plan to buy a pair of blue jeans. When you go to purchase the jeans, you discover that the store is having a super-sale on your brand and style of jeans, for R150 per pair. How many pairs would you buy and why? Use what you have learned about diminishing marginal utility to explain your answer.

The Economics teacher use this page as a transparency to show learners the concept of Diminishing Marginal Returns

The Law of Diminishing Marginal Returns

When more and more units of a variable resource (such as labour) are added to a fixed resource (such as capital), eventually the additional (marginal) output associated with the variable resource declines.

The law of diminishing marginal returns is observed in production processes when at least one resource is fixed – that is, it cannot change during the time period in question.

Economic teachers can modify these lesson plan for grade 10 to suit their respective teaching style. Answers are given to respective activities (italics words).

EXAMPLE: GRADE 10:
LEARNING OUTCOME 2: MICRO ECONOMICS

The learner is able to demonstrate knowledge, understanding and appropriate skills in analysing the dynamics of markets.

Assessment standard 1:
Explaining the market as a phenomenon and making use of graphs to illustrate the setting of prices and quantities.

Topic: Market Dynamics

INTRODUCTION

Most markets do not fit the strict assumptions of perfect competition: many sellers selling identical products in a market that is relatively easy to enter and exit. Imperfectly competitive markets can differ from perfect competition in terms of one or more of these factors, and in varying degrees. In most markets, products are *not* identical, but there may be several close substitutes. Many markets are not easy to enter because of high capital costs and the difficulty of competing with established producers selling well-known, heavily advertised brands. Moreover, many important markets are characterised by a few large sellers rather than many small ones. For example, among the US producers of such products as motor vehicles, cereal breakfast foods, chewing-gum, cigarettes, photocopying equipment and sewing machines, the four largest firms account for more than three-fourths of the total industry sales to South African firms. In many local markets, there are sometimes only a few competing firms even when there are more firms competing at the national or regional level. For example, even though there may be many sellers of gasoline in a large city, vigorous competition may exist only between a few sellers in a specific neighbourhood. Therefore, it is important for students to understand the following characteristics and consequences of imperfectly competitive markets:

Firms in imperfectly competitive markets are often interdependent, with the actions of one firm greatly affecting business conditions for its competitors.

1. Large companies competing with other large firms often try to avoid direct price competition, because of the uncertainty concerning how their competitors will react, and a joint interest in keeping prices above the level that would prevail in perfect competition.

2. Both large and small firms in imperfectly competitive markets emphasise non-price competition, especially advertising that stresses real or imagined differences in the quality of goods and services provided to customers.

3. In markets dominated by a few large firms, there are strong pressures supporting price collusion, although the collusion must often be tacit rather than explicit in countries such as South Africa, where such price fixing is illegal (the One-time/Mango affiliate to the SA Airlink Company).

4. Competition amongst many small companies producing identical products is desirable because it results in lower prices for consumers and a more efficient use of scarce resources. Imperfect competition typically leads to less output and higher prices, but sometimes these negative results are offset because large firms are able to take advantage of economies of scale, which reduce production costs and prices. Also, there is clear evidence that consumers like the greater variety of product styles and features that are associated with some degree of imperfect competition.

5. Evaluating any specific imperfectly competitive market involves a careful weighing of these costs and benefits. Public policy should undoubtedly be directed toward eliminating extreme concentrations of market power and flagrant cases of collusive behaviour in order to maintain an effective degree of competition, but such policies should stop far short of breaking up large firms just because a market is not perfectly competitive.

CONCEPTS

Competition and market structures
Interdependence in imperfect competition
Non-price competition
Collusion
Antitrust policy and regulation of natural monopolies

Competition among sellers lowers costs and prices, and encourages producers to produce more of what consumers are willing and able to buy. Example: Mango vs. Kulula.com.

Sellers compete on the basis of price, product quality, customer service, product design and variety, as well as advertising. The level of competition in a market is influenced by the number of buyers and sellers in the market. The level of competition in an industry is affected by the ease with which new producers can enter the industry. Collusion among buyers or sellers reduces the level of competition in a market. Collusion is more difficult in markets with large numbers of buyers and sellers.

LESSON OUTCOMES

Learners define perfectly competitive and imperfectly competitive markets.

Learners evaluate the role of non-price competition in imperfectly competitive markets.

Learners explain the tendency toward price collusion in imperfectly competitive markets.

Learners assess government's role in dealing with imperfectly competitive markets.

LESSON DESCRIPTION

A series of activities are used to explore:

1) Demand and pricing decisions facing imperfectly competitive firms;
2) Interdependence in situations where actions by one firm have a major effect on the remaining competitors in a market;
3) The tendency for firms with formal or informal pricing agreements to go through phases of colluding and then cheating on the collusive agreement; and
4) Public policy decisions over mergers when it is not clear whether a merger will result in more or less effective competition in an already concentrated industry.

TIME REQUIRED

Three class periods – Day one: procedures 1-7. Day two: procedures 8-16. Day three: procedure 17 and Assessment.

MATERIALS

- Activity 1: Perfectly and Imperfectly Competitive Markets – one per student
- Activity 2: The Prisoners' Dilemma – one per learner
- Activity 3: Duelling Gas Stations – one per learner
- Activity 4: We're All in This Together...Aren't We? – one per learner
- Activity 5: The Airlines Case: Is Big Better? – one per student
- Buyer and seller cards, learner score sheets, and one class tally sheet for the Classroom Market for Crude Oil (Lesson 3 of this volume)
- Several different brands of two or three different flavours of soft drinks (Fanta, Pepsi, Coca-Cola, etc.); several blindfolds; paper drinking-cups; and a bag of ice

PROCEDURES

1. Explain that this lesson will examine the causes and consequences of imperfect competition, and some strategies frequently employed by imperfectly competitive firms.

2. Distribute a copy of Activity 1 to each learner. After discussing the major characteristics of perfectly and imperfectly competitive markets, ask the learner to answer the questions on the activity sheet:

3. Considering these characteristics of perfectly and imperfectly competitive markets, imagine that you are a seller in each of the following markets. Explain what you think would happen to your sales levels if you raised or lowered the price of your product. Specifically, how much do you think sales would change, and why?

   A. John Jacobs, Wheat Farmer: (Agricultural products are probably the best example of a perfectly competitive market – except for the presence of government price controls, as discussed in Lesson 6. If you raise your price above the market price, your sales will be zero because wheat buyers can buy the identical product at the market price from any one of many other sellers. If you lower your price, your sales will not increase. You can sell all you want at the market price, so it does not make sense to lower your price below the market price.)

   B. Bosch Local Electrical Company: (This is an example of a natural monopoly, the most extreme form of an imperfectly competitive market. The product has no close substitutes, and there is only one seller in the market. If you increase your price your sales will fall, but quite possibly very little because the demand for electricity is inelastic. Similarly, if you lower your price, your sales will increase only slightly.)

   C. Nissan Motor Manufacturer: (This is an example of an oligopoly – a market with a few large sellers. These markets are characterized by a high degree of **interdependence**. If you raise your price you may well lose a lot of sales **if** your competitors do not increase their prices, too, because many consumers consider

different brands of cars to be close substitutes. If you lower your price you may capture some of your competitors' sales **if** they do not also lower their prices. If they do match your price decrease, the number of cars you sell will probably increase very little. You cannot be sure what will happen if you raise or lower your price, because the results depend upon what other sellers do.)

D. Daisy Flower Shop: (In this market, as with automobile manufacturers, the products of different sellers are close substitutes, and changes in prices at one flower store can affect sales at other stores where flowers are sold. But there are many more places where people can buy flowers in most SA cities than there are Nissan automobile manufacturers. The imperfectly competitive markets for flowers and other retail items are examples of the market structure that economists call monopolistic competition. In these markets, if you raise your price you will lose some sales, and if you lower your price you will gain some sales. But the actual results depend upon how many sellers are in the market, the extent to which consumers consider the products and support services of the competing shops to be close substitutes, and how sensitive customers are to the price changes.)

4. If you did not use the "Classroom Market for Crude Oil" activity to demonstrate market clearing or equilibrium price and quantity in Lesson 3, or to demonstrate changes in supply and demand in Lesson 4, conduct the market game as described in Lesson 3, to establish a competitive market price and quantity. If you did use the activity, either remind the students of what the competitive price and quantity was (using the buyer or seller decks from Lesson 3), or conduct the activity again, using the buyer and seller decks from Lesson 3, establishing a market price of about R490 ($70) a barrel for crude oil.

5. Conduct the "Classroom Market for Crude Oil" activity again, using the buyer and seller decks from Lesson 3, but this time conduct one round with only four sellers. Assign one seller to each corner of the trading area, to keep the sellers separated. Allow each seller to make trades only when he or she is standing in the assigned

corner. Instruct both buyers and sellers to make only one trade with each card, drawing a new card before they make another trade. Keep a class tally sheet as explained in Lesson 3, and when the new market clearing price is established (usually in five to 10 minutes) stop the trading.

6. Now bring the four sellers together in the middle of the trading area, tell them that they will stand next to each other in the next trading round, and give them a few minutes to discuss a joint strategy. You may want to let them discuss this outside of the classroom, while you discuss the market price and market structure of the last round with the rest of the class. When the sellers have their strategy set, conduct another round of trading until a new market price is clearly established, as recorded on the class tally sheet.

7. Debrief the activity, pointing out that when the market became less competitive as the number of sellers was decreased, equilibrium price increased and quantity decreased, even though the deck of seller cards (representing the firms' costs of producing and selling crude oil) did not change. Supply decreased (shifted to the left – see Lesson 4) because the number of sellers decreased. This is basically what happened to the world crude oil market in the 1970s, as a market that had been competitive became imperfectly competitive. Production cutbacks and price increases for crude oil and petroleum-based products were initiated by the Organization of Petroleum Exporting Countries (OPEC), the most famous current example of a cartel. The **collusion** to raise prices among sellers was probably much more explicit and effective in the second round, when sellers could easily meet to set a joint strategy, and more easily keep track of what other sellers were doing during the trading round. This probably resulted in an even higher price and lower quantity sold.

8. Point out that oil and gas prices decreased sharply (adjusted for inflation) through the 1980s and most of the 1990s, then rose again around 2000-2006 as a result of several factors, including increased global and SA consumer demand, capacity

constraints at SA refineries, higher production costs associated with producing environmentally "cleaner" gasoline in some parts of SA (remember the Department of Transport's law on fuel), and renewed efforts by OPEC and some other oil producers to limit production and increase prices.

9. Briefly discuss why firms in imperfectly competitive markets must make price and output decisions under conditions of interdependence and a high degree of uncertainty. The key issue is that, with a smaller number of firms, when one firm changes its output and price levels (price competition), or when one firm introduces a new product, launches a new advertising campaign, or adopts some other competitive strategy (**non-price competition**), that will affect the price, sales, and quite possibly profits of other firms producing similar products. Announce that the class will now consider a case of interdependence in decision-making in a situation that may, at first, seem to have little to do with economics. Later, they will see how imperfectly competitive firms face exactly the same kinds of situations.

10. Distribute copies of Activity 2, The Prisoners' Dilemma. After the learners have read the activity, review the payoffs facing both prisoners carefully, to make sure that learners understand them.

11. Have learners answer questions A through D on Activity 2, and then discuss their answers. A learner who says "I would not confess and just take the one year in jail" probably doesn't understand the dilemma. Individually, for both Curly and Moe, confessing is the best solution – offering the shortest jail term *regardless* of what the other crook does. But if the crooks are able to collude or cooperate, the total amount of jail time served by both of them will be minimized if they both refuse to confess. Despite that Curly and Moe should not confess *only* if they are absolutely certain that the other person will not confess, or if they are afraid that the other person (or that person's "associates") will somehow retaliate if they do confess. And remember, they both start out knowing that the other person is a crook!

A 1. What would you do if you were Curly and you expected Moe to confess? Why? (*Curly should confess because in this case he expects to go to jail for 10 years if he doesn't confess, but only five years if he does.*)

A 2. What would you do if you were Curly and you expected Moe not to confess? Why? *(Curly should still confess because in this case he expects to go to jail for a year if he doesn't confess, but only three months if he does.)*

B 1. What would you do if you were Moe and you expected Curly to confess? Why?

B 2. What would you do if you were Moe and you expected Curly not to confess? Why?

(*The answers for Moe are exactly the same as for Curly. Therefore, the incentives they face may lead both Curly and Moe to confess, even though that way they both spend five years in jail, rather than only one year if they both refuse to confess.)*

C. What would you do if you were Curly or Moe? Are there things other than the jail terms you should consider?

(Curly and Moe should consider the following possibilities:

1. *Confess, because you serve less time that way whether the other person confesses or not, and the worst that can happen by confessing is a five-year term, while the worst that can happen by not confessing is a 10-year term.*
2. *Don't confess if you absolutely trust your partner not to confess. That way the total amount of time your both serve is minimized – two years total rather than 10 years if they both confess, and 10 years and three months if one confesses and one doesn't.*

3. *Don't confess, because you fear that if you confess and your partner doesn't, your partner or some of his other business associates will commit violent acts on various parts of your body, or against your family.)*

D. Under what circumstances would Curly and Moe not confess?

(As explained in C, either because of complete trust in the partner, or complete fear. Trust is more likely if Curly and Moe have a long history of working together, and plan to work together for many years to come.)

11. To demonstrate the Prisoners' Dilemma operating in a business setting, distribute a copy of Activity 3 to all students. Allow time for them to answer questions A – C, individually or in small groups. This activity will reinforce students' understanding of the interdependence of firms in imperfectly competitive markets. It is a prisoners' dilemma problem again, because although both firms make more money if they cooperate and set higher prices, individually they both face incentives to lower price, no matter what price they believe the other seller will charge. Mac is considering raising his price because he thinks that people will buy about the same amount of gasoline even if the price is raised a little. He figures that he can more than make up for the few sales he will lose with the higher price for the sales he makes. Would you advise Mac to do this? Explain your answer. *(No. Mac is correct that the overall demand for gasoline is relatively inelastic, but if he raises the price at his station and Charlie doesn't, he will lose a lot of sales.)*

A. Charlie is considering lowering his price because he thinks that he can take business away from Mac if his price is a little lower. He believes that he can more than make up for the small decrease in revenue from each gallon sold by selling a lot more gallons. Would you advise Charlie to do this? Explain your answer. *(No. Charlie is correct that he would draw business from Mac only if Mac doesn't lower his price, too. In fact, Mac may lower his price even more than Charlie does. They are both likely to wind up selling only a little more*

*gasoline at a lower price, and making lower profits.)*Can you think of any other actions that Mac or Charlie might take to increase the profitability of their businesses? *(They might try to sell more by advertising or by providing better service, clean restrooms, and free coffee, maps, or other "giveaways." These strategies are also costly, however, and may be matched by their competitors.)*

From the individual viewpoint of either Mac or Charlie, they will both expect to sell more gas by charging a lower price, regardless of whether they expect their competitor to charge a higher or lower price. But jointly, their best solution is to enter into an agreement to charge the same, relatively high price. (Note, however, that the threat of someone else opening a new gas station in the town, and the price of gas at the closest stations along the interstate highway, limit the price they can charge.) A mutual price agreement takes advantage of the fact that demand for gasoline is relatively inelastic, and reduces the risk of the competitor charging a lower price. Fortunately for consumers, such collusive agreements are illegal in this country. However, collusion can be difficult to identify and prove when the agreement is simply a tacit understanding. In debriefing this activity, explain that prices in most imperfectly competitive markets tend to be "stickier" than in competitive markets, changing less frequently. One reason for this is the great uncertainty created by the interdependence between competitors. In some cases, however, it isn't practical to change prices very often. For example, paper catalogues and menus with price information have to be reprinted and distributed every time prices change, and that is expensive.

12. Distribute a copy of Activity 4 to each student. This activity can be conducted by collecting a pricing decision from each learner, or the class may be divided into ten small groups that each makes a pricing decision. The table shows clearly that what happens to a firm's profits depends upon what other firms in the industry do.

13. Ask learners to read Activity 4 and, *without talking to other students – or to other groups if you are using small groups* – to decide whether to implement the price increase.

14. Collect the copies of Activity 4 and count the number of yes and no responses. Announce the results. (If more than ten sheets are counted, the results can be interpolated from the data shown in Activity 4. If half the students raise the price, the results will be as shown for five firms; if 70 percent raise the price, the result will be as shown for seven firms, etc.) In debriefing this activity, stress that collusion can definitely benefit sellers in imperfect markets, but it is difficult to maintain collusive agreements. Again, a discussion of OPEC's problems in setting prices and maintaining production quotas in the 1980s and 1990s can be used to illustrate these points. As in many other cartels that have existed in earlier decades and centuries, firms in OPEC have a strong incentive to collude to raise prices and profits, but also face strong incentives to cheat on the cartel agreement, lowering their price (often secretly) to sell more than they are assigned to sell by the cartel.

15. To review the importance of non price competition, ask learners to list their favourite brand of soft drink, blue jeans, automobile, and athletic shoes. Ask them to list the features that make their brand "special," and ask how much they would pay to get those special features, compared to the price they might pay for a competing brand. Estimate how much it is worth to the company that produces these brands to maintain this brand loyalty. Suggest that a rough estimate of this amount might be the price difference students were willing to pay times the number of items the company sells each year, minus the advertising and other costs associated with maintaining the brand loyalty and identification.

16. Ask learners how much they are influenced by: a) advertising campaigns for their favourite products, and b) the popularity of these brands with their friends and other classmates. To investigate whether these differences are real or simply perceived, conduct a blind taste test of soft drinks, and see whether students can choose their brand from a selection of three or four competing brands of the same kind of sodas.

Distribute copies of Activity 5 to illustrate public policy concerns relating to imperfectly competitive markets. The purpose of the case study is to have students understand that many **antitrust policies** designed to prohibit collusion and limit firms' market power are not clear cut. Have the students read the case study and then write answers to the questions. Ask some students for their recommendations on the case, and then discuss the answers with the students, stressing the following points:

- The airline industry is an imperfectly competitive market, and the actions of one seller definitely affect other firms in the market.

- Brand loyalty associated with high advertising costs, frequent-flyer programmes, and long-term safety and performance records are significant barriers to entry, as are high purchase, maintenance, and operating costs for airplanes; labour costs for highly skilled workers (pilots, mechanics, etc.); and computerised international ticketing and reservations systems.

- In general, owners of resources in a market economy are free to use these resources in whatever manner they choose. However, an important economic function of government in a market economy is to maintain competition. Therefore, the government limits property rights in certain circumstances, including prohibiting mergers of large firms in some highly concentrated industries.

- Often, the more firms in a market, the greater the degree of competition, which results in lower prices and increased output. Many markets are inherently imperfect, however; and big doesn't always mean bad if large-scale operations are required to minimize production costs. That is especially true if it is easy for some competitors to enter markets where economic profits are being earned. Note that airlines can often reroute their planes to different cities quite easily – unless gate space at airports is unavailable. On the other hand, in extreme cases such as natural monopolies – including the public utilities that provide electric, water, and sewerage service – where it is too expensive to have even two companies providing the same service, the government typically takes over these companies, or regulates the prices and/or profits of privately owned companies.

The airline case in this activity is certainly not clear-cut. A major point of difference among those evaluating this situation will be whether they believe the two companies can survive without merging. Another key point is that the two airlines are now generally serving different markets/cities.

CLOSURE

Review the characteristics of imperfectly competitive firms listed in the Introduction to this lesson, and the conclusions that immediately follow that list.

ASSESSMENT

1. Ask learners to evaluate the following statement in a one or two-page essay:

"Most progress in the last century occurred in markets that are, or were, imperfectly competitive, not perfectly competitive. That progress included developing new products and lowering prices for established products. We would be better off if the government quit trying to keep markets so competitive, and let them become oligopolies or even monopolies if that's what happens in the marketplace. That's what other countries are doing already, and look how successfully their companies have been competing with U.S. firms in recent decades."

Or

2. Have students read about a recent antitrust case, such as the case against Microsoft. You may want to start by having them check the webpage at *http://wwwusdoj.gov/atr/cases/ms_index.htm*. Let some students support the antitrust case, representing attorneys or economists at the Department of Transport and Public works in their respective provinces; have other students oppose the case, representing attorneys or economists working for the company or companies involved in the case.

Activity 1

Perfectly and Imperfectly Competitive Markets

A perfectly competitive market is one in which many sellers produce identical products in a market that is relatively easy to enter and leave. In these markets, sellers have no control over the price of their products. They have to accept the market price and they can sell as much or as little as they want at that price.

If these conditions do not exist, the market is said to be imperfectly competitive. There are several possible kinds of imperfectly competitive markets depending upon: 1) the number of sellers, 2) the types of products produced (especially the availability of close substitutes), and 3) whether the market is easy to enter.Considering these characteristics of perfectly and imperfectly competitive markets, imagine that you are a seller in each of the following markets. Explain what you think would happen to your sales levels if you raised or lowered the price of your product. Specifically, how much do you think sales would change, and why?

A. John Jacobs, Wheat Farmer

Increase your price Decrease your price

B. Bosch Local Electrical Company

Increase your price Decrease your price

B. Nissan Automobile Manufacturer

Increase your price Decrease your price

C Daisy Flower Shop

Increase your price Decrease your price

Activity 2

The Prisoners' Dilemma

Curly and Moe are crooks. They have been caught stealing auto parts and are now sitting in separate rooms in the city jail. The Provincial Attorney is delighted to have finally caught Curly and Moe in the act of committing a crime. The PA knows that Curly and Moe are guilty not only of this crime, but also of several other burglaries that have occurred during the past year. She *knows* they are guilty of these crimes, but she can't prove that in court.

The PA decides to try to persuade Curly and/or Moe to confess by offering them a deal. She talks to each one separately and says: "I have enough on both of you to send you to jail for a year. But if you alone confess to the other robberies, which carry a 10-year sentence, you will get off with three months and only your partner will serve 10 years. If you both confess to the other robberies, you will both get five years."

Don't worry here about whether the constitutional rights of Curly and Moe are being violated, or whether they would actually serve these exact sentences if convicted. Those are interesting and important issues, but they can be dealt with in another activity or course. For now, accept the four following propositions:

1. If Curly confesses and Moe doesn't, Curly goes to jail for three months and Moe for ten years.

2. If Moe confesses and Curly doesn't, Moe goes to jail for three months and Curly for ten years.

3. If both Curly and Moe confess, they both go to jail for five years.

4. If neither Curly nor Moe confess, they both go to jail for one year.

Given those results, answer the following questions:

A. 1. What would you do if you were Curly and you expected Moe to confess? Why?

   2. What would you do if you were Curly and you expected Moe not to confess? Why?

B. 1. What would you do if you were Moe and you expected Curly to confess? Why?

   2. What would you do if you were Moe and you expected Curly not to confess? Why?

C. What would you do if you were Curly or Moe? Are there things other than jail terms you should consider?

D. Under what circumstances would Curly and Moe not confess?

Activity 3

Duelling Gas Stations

Mac and Charlie each own and operate petrol stations across the street from each other on the edge of town, near an interstate highway. There are no other service stations in this town. They are now selling their petrol for exactly the same price and they both have large signs listing their price.

A. Mac is considering raising his petrol price because he thinks that people will buy about the same amount of petrol even if the price is raised a little. He figures that he can more than make up for the few sales he will lose with the higher price for the sales he makes. Would you advise Mac to do this? Explain your answer.

B. Charlie is considering lowering his price because he thinks that he can take business away from Mac if his price is a little lower. He believes he can more than make up for the small decrease in revenue from each gallon sold by selling a lot more gallons. Would you advise Charlie to do this? Explain your answer.

C. Can you think of any other actions that Mac or Charlie might take to increase the profitability of their businesses?

Activity 4

We're All in This Together. . . Aren't We?

Imagine that you represent one of the 10 largest soft-drink companies in the nation, and that you are attending a meeting of the South African Soft Drink Producers Association. During an afternoon session the association economist presents evidence showing that, at current prices, the demand for all soft drinks (not one particular brand) is inelastic. This means that if prices are lowered, consumers will buy more soft drinks, but the increase in sales will be relatively small. If prices are raised, consumers will buy fewer soft drinks, but the decrease in units sold will be relatively small. The economist presents evidence showing that if all of the 10 largest companies increase their prices 15 percent, each company's profits would increase 12 percent. Each company would sell a little less than now, but at higher prices. An off-the-record motion is made (after all, you wouldn't want the Justice Department to bring charges of illegal price fixing) that each firm raise its prices by 15 percent. The unofficial motion passes unanimously.

Returning to your office, you must decide whether to send out a memo announcing a price increase. Having had some training in economics, you realize that the effect of a price increase on your profits depends on how many other firms really go along with the price increase.

The following table shows the change in your profits under the different possible outcomes. Under these circumstances, would you raise your price?

Number of firms raising price	Number of firms not raising price	Percent change in profits for firms raising price	Percent change in profits for firms not raising price
10	0	+15	—
9	1	+12	+100
8	2	+9	+75
7	3	+6	+50
6	4	+2	+30
5	5	0	+18
4	6	-5	+10
3	7	-15	+6
2	8	-30	+4
1	9	-50	+2
0	10	—	0

_____ Yes, I would raise the price of my product.

_____ No, I would not raise the price of my product.

Explain your decision. _____

_____

Activity 5

The Airlines Case: Is Big Better?

Imagine that it is 10 years from now and you have been hired as a consulting economist for the Antitrust Division of the Department of Justice and Department of Transport and Roads. The following case is given to you for review. Use what you know about markets plus the information in the case to suggest a policy to the assistant attorney general in charge of antitrust actions. Two relatively new airline companies, **Mango and Airlink Airways**, have announced plans to merge. The leading airline companies and their respective shares of total SA ticket sales over the past year are:

SAA	**25%**
Mango	**15%**
Khulula.com	**14%**
One Time	**11%**
Air link	**10%**
British Airways	**9%**
All others	**16%**

During the past five years, the airline industry has become more concentrated as smaller airlines have gone out of business or merged with larger companies. Note that the four largest airlines now account for 57 percent of total sales.

Arguments against the merger:

Some staff attorneys at the Justice Department believe the merger should be opposed. They believe the merger of the fourth and sixth largest airlines will continue what they regard as an unhealthy trend toward larger airlines, a higher concentration of sales, and less competition. The newly merged airline will be the largest in the nation, with more sales than the leading firm now has.

Aggressive advertising campaigns by the large airlines are raising significant barriers to the entry for potential new competitors.

Arguments for the merger:

Attorneys for the companies involved have filed papers arguing that the merger would not materially affect competition in the industry. Most of Mangos' business consists of coast-to-coast flights using very large aircraft. Nationwide Airlines specialises in shorter flights using smaller planes and the hub concept. Only four cities are now served by both airlines. Furthermore, the attorneys argue that neither airline can survive in the long run without the merger, because of heavy competition from the largest firms in the industry today. The merged company would have a larger advertising budget and could realise substantial economies in their reservation and ticket sales operations. The company attorneys state that if either of these two companies fail, the lost sales will go primarily to the largest three airlines, and thus increase concentration in the market even more. The attorneys argue that one strong competitor is better than two smaller companies going out of business.

Question for group discussion and presentation:

Should the Justice Department announce that it will oppose the merger? What is your recommendation? Explain your position. Make notes and present to class.