

CHAPTER 4

ROLES OF EDUCATORS AND LEARNERS IN THE IMPLEMENTATION OF EDUCATIONAL ACTIVITIES

4.1 INTRODUCTION

Implementation of outcomes-based education finds expression in the roles played both by educators and learners. As the educator makes use of different approaches to assist the learners achieve learning objectives, there are certain ways in which he/she has to behave that conforms to the outcomes-based education approach.

The theme of the research is the implementation of outcomes-based education policy. Educators and learners are the main roleplayers in the implementation process. It is therefore essential to indicate how the implementation of the policy impacts on them. This impact finds expression in the implementation activities with respect to the roles played by educators and learners. Hence, the need to explain the implementation activities performed by educators as well as learners to obtain successful implementation of outcomes-based education policy. The matters that the educator may be concerned with or in which he/she may be participating are –

- ❖ reflective teaching practice;
- ❖ multicultural classrooms;
- ❖ possible outcomes of learning;
- ❖ teaching strategies;
- ❖ lesson planning and preparation; and
- ❖ roles of educators and learners.

These matters are dealt with below.

CHAPTER 4

4.2 REFLECTIVE TEACHING PRACTICE

Broadly stated, reflective teaching is thoughtful teaching. This approach to teaching requires teachers to question their classroom practices, their beliefs about teaching, forces that influence the subject matter and methods of teaching which will satisfy set moral and ethical principles of teaching. Stated differently, reflective teaching practice, according to Van der Horst and McDonald (1997:118), is a process of interrogating ones teaching in relation to –

- ❖ purpose;
- ❖ focus;
- ❖ methodology; and
- ❖ supportive environment.

Purpose refers to the need to improve some aspects of teaching. It may be general or specific. A statement of purpose needs answering the following question: “Why do I want to reflect on my teaching?” Focus follows on the purpose. In order to stay focused the educator must ask: “What will I be reflecting on?” To obtain clarity about focus and purpose, there is a question the answer of which serves as a guiding star that leads to the selection of suitable methodology. To choose a correct methodology, the educator must ask: “How can my reflection be guided to help me achieve my desired purpose?” (Van der Horst & McDonald, 1997: 118 & 119). The aim of ongoing evaluating of one’s teaching is to evaluate one’s teaching with the constant aim of improving it. The process is continuous throughout the educator’s career – that is, to be self-critical about one’s teaching, and trying out new ideas (Petty, 1995:361).

A supportive environment refers to a teaching and a learning milieu that lures educators to teach effectively and learners to learn effectively. Such a conducive teaching and learning environment will be subject to constructive criticism, institutional norms of

CHAPTER 4

collaboration and structural arrangements that promote essential joint ventures by colleagues (McIntyre & O'Hair, 1996:2).

The major aim of reflective teaching is to encourage teachers to be open about problems they encounter in teaching and to discuss them with their colleagues. This creates opportunities for educators to think about teaching, with the aim of improving it. The more educators think and talk about their teaching practice, their teaching ceases to be routine and becomes reflective (McIntyre & O'Hair, 1996:3).

Reflective teaching practice dictates to educators how they should behave and which role to play. That is, it spells out a package of activities which educators must engage in while implementing outcomes-based education. Therefore, reflective teaching practice serve as a means of implementing outcomes-based education policy successfully.

Another factor that needs to be taken into account in a teaching and learning situations are learners. The composition of the classes, its homogeneity or multiculturalism will influence the educator's teaching. Multicultural classrooms, as far as outcomes-based education is concerned, will be explained in the following section.

4.3 MULTICULTURAL CLASSROOMS

Unlike in the past, before the birth of the new South Africa which was ushered in by the *Constitution of the Republic of South Africa, 1996* (Act 108 of 1996), schools were provided racially. Learners attended schools which were racially segregated according to the policy of separate development. Nowadays multiracial classrooms are a common feature of the school system. Learners, from different racial groups and cultures, are in the same classroom. In such a classroom learners are exposed to one another's culture and are expected to respect their cultures as valuable educational resources (Coutts, 1990:5).

CHAPTER 4

In fact, multicultural classes are a product of multicultural education. As implicitly stated before, South Africa is a multicultural and a multiracial country. It is also affectionately known as the rainbow nation to emphasise the multiplicity of its cultures. Therefore, it makes sense to utilise multicultural education in such a setting. In this regard Squelch (1991:14) states that a multifaceted educational approach aims at preparing learners for life in a multicultural society.

Van der Horst and McDonald (1997:119-120) explain the concept of multicultural education in terms of its essential features, which are –

- ❖ it recognises and accepts different cultural groups;
- ❖ it sees multiculturalism as an asset and not a liability;
- ❖ it advocates a just and democratic society;
- ❖ its meaning is broad and it encompasses age, sex, language and learning style;
- ❖ it is inclusive and not divisive;
- ❖ it is committed to and encourages democratic processes and practices; and
- ❖ it is opposed to racism and prejudice in society.

In order to understand the present, we need to know the past. As it is commonly stated that one cannot know where one is going unless one knows where one comes from. It is therefore necessary to understand that in the past the South African school system was based on racial grounds. The differences of racial groups were emphasised. This practice denied learners of different cultural groups to learn from one another. Coutts (1992:40) describes this setup as a schooling dispensation that emphasised cultural identities and which structured its schooling to affirm and transmit such identities.

One of the intended or unintended outcomes of the systems of education is that blacks despised their own languages. Frederickse (1992:122) illustrates this point by saying that in South Africa most of the former white state schools did not teach any of the

CHAPTER 4

African languages. The result was that learners learned and wrote only English and Afrikaans. Unfortunately this tendency of ignoring African languages deprived English and Afrikaans speaking learners of knowledge of the cultures of their black classmates. That is, the multicultural classrooms did not accommodate all the cultures of their learners. Lemmer (1993:18) acknowledges that the problem faced by South Africa was that the majority of educators were trained in segregated colleges of education and lacked experience of multicultural education.

The other side effects of racially segregated education were inferior education and unskilled and semi-skilled workers. Mathunyane (1996:45) describes the result of the separate school system as responsible for most blacks being undereducated, under-skilled and underdeveloped. Consequently they were unable to participate profitably in the social, economic and civic life of their country.

This state of affairs necessitated the need of transformation in the education system; to transform the educator's role from that of monocultural to multicultural classroom. Educators had to be provided with tools or techniques to engage in productive transformation. This will enable them to acknowledge and respect that different cultural experiences of learners are useful resources of teaching and learning. In this regard Munsamy (1999:80) confirms the need to acknowledge cultural differences in teaching. Le Roux (1997:63) also echoes the sentiments expressed about cultural differences.

From the above it is clear that successful teaching should take into account that both the learners and the educators could have different cultures. Culture is of paramount importance and must be respected in teaching and learning. The nature of culture, which is described by Arends (1994:135) as a way of seeing, perceiving, and believing, demands that it must be accorded special place in education. From another perspective, Le Roux (1997:11) maintains that it is the responsibility of the school to transmit culture. Therefore, by implication, education should not be culturally biased. It thus is the responsibility of educators, especially in a multicultural society like South Africa, to

CHAPTER 4

present lessons in a culturally neutral fashion. Besides, multicultural classrooms dictate that all cultures represented by the learners and the educator in a classroom must be treated as equally important. Stated differently, educators in the multicultural South Africa have no choice but to acknowledge multiculturalism in teaching.

On account of the significant presence of culture in a classroom, educators must utilise teaching styles that are appropriate to multicultural classrooms. In fact, each learner brings into the classroom experience and knowledge that has been coloured by his/her culture. The prior learning knowledge that the learner has acquired influences his/her learning style. It is therefore important that the educator must take into account cultures that are present in his/her classroom and to select and apply an appropriate teaching style. In this regard Dekker en Lemmer (1993:43) maintain that educators should take into account culture when evaluating and selecting an appropriate teaching style. Munsamy (1999:148) concurs with the above because he also reiterates that educators should be aware of the cultural background of their learners and take the same into account when considering the manner in which learners should learn.

It follows from the central role played by culture in teaching and learning that for teaching to be effective, it must be cultural sensitive. As a result of the presence of diverse cultures in the classroom, educators must accommodate the multiplicity of cultures in their teaching styles. Van der Merwe (1997:27) confirms this point of view when he states that educators must design their teaching styles to accommodate multiculturalism in their classrooms. Lemmer and Squelch (1993:63) express the same feeling when they state that by employing a diversity of teaching styles educators can help to enhance learners' classroom behaviour, and their attitude towards school and academic achievement.

CHAPTER 4

Other authorities who advocate the influence that culture has on teaching and learning include Van der Merwe (1997:12) as he writes that schools must adapt to their environment and respect the characteristics of the local community. In pursuance of their belief on the sensitivity of learners' cultural backgrounds, Wlodwski & Ginsberg (1995:17) state that to be effective in the multicultural classroom, educators must relate teaching content to the cultural background of the learners. Thirdly, Irwin (1997:2) states that in implementing multicultural education and addressing diversity issues calls for educators to equip themselves with pertinent knowledge, skills, and attitudes that are congruent with behaviours indicative of acceptance, respect, and awareness. He further states that the role of educators in the classroom is vital for the success of multicultural education. That is, educators have the authority and the means to create classroom climate that will enhance positive attitudes, values, beliefs and positive expectations among all learners.

Pursuant to its objectives of seeking to bring about reform in the school system, multicultural education makes use of many teaching styles. On account of the fact that teaching methods are culturally influenced, some methods are more effective for some learners than others. To counteract or eliminate the cultural inclination of teaching styles, many teaching styles must be utilised to cater for the different cultural groups. Some of the teaching styles that the educator may employ in teaching include role playing, games, independent study, project work and group work. Over and above this, the teaching styles must be modified to be in harmony with the different learning styles of the learners (Van der Horst & McDonald, 1997:120).

From the foregoing argument it is evident that teaching must be conducted in ways that will neutralise the effects of cultures present in a classroom. A set of guidelines have been formulated and recommended for implementation in order to assist educators to teach effectively in their classrooms. In this respect, Van der Horst and McDonald (1997:120-121) identified general guidelines which, when applied, will enhance the chances of effective teaching in multicultural classrooms, which are –

CHAPTER 4

- ❖ to make room for alternative modes of response, visual or graphic rather than verbal;
- ❖ shortening of assignments given by breaking them into segments;
- ❖ ensure that learners experience success and develop self-confidence by first giving them simple tasks. Thereafter assignments should be made gradually difficult. That is, the principle of using simple to more difficult exercises and assignments must be followed;
- ❖ learners should be given the latitude to choose from alternative activities and assignments;
- ❖ that permission must be granted to learners to choose from preferred forms of responses to improve their motivation level;
- ❖ abstract concepts, which are generally speaking difficult to comprehend, must be taught by using concrete examples to promote understanding;
- ❖ language used in written texts should be carefully chosen in such a way that it does not tax learners beyond their reading level; and
- ❖ educators should formulate and articulate academic and behavioural expectations and communicate them clearly, precisely and concisely to learners.

From what has been argued so far about the nature, character and influence of multiculturalism in classrooms, it is evident that multicultural education is posing a real challenge to South Africa. The new democratic South Africa is provided for in the *Constitution of the Republic of South Africa, 1996* (Act 108 of 1996). Non-racialism and non-sexism are foundations of the *Constitution of the Republic of South Africa*, as provided in its section 1.

Multicultural classrooms are a common feature of the school system in the democratic South Africa. Explanation of multiculturalism implies that there must be acceptance of diversity of age, sex, language, religion and learning styles; fairness in dealing with different racial groups; learners' and educators' cultural differences be respected;

CHAPTER 4

educators use teaching styles that accommodate and are friendly to different cultures; and schools should adapt to their environment and local community. Thus, it can be deduced that multicultural classrooms compel educators and learners to behave in a specific manner. That is, multicultural classrooms should facilitate the implementation of outcomes-based education policy by redefining the roles to be played by educators and learners.

Multicultural education demands that educators must be appropriately competent and effective. In order to achieve this aim, educators must know possible outcomes of learning.

4.4 POSSIBLE OUTCOMES OF LEARNING

Outcomes are results of learning and involve demonstrations of performance of what learners have learnt. Stated differently, the focus or emphasis is on what learners can do as a result of what they have been taught when they reach a particular stage in learning. Therefore, outcomes are the results of learning processes and refer to knowledge, skills, attitudes and values within particular contexts. Learners should be able to demonstrate that they understand and can apply the desired outcomes within a specific context (Department of Education, 1997:118). Wessels and Van den Berg (1998:2) concur with the above when they state that outcomes are the observable knowledge, skills and values that learners acquire.

Van der Horst and McDonald (1997:121) describe learning outcomes as the issues that learners must learn. These outcomes influence the way educators plan their instruction. In making decisions on what learners must learn, educators must take into account the knowledge, skills and attitudes that must be acquired in a given learning area. Therefore, the starting point is the formulation of outcomes which will follow on instruction and assessment structured for specific outcomes. Thus, the approach for outcomes-based education is the alignment system which promotes the matching of

CHAPTER 4

outcomes with the instruction and assessment processes.

The aforementioned vision of outcomes is shared by the Gauteng Department of Education and Vista University (2002:5) whose approach is that outcomes are clear statements of desired educational achievements, results, and accomplishments that educators want learners to demonstrate at the end of significant learning experiences. The objective becomes the starting point for curriculum, instruction, assessment planning and implementation, all of which must be focused on desired outcomes. These clear, comprehensible and appropriate statements indicate the knowledge, skills, values and attitudes that learners must demonstrate at the end of instructional material learnt.

The inclusion of knowledge, skills, attitudes and values in the aforementioned definitions of outcomes, is essential. Outcomes need to be understood in a broader sense. They involve, amongst others, integrative capabilities that draw on an understanding of underlying principles and processes, and transferability of application. Therefore, outcomes should not be seen as products that can be measured, but as processes and thinking skills (Wessels & Van den Berg, 1998:2). This view of what outcomes are, is shared by the South African Qualifications Authority (SAQA) stating that outcomes underpin all learning, teaching and training in all learning areas. These outcomes will promote critical tinking and lifelong learning, and ensure that learners can apply and integrate what they learn within different settings (*SAQA Bulletin*, 1997:7). The Department of Education (1996:18) also maintains that learners should be able to demonstrate that they understand and can apply the outcomes within a particular context. However, Spady (1994:4) gives another shade of meaning of outcomes when he states that outcomes must take precedence over time for their achievement.

From the explanation above, it is clear that outcomes are central to outcomes-based education. According to Spady and Schlebusch (1999:38-39), formulation of outcomes serve the following purposes –

- ❖ drawing special attention to a matter;

CHAPTER 4

- ❖ focusing time and strategies on its accomplishment;
- ❖ making it a top priority in instructional planning and delivery; and
- ❖ determining the essence of what will be assessed, credentialed and reported.

From this point of view, outcomes are the starting point, the centrepiece and the bottom line of all teaching efforts. Hence, the need to identify what outcomes require of learners and educators and their long-term impact on learners' futures.

Spady and Schlebusch (1999:39-50) outline major distinguishing features of outcomes, which are –

- ❖ outcomes that go beyond defining and accomplishing a learning system's top priorities while focus shifts from the specifics of given courses or programmes to the long-term importance and impact of the learning on the career and personal success of learners after completing their studies – outcomes of significance;
- ❖ outcomes are visible things that happen and learners do, implying that the outcomes are visible and demonstrable, and described in demonstration verbs;
- ❖ outcomes are demonstrations of learning that happen at or after the end of designated courses or programmes;
- ❖ outcomes take many forms as they involve skills and competence which range from the simple to the complex, from micro to macro, and from those tied to specific content to those influenced by the nature of complex contexts and settings; and
- ❖ outcomes are actual demonstrations of actual substance for which there are no inherent scores and numbers while substance must be dealt with on its own terms. It cannot, like numbers, be added up, averaged, weighted, and divided.

The outcomes have particular implications for educators as facilitators of learning. The assumptions of the outcomes approach in general have been embedded in effective teaching practices. However, outcomes make some of these embedded practices more

CHAPTER 4

explicit. Outcomes-based education demands clarity about what exactly are being taught and learnt, and how to assess learners. This is made possible by naming elements of skills, knowledge and values in outcomes and assessment criteria, and asking that these be demonstrated through various kinds of evidence, processes and performances (Wessels & Van den Berg, 1998:11).

Research has proved that learning should proceed along different routes depending on what outcomes learners intend to acquire. Regardless of the fact that there could be different ways to characterise what learners learn, the result could be indicated taxonomically. In this regard Gagné (in Van der Horst & McDonald, 1997:122 & 132) distinguishes five major domains of such learning outcomes, which are:

- ❖ verbal information;
- ❖ intellectual skills;
- ❖ cognitive strategies;
- ❖ attitudes; and
- ❖ motor skills.

In addition to the afore-mentioned contribution Gagné (in Van der Horst & McDonald, 1997:132), proposes that there are nine instructional activities that educators need to make use of in order for the learners to attain the expected learning outcomes. The instructional activities in question are the following:

- ❖ stimulating or motivating learners to be attentive;
- ❖ informing learners of outcomes in advance so that they can develop relevant expectations;
- ❖ reminding learners of what they have learnt that is relevant to what is to be taught;
- ❖ guiding learners until they understand;
- ❖ asking learners to apply knowledge already gained to indicate that they understand

CHAPTER 4

it;

- ❖ presenting the lesson clearly and distinctly;
- ❖ assessing each learners' performance;
- ❖ giving learners practice exercises in order to promote retention and generalisation (Van der Horst & McDonald, 1997:122).

To illustrate Gagné's (in Van der Horst & McDonald, 1997:123) theory in practice, his major learning outcomes with suggestions relevant for teaching are set out in Table 4.1:

CHAPTER 4

TABLE 4.1: INSTRUCTIONAL ACTIVITIES FOR EDUCATORS

Outcomes of learning	Examples	Conditions that facilitate outcomes
1. Intellectual skills Higher order rules	Learner determines how to calculate the area of trapezoid.	Review of relevant rules; verbal instruction to aid in recall of rules; verbal instructions to direct thinking.
Rules	Learner discovers characteristics that are common to all mammals.	Learner is made aware of desired learning outcomes; relevant concepts are reviewed; concrete examples are provided.
Concepts	Learner classifies objects in terms of size and colour.	Examples presented; learner engaged in finding examples; reinforcement.
Discriminations	Learner distinguishes among different printed letters.	Simultaneous presentation of stimuli to be discriminated; reinforcement (confirmation); reception.
Simple types of learning (signal learning; stimulus-response learning [chaining])	Learner is conditioned to respond favourably to school.	Reinforcement; models; positive experience in various school contexts.
2. Verbal information	Learner writes down Gagné's five major learning domains.	Information that organises content (advance organisers); meaningful context; instructional aids for retention and motivation.
3. Cognitive strategies	Learner devises personal strategy for remembering components of the basic information processing model.	Frequent presentation of novel and challenging problems; discussion of direct teaching of cognitive strategies.
4. Attitudes	Learner chooses to read an educational psychology text rather than a novel.	Models; reinforcement; verbal guidance.
5. Motor skills	Learner types a summary of this chapter.	Models; verbal directions; reinforcement (knowledge of results); practice.

(Source: Van der Horst & McDonald, 1997:123)

CHAPTER 4

The kinds of skills, knowledge and attitudes advanced for in the outcomes of learning have implications for teaching methodology. These outcomes demand proactive and critical learners who can take control of their own learning, and not learners who are passive recipients of knowledge. This implies that teaching methods should be, if they prefer, activity-based learning, structured group work, and integrated tasks in which learners have to develop a piece of work over time, bringing together a number of skills and outcomes (Wessels & Van den Berg, 1998:11).

Another important matter for outcomes-based education and the educator is assessment. Outcomes, according to Wessels and Van den Berg (1998:11), dictate assessment that –

- ❖ involve applying skills and not merely recognising or reproducing facts;
- ❖ lead to the performance of complex tasks after completion of easier ones;
- ❖ lead to real products or solutions of problems; and
- ❖ are set in a meaningful context that connects diverse ideas.

From the above it is clear that there need not be a sharp division between learning something, and having that learning assessed. Since both learning and assessment are processes and performances, any unit of learning material can create an opportunity in which the learner learns by combining and practising various skills, while also being assessed. Therefore, assessment must be seen as an ongoing process, while teaching is taking place. Hence, formative assessment is preferred over summative assessment.

Formative assessment refers to on-going, classroom-based assessment that has a developmental and monitoring function. This form of assessment makes it possible for evidence of the learners' achievement to be gathered over time and in various divergent ways. Moreover, these are clearly stated outcomes and assessment criteria against which evidence of achievement is assessed (Wessels & Van den Berg, 198:11-12).

CHAPTER 4

Formative assessment and summative assessment are not conflicting forms of assessment. On the contrary, they serve different purposes. The criterion is whether the educator sees himself/herself as getting to know the learners in order to teach them better, in which case he/she makes use of formative assessment; or to assist others to be better informed about learners' competencies, in which case he/she utilises summative assessment (Frith & Macintosh, 1986:17).

Summative assessment has as its primary goals grading or certifying learners, judging the effectiveness of the teacher, and comparing curricula. It is directed toward a much more general assessment of the degree to which the larger outcomes have been attained over the entire course or some substantial part of it. The major purpose of summative assessment is to determine the degree to which a learner can apply information to solve problems. Furthermore, the purpose of summative assessment is to grade learners and to report to both parents and administrators (Bloom, Hastings & Madaus, 1971:2 & 61).

According to Wessels and Van den Berg (1998:12), the following questions are helpful to frame formative assessment tasks:

- ❖ Does the task relate to a real-life problem?
- ❖ Is the task non-routine or multi-faceted?
- ❖ Does it enable the learner to draw on many different sources, and to use and apply this information?
- ❖ Does it encourage the learner to produce a quality product or performance?
- ❖ Can it involve collaboration between learners to develop a product?
- ❖ Does it involve any evaluation by the learner of the effect on the audience?
- ❖ Is it a learning opportunity as well as an assessment task?

CHAPTER 4

Possible outcomes of learning are results of learning which involve demonstration of performance by learners. Outcomes find expression in knowledge gained by learners, skills displayed by learners, and attitudes and values inculcated in learners. It, therefore, follows that outcomes of learning influence the way educators teach and the manner in which learners learn. Moreover, research proved that learning should proceed along different routes as dictated by outcomes of learning. Thus, it can be deduced that possible outcomes of learning dictate roles to be played by both educators and learners in the implementation of outcomes-based education policy.

Outcomes influence the methods of teaching to be used to achieve stated objectives. In outcomes-based education it is essential that the educator select the appropriate method of teaching for achievement of specific learning outcomes. In this regard the focus is on improving the learners' performance to achieve stated objectives. Hence, teaching strategies and teaching methods will be explained in the following section.

4.5 TEACHING STRATEGIES

A teaching strategy is defined as a broad plan of action for teaching activities with the sole purpose of satisfying a predetermined objective. On account of the broad nature of a strategy, it follows that the refinement of acts of teaching and learning occur at another level of curriculum development, namely lesson planning. Hence, seen from another perspective, a strategy is an approach designed to undertake teaching and learning. In fact, it is an approach which aims at helping the educator to achieve learning outcomes. Other appropriate factors are lesson objectives, learning outcomes and the subject matter (Van der Horst & McDonald, 1997:124).

Closely related to strategy are methods. As stated earlier strategy is a multi-faceted phenomenon. Therefore, every strategy requires particular procedures and techniques to implement it. The techniques that the educator use during each phase of a lesson

CHAPTER 4

are called teaching methods. Therefore, teaching methods could be regarded as the means by which the educators attempt to attain the desired learning outcomes. In turn, teaching method is the way educators organise and use techniques, subject matter, and teaching media to achieve teaching objectives and to attain desired learning outcomes (Van der Horst & McDonald, 1997:124).

Two of the well-known teaching strategies are the inductive and deductive teaching strategies. These are explained in the following paragraphs.

4.5.1 Deductive and inductive teaching strategies

The deductive and inductive teaching strategies have been used since ancient times. The one strategy is the antithesis of the other. Old as they are, they still form the basis of all contemporary approaches in teaching.

The inductive teaching strategy is that in which progress in a lesson is made as the learner is led to make discoveries from the parts towards the whole or from the particular to the general. When progress is made from the parts to the whole, the reflection ends in generalisation. The principle of moving from the known towards the unknown in learning is basic to the inductive teaching strategy. In the lesson situation the inductive teaching strategy is used when the educator chooses several examples and guides the learner to reduce the examples in order to discover the essence or general law. For instance, by heating different substances in a natural science lesson and by measuring them in a specific manner the learners discover the general rule that materials expand when they are heated (Kruger, *et al.*, 1983:88).

The inductive strategy involves a number of steps. In science it starts with observation and experimentation. A scientist repeats the same experiment and if it repeatedly yields the same result, he/she formulates an hypothesis. Thereafter he/she continues

CHAPTER 4

to perform further similar experiments to test the validity of his/her hypothesis. In conclusion, he/she provides a theory, that is, an explanation of the hypothesis (Van der Horst & McDonald, 1997:126).

In applying the deductive teaching strategy, progress is made from the general to the particular or from the whole towards the parts. The deductive teaching strategy is, therefore, the observation dimension of the inductive teaching strategy. The progression is from a general theorem, statement, law, definition, rule or conclusion towards a particular example. Thus, in the deductive teaching strategy the point of departure is a general statement or a whole and progress is made through analysis towards particular cases or parts, and in this manner towards a conclusion (Kruger, *et al.*, 1983:89).

The deductive teaching strategy is proceeding from a general law to a particular case. For example, if $a = b$ and $b = c$, it can be deduce that $a = c$. This indicates that the deductive strategy is used extensively in Mathematics because of its structure. Notwithstanding that, other disciplines such as Religious Studies and History can also be taught by making use of the deductive teaching strategy (Van der Horst & McDonald, 1997:125).

It should be clear that the deductive teaching strategy is more suitable for use with advanced learners. In this teaching strategy the pace of instruction is faster because extensive use is made of the knowledge and insight that learners have acquired previously. That is why the deductive teaching strategy is used in the higher classes of the senior phase. However, it has two major disadvantages. Firstly, sometimes learners do not achieve an adequate understanding and thus merely memorise the learning material, which may be the theorem, statement, law or general rule. Secondly, it does not encourage self-discovery. Learners rely much more on the educator. The result is that learners find it difficult to take the initiative in acting independently (Kruger, *et al.*, 1983:89-90).

CHAPTER 4

The choice between a deductive and inductive teaching strategy depends to a large extent on the nature of the learning material and the learners' level of readiness. The effective use of either or both teaching strategies depends largely on the educator's experience.

Both inductive and deductive teaching strategies facilitate independent and critical thinking in learners. This is in fact one of the outcomes of learning through outcomes-based education. Thus, it can be deduced that inductive and deductive teaching strategies promote the implementation of outcomes-based education policy.

The next section deals with co-operative learning as a teaching strategy.

4.5.2 Co-operative learning as a teaching strategy

Co-operative learning is defined as learners working together in small groups that make it possible for each learner to participate meaningfully on completing a given task. There is no direct or immediate supervision by the educator. It is also worth noting that co-operative learning should not be equated to group work as it is more involved (Van der Horst & McDonald, 1997:127).

Co-operative learning affords learners the opportunity to procure more meaningful learning. Co-operative learning makes it possible for educators to handle big classes. Furthermore, it stimulates peer interaction and learner-to-learner co-operation in an attempt to foster successful learning by all. Co-operative learning has two aims, namely, to improve learner understanding and skills in the learning area, and for the learners to develop co-operative group skills and to appreciate different individuals and cultures found in South African classrooms (Van der Horst & McDonald, 1997:128).

CHAPTER 4

Like all other teaching strategies, co-operative learning activities have a set of common characteristics. Research has shown that the success of co-operative learning rely on three specific elements, which are:

- ❖ face-to-face interaction;
- ❖ a feeling of positive interdependence; and
- ❖ a feeling of individual accountability (Van der Horst & McDonald, 1997:128).

Co-operative learning is essential in big classes (Gauteng Department of Education & Vista University, 2002:107). Learners will make significant progress if they are in a learner-centred classroom where the educator employs co-operative learning. In fact, co-operative learning should be at the core of every learner-centred classroom. Such a classroom enables the learners to co-operate to –

- ❖ complete projects;
- ❖ master new concepts;
- ❖ test one another; and
- ❖ correct one another's work (Wessels & Van den Berg, 1998:22-23).

A major distinguishing feature of co-operative learning is formation of groups in a classroom. Co-operative group work affords learners the opportunity to learn through the expression and exploration of diverse ideas. The reigning spirit amongst the group members is that of using the resources available in a group in order to –

- ❖ deepen understanding;
- ❖ sharpen judgement;
- ❖ develop co-operation and promote acceptance of individual differences;
- ❖ improve learners' problem-solving skills;
- ❖ experience success by all learners;

CHAPTER 4

- ❖ share ideas; and
- ❖ support one another (Gauteng Department of Education & Vista University, 2002:107).

There are numerous ways in which the educator can group learners. In assigning learners to specific groups, the educator may use his/her own choice or the learners' choice based on the following –

❖ *Educator's choice*

The following are characteristics of an educator's choice:

- ✧ common factors such as shared hobby, birthday and matching pictures;
- ✧ specific reason such as making a shy learner to feel at home by placing him/her in a group of friendly peers;
- ✧ achievement: learners are grouped according to their abilities and achievements;
- ✧ proximity: learners closest to one another form groups.

Thus learners are placed in groups in which they will feel free to participate.

❖ *Learners' choice*

Learners' choices reveal the following characteristics:

- ✧ learners are allowed to form their own groups, though the educators are free to rearrange the groups if the combination of the group is detrimental to progress;
- ✧ most learners are in favour of grouping themselves as this affords them the opportunity to work with their friends (Wessels & Van den Berg, 1998:24).

CHAPTER 4

Thus, it could be deduced that learners take initiatives in forming groups and in learning.

In order for groups to function well there are particular guidelines to be followed. For instance, group members have to learn to listen to one another. To do so, they must –

- ❖ avoid destructive listening: while one talks, other group members fidget, look away, yawn and show signs of boredom;
- ❖ avoid interruptive listening: while a group member is speaking other group members should not keep on interrupting and clowning; and
- ❖ promote creative listening: in this regard each group member should have a turn to speak about a subject for five minutes. Hence, there should not be interruption. Questions should be asked to clarify meaning. Also, the checking summarising technique is used. When group members cannot agree, this checking technique often helps to get the group back on course (Wessels & Van den Berg, 1998:24).

It is essential that the learners should know what the educator expects of each of them as well as the group leader. The group leader should know how to involve inactive group members and how to deal with members who dominate the group. Learners need to understand what positive interdependence means. As the saying goes, no man is an island. In order to strengthen interdependence –

- ❖ rewards can be built into the learning activity; and
- ❖ the whole class can decide after the report back of the group which answer or contribution was the best (Gauteng Department of Education & Vista University, 2002:108).

The purpose of co-operative learning is to make each a strong individual in his/her own right. To achieve this aim –

CHAPTER 4

- ❖ learners are individually held accountable to pull their weight and to do their share of the work;
- ❖ each learner in a group is allocated a specific task to perform;
- ❖ the educator has to allow the learners time to reflect and discuss how the group should operate;
- ❖ learners must know that their characteristics can contribute to or disrupt group work (Wessels & Van den Berg, 1998:25-26).

Other co-operative learning techniques – apart from learner teams achievement divisions, jigsaw and group investigation – are brainstorming, peer correction and peer tutoring as will be explained in the following paragraphs.

Brainstorming is used to produce a large number of creative ideas. As discussions continue, ideas relevant to the topic under discussion are identified and recorded. A brainstorming session takes place under strict rules to avoid confusion and a waste of time. The rules under which it takes place are –

- ❖ no criticism: ideas will be evaluated and judged at a later stage;
- ❖ free-wheeling is welcomed: even wild ideas should be welcomed as they can be tamed at a later stage;
- ❖ quantity is encouraged rather than quality as it will make learners feel free to contribute;
- ❖ combination and improvement are sought. Ideas are regarded as common property, therefore combining or improving ideas contributed by different learners is allowed; and
- ❖ points to be remembered when organising a brainstorming session are –
 - ❖ the concept of brainstorming must be explained to the learners. In fact, it is necessary for learners to know what is expected of them;

CHAPTER 4

- ✧ one of the learners has to act as scribe in a group. Learners can also take turns in writing down ideas, for instance, after every five ideas, the pen and paper are passed on to the next learner;
- ✧ the problem of topic to be brainstormed must be carefully formulated so that it is clear and comprehensible to the learners; and
- ✧ time is of the essence during the brainstorming session. Therefore, there must be a time limit, for example, fifteen minutes per topic. The educator must warn the learners when the time has almost expired (Wessels & Van den Berg, 1998: 28-29).

Peer correction is used to facilitate co-operative learning. Using peer correction techniques will increase learner participation in a class immensely. According to Wessels and Van den Berg (1998:31), two techniques, identified as technique A and technique B, for peer correction are –

- ❖ Technique A requires that –
 - ✧ learners decide individually on an answer;
 - ✧ they write down their answers;
 - ✧ they form pairs to check their answers; and
 - ✧ they share their answers with their group and they are all held accountable for the correctness of their written answers;

- ❖ Technique B requires that –
 - ✧ learners draw a test from a test bank;
 - ✧ answers to the test questions are kept in envelopes at the back of the class; and
 - ✧ a member of a group draws the test for another member and uses the answer sheet to mark it.

Learners are encouraged by the educator to ask their fellow-learners for explanations when they do not understand him/her. If some of the learners fail to understand the

CHAPTER 4

explanation, the educator may ask them to work in groups and explain to one another what was meant by the explanation. This exercise of peer correction will also establish an important idea that the educator is not the sole source of information and that learners can seek information from themselves and their peers. In addition, co-operative behaviour and processes are viewed as basic to human endeavour, the foundation on which strong democratic communities could be built and maintained (Arends, 1994:339-340).

Peer tutoring is used to facilitate co-operative learning. In peer tutoring learners help each other to learn and they learn by teaching their peers. It is not only able learners that help less able ones, but it is recognised and accepted that less able learners can teach high ability peers in areas where they have particular expertise. Also, the shared responsibility and interaction amongst learners produce positive feelings towards tasks and others, generate better intergroup relation, and result in better self-esteem for learners with histories of poor achievement (Duke, 1990:101).

It is a demanding task for the educator to help learners teach one another. Hence, the educators should be well organised as peer tutoring involves planning, training the learners who are intending to teach, having supportive material ready and available, and being very tactful when explaining peer tutoring to the learners. Learners who are going to tutor must know what they are letting themselves in for, and what is expected of them before they agree to tutor (Wessels & Van den Berg, 1998:32).

According to Wessels and Van den Berg (1998:23-24) group work in co-operative learning has the following advantages –

- ❖ it helps learners to learn to work co-operatively;
- ❖ learners actively participate in purposeful activities;
- ❖ there is face-to-face interaction that makes the learning process personal;

CHAPTER 4

- ❖ learners interact socially and develop communication skills such as listening, sharing, advising and persuading;
- ❖ it reinforces skills previously taught, for example, they get an opportunity to practice introducing persons to one another;
- ❖ it allows learners to discuss and clarify issues. They also have the opportunity to practice what they want to say in the target language with a supportive group. This will help built self-confidence and a positive attitude towards the target language;
- ❖ it helps to develop high order thinking skills such as logical reasoning, open-ended problem-solving, synthesis and analysis;
- ❖ it helps the learners to pool their resources and to respect one another's strengths and weaknesses. They learn from one another and thus become more understanding regarding personal values;
- ❖ it allows the educator to circulate and monitor the progress of an activity, assessing the learners continually. Common errors committed by learners can be packed up and corrected at a later stage; and
- ❖ co-operative learning assists learners to become knowers rather than assimilators. It also makes it possible for the learning process to be facilitated both cognitively and effectively.

Thus, it could be deduced that co-operative learning as a teaching strategy encourages learners to work together in small groups in performing tasks assigned to them by the educator. Group formation facilitates peer interaction in teaching and learning. In turn, this improves learners' understanding and skills in the learning area.

Learners may take initiative in forming groups and the educator may allocate learners to groups. Freedom of choice to belong in a group engenders a sense of belonging and appreciation, which is conducive to teaching and learning. Therefore co-operative learning builds learners' self-esteem and self-confidence. Furthermore, co-operative learning serve as a means of defining roles to be played by both educators and learners during the implementation of outcomes-based education.

CHAPTER 4

Closely related to co-operative learning is problem-solving as a teaching strategy.

4.5.3 Problem-solving as a teaching strategy

Problem-solving goes hand in hand with a critical attitude. In addition, it follows a particular process; this includes awareness of the problem, and gathering of data. According to Bell (1978:119-120), problem-solving usually involves five steps, which are –

- ❖ presentation of the problem in a general form;
- ❖ restatement of the problem in an operational definition;
- ❖ formulation of alternative hypotheses and procedures which may be appropriate means of attacking the problem;
- ❖ testing hypotheses and carrying out procedures to obtain a solution or a set of alternative solutions; and
- ❖ indicating which possible solution is most appropriate or verifying that a single solution is correct.

It is important for the educator to guide learners in identifying problems and how to deal with them. In addition, for learners to come to grips with the problem it must be presented in a form which they can understand (Duminy & Söhnge, 1980:87).

Problem-solving is a higher order and more complex type of learning than rule-learning, and rule acquisition is a prerequisite to problem-solving. Problem-solving involves selecting and chaining sets of rules in a manner unique to the learner and which results in the establishment of a higher order set of rules previously unknown to the learner. Words like creativity and discovery are often associated with problem-solving (Bell, 1978:119). Furthermore, Duminy and Söhnge (1980:181-182) maintain that it is necessary to encourage originality and creativity amongst learners by making use of the following five stages in the creative process:

CHAPTER 4

- ❖ The first stage is growing sensitivity to problems. That is, to doubt things that everybody else finds obvious, discovers problems in them and start to look for solutions.
- ❖ The second stage is the phase of preparation, which consists of a conscious, active, search for solutions to problems detected during the first stage.
- ❖ The third stage is known as a creative pause, with the creative activity taking place in the unconscious. Success of the unconscious activity of this phase depends on the quantity and quality of the work done during the previous stages.
- ❖ The fourth stage consists of the moment of insight and inspiration.
- ❖ The fifth stage is characterised by the outcome of the whole creative process as it is moulded into its final form. This takes place in the conscious mind and can be strongly influenced by the educator.

Most of the problems that learners must grapple with come from the educator and subject-related literature. In fact, any task which the educator assigns to his/her learners implies that they have been given a problem to solve. The intention of the educator by providing learners with problems is to afford them an opportunity to analyse and solve problems independently. However, a note of caution is that the problem-solving teaching strategy cannot be applied by all learners with equally favourable results. The more gifted learners will experience it as a real challenge and should be encouraged to solve problems. Less gifted learners require more assistance from the educator (Kruger, *et al.*, 1983:108-109).

Problem-solving is better poised to engage learners in seeking knowledge, processing information, and applying ideas to real world situations. As learners are involved in problem-solving, they tend to be motivated and discover reasons why they should learn the subject matter. These advantages of making use of problem-solving are applicable in all learning areas (Van der Horst & McDonald, 1997:138).

CHAPTER 4

Problem-solving help learners to realise that the knowledge they have gained is of practical value; that is, it will help them to gain new knowledge and to use it in new situations. Problem-solving can also be used as part of a lesson or as a theme for several lessons or as a basis for a course of study. This approach helps learners to identify and solve problems and the type of problems they can identify and solve (Van der Horst & McDonald, 1997:138).

It could be argued that problem-solving is one of the complexities to be solved with the complementary of outcomes-based education. Educators and policy analysts should thus be cognisant of the requirements in this regard.

Care should be taken to ensure that learners learn about the particular learning area when using problem-solving as a teaching strategy. The sequence of steps to be followed when making use of problem-solving should not distract learners' attention from what they are supposed to learn. In fact, the emphasis should be on the learners to explore all aspects of the problem to be solved. By so doing, they are bound to develop an understanding of the principles and concepts displayed by the problems. That is, learners will gain insight that will enable them to understand the learning area better and to look at it from different viewpoints (Van der Horst & McDonald, 1997:138-139).

The secret of successful implementation of the problem-solving strategy is practice. For learners to be more adept at problem-solving, they need appropriate practice. Issues to consider when making use of problem-solving as a teaching strategy are:

- ❖ Decide what the learners have to learn.
- ❖ Formulate relevant problems.
- ❖ Present problems in such a way that they will be motivated to solve them.

CHAPTER 4

- ❖ Monitor learners' progress and encourage them to look for information that will lead to the solution of the problem.
- ❖ Help learners to analyse data and guide them to understand how problem-solving can assist them to study a particular learning area (Van der Horst & McDonald, 1997:143).

The problem-solving teaching strategy demands that the educator participates and play specific roles to help learners. In the case of learners there are suggestions which will enable them to be successful problem solvers. As far as the role of the educator is concerned, the following suggestions should be taken into consideration:

- ❖ It is the educator's task to create genuine problem situations. He/she should be alert, constantly looking for problem-solving opportunities.
- ❖ The educator must always be ready and willing to offer assistance and guidance to learners up to a certain point. However, he/she should refrain from providing the solution to the problem as this will deprive learners of independent discovery.
- ❖ He/she should explain to learners that problem-solving is not confined to the Mathematical Literacy; Mathematics and Mathematical Sciences; and Natural Sciences learning areas, but can be used in other learning areas as well.
- ❖ It is crucial for the educator to help learners to focus on the problem at hand.
- ❖ The educator must train learners to analyse and solve problems.
- ❖ Under no circumstance should the educator show impatience to a learner who flounders around with a problem.
- ❖ Educators should try by all means to answer learners' questions in such a way that will stimulate further thinking and reasoning.
- ❖ It is essential that the educator should supply all possible teaching and learning aids necessary to solve the problem.
- ❖ The educator should encourage learners to work in groups when solving problems.

CHAPTER 4

- ❖ It is the responsibility of the educator to encourage learners to grapple with the problem until a solution is found.
- ❖ The educator must give learners problems that are not beyond their standard of comprehension. Otherwise learners will find the problem too difficult to solve and may be demoralised in future to attempt to solve problems. Hence, the level of preparedness of the learners must be taken into account.
- ❖ The educator must prepare thoroughly and must give learners guidance continually as this teaching strategy is slow and tiring (Kruger, *et al.*, 1980:88).

As far as the roles of learners are concerned during the problem-solving session, the Gauteng Department of Education and Vista University (2002:31-32) offer the following suggestions –

- ❖ learners should accept the challenge of solving a problem;
- ❖ learners should be encouraged to rewrite the problem using their own words;
- ❖ it is necessary for learners to avoid rushing to solutions. They need to take time to explore, think and reflect;
- ❖ learners should be encouraged to ask themselves questions that will lead to the solution of the problem;
- ❖ learners should not hesitate to take a break when solving a problem;
- ❖ it is necessary for learners to look at the problem from different angles;
- ❖ learners must run through a list of strategies that may help solve the problem;
- ❖ learners need to be aware of the fact that some problems have more than one solution;
- ❖ practice makes perfect. Learners have to solve lots and lots of problems to gain confidence and mastery of a unit of an area of study;
- ❖ in case learners fail to make progress, they must not hesitate to go back to make sure that they really understand the problem. This review process may happen twice or thrice in relation to a particular problem because understanding increases as one progress to a solution;

CHAPTER 4

- ❖ learners should write every solution neatly and clearly so that it can be understood alike by the educator and learners themselves; and
- ❖ learners need to develop good problem-solving helper skills for assisting others in solving problems. In fact, learners who offer help should not give own solutions, but must provide hints to the solution of problems.

From the aforementioned, it is clear that the educator will need much more than the usual teaching skills. He/she must be able to engage in the formulation of the problem, the analysis of the problem, and the generation and assessment of ideas. Thus, to ensure that outcomes-based education is effectively implemented policy analysts should pay particular attention to this matter.

Problem-solving as a teaching strategy, just like the inductive and deductive teaching strategies, encourage critical thinking. Learners are provided opportunity to solve problems by the educator. For this to happen the educator guides learners in identifying problems as well as providing them with a toolkit that would enable them to solve problems. As the saying goes, practise makes perfect. Learners need to practice in order to improve the skills of solving problems. This will prepare learners to participate in the global economy as well as in the technological world, which are objectives of outcomes-based education. Therefore, problems-solving as a teaching strategy facilitates the implementation of outcomes-based education policy.

Now that the teaching strategies which are more appropriate to be used in outcomes-based teaching have been explained, it is necessary to see how lesson planning and preparation influence or contribute to the successful application of outcomes-based education.

CHAPTER 4

4.6 LESSON PLANNING AND PREPARATION

Planning beforehand is of the utmost necessity in order for any task to be performed successively. An educator should regard a lesson as a task to be fulfilled and should plan thoroughly. In this regard Van der Horst & McDonald (1997:147) maintain that one should not think of teaching in terms of presentation only; on the contrary, presentation is preceded by planning and preparing the lesson. Duminy and Söhnge (1980:106) also confirm that the planning of lessons is an important part of the work of every educator, whether in service or in training. Jacobsen, Eggen and Kauchak (1999:15) also emphasise the important role planning plays in teaching. They continue to state that during the planning phase, the educator needs to ask himself/herself the following question: What do I want my learners to know, understand, appreciate, and be able to do?

Kruger, *et al.* (1983:130) confirm that lessons must be planned, systematised, organised and purposive. Consequently, every detail, including time, methods of teaching, teaching aids, learning content, questions, assignments, and modes of learning must be thoroughly considered and planned in advance. They continue to support their standpoint by saying that sound planning is imperative because in the final analysis the educator is accountable for the country's expenditure on schooling, as well as the preparation of the learner for his/her future and through this activity of teaching for the welfare of the community. Therefore, the educator has a foremost and responsible task in the community. In fact, no country can afford to have educators who do not make optimal use of the opportunities for teaching and educating its children.

According to Jacobsen, Eggen and Kauchak (1999:16), research evidence supports the value of planning. It has been found that the actions educators take in the classroom are influenced by the plans they make. In addition, research has shown that planning provides educators with both confidence and security. In planning some background

CHAPTER 4

knowledge of the learners to be taught and also the knowledge learners bring to the classroom, is of vital importance, Although a lesson can be thoroughly planned, this does not mean that it will be successful when applied. There are a number of factors influencing the course of the lesson, and can determine its success. These factors must be taken into consideration in planning. Some of these factors are –

- ❖ the intelligence levels of the group; and
- ❖ the activities of the preceding and the subsequent lessons (Steyn, Badenhorst & Yule, 1991:61).

Planning and preparation, just like curriculum development, take place at different levels. At the highest level, planning occurs at the Department of Education level, followed by planning at the school management level, and the planning done by the educator at the classroom level. In addition, it is essential to note that planning takes place in different forms; for example, daily, weekly, quarterly, as well as unit planning and annual planning. Secondly, schemes of work in which planning is embodied should be accessible, flexible and adaptable to the ever-changing needs, learners and the curriculum (Van der Horst & McDonald, 1987:147).

Planning may be done by utilising the following specific models. The dominant model of planning is known as the rational-linear framework. This model has four basic tenets, which are –

- ❖ specifying objectives and learning outcomes;
- ❖ specifying knowledge and skills;
- ❖ selecting and sequencing learning skills; and
- ❖ evaluating of outcomes (Van der Horst & McDonald, 1997:147-148).

CHAPTER 4

Kruger, *et al.* (1983:130) concur with Van der Horst and McDonald and make the following additions to the essence of lesson planning –

- ❖ the educator must determine what the form of the lesson is to be;
- ❖ which methods are most suited to the exposition of the selected learning content;
and
- ❖ which teaching and learning aids will contribute most towards the achievement of the objectives.

It could be stated that lesson planning enables the educator to ensure that outcomes-based education becomes a reality. This is achieved by establishing beforehand what should be done to enable learners to achieve the required outcomes.

Apart from the essence of lesson planning, there are benefits to be derived from this exercise. According to Kruger, *et al.* (1983:131), the benefits in question are:

- ❖ Lesson planning saves time and energy because the lesson is focused on achieving predetermined objectives. Consequently, time is not wasted on irrelevant matters.
- ❖ Lesson planning promotes the purposiveness of the educator's practice. For example, it helps him/her to consider the organisation of the learning content, which methods are suitable for particular learning content, and which aids will produce the best results.
- ❖ It ensures that the topic of the lesson is covered fully, systematically and sequentially.
- ❖ It encourages self-discipline on both the educator and learners because teaching and learning proceed in accordance with the prearranged plan and everyone is expected to adhere to this arrangement.
- ❖ It promotes the integration of learning content as the educator is expected to determine in advance what linkages exist between the learning content of the present and previous lessons, as well as the learning content of other subjects.

CHAPTER 4

- ❖ It ensures that there is continuity because the educator and learners proceed towards the achievement of the lesson objective in a logical, effective and pre-arranged manner.

Critics view the rational-linear framework model as static and fixed. In response to this limitation, the more organic model of planning and teaching was formulated. This model considers objectives as flowing from a cyclical process and are also seen as symbols, advertisements and as justifications for action. Such a descriptive model is frequently used by experienced educators. Therefore, for a lesson to be effective, learning outcomes and experience are needed. Duminy and Söhnge (1980:170) emphasise the important role played by experience when they state that young and inexperienced educators need to spend much time on lesson planning.

It is imperative that each lesson should be planned. Hence, the educator needs to know what the lesson's intended learning outcomes are, what the subject matter is, what the procedures will be, and how they will be executed. Both experienced and inexperienced educators must give careful thought to their lesson plans if they want to be successful. The advantage of planning is that it ensures familiarity with the content.

In addition, it gives educators confidence and it also shows the learners that the educator has prepared (Van der Horst & McDonald, 1999:149). Steyn, Badenhorst and Yale (1991:62) warn that although a lesson may be planned meticulously beforehand the educator should be able to improvise when confronted by a class. The importance of lesson planning cannot be over-emphasised, but the educator should be aware that improvisation should be built into his/her planning. This will come in handy should the situation in the classroom dictate that a slight or a significant adjustment be made to the lesson plan.

Bell (1978:191) has identified particular activities in planning lessons which will greatly enhance the chances of success. The activities in question are –

CHAPTER 4

- ❖ learning content
 - ✧ selecting and naming the topic to be studied;
 - ✧ identifying the objectives in the topic;
 - ✧ sequencing each topic in a hierarchy of topics;
- ❖ learning objectives
 - ✧ identifying cognitive objectives;
 - ✧ selecting affective objectives;
 - ✧ sharing objectives with learners;
- ❖ learning resources;
 - ✧ preparing materials to be used by learners;
 - ✧ obtaining additional resources;
- ❖ preassessment strategies;
 - ✧ identifying prerequisite content;
 - ✧ assessing learner readiness to learn the topic;
- ❖ teaching/learning strategies
 - ✧ choosing an appropriate teaching strategy;
 - ✧ managing the learning environment;
- ❖ postassessment strategies;
 - ✧ assessing learners learning;
 - ✧ evaluating teaching effectiveness.

It should be obvious that the above-mentioned activities would serve as a toolkit to improve lesson planning and presentation.

There are general principles that must be observed in lesson planning, which are –

- ❖ learning outcomes contribute directly to unit and course outcomes;
- ❖ learning outcomes must be clear in the educator's mind;
- ❖ the lesson must be long enough to be completed within stated time;

CHAPTER 4

- ❖ the teaching-learning activities must lead to the attainment of set goals;
- ❖ the educator must know what to do, how to do it, and which materials are needed;
- ❖ it is imperative to start with an appropriate introduction and culminate with the relevant assessment; and
- ❖ each activity must be allocated sufficient time (Van der Horst & McDonald, 1997:149).

Regardless of how experienced an educator may be, there is always a need for planning and preparation. The educator has to write down in a systematic way the subject matter he/she is going to teach. The more experienced an educator is, the less he/she needs to write down the detail of the lesson. Nevertheless, he/she needs to plan and prepare himself/herself to remember what has to be done. Therefore, lesson plans are records of work to be done (Steyn, Badenhorst & Yale, 1991:66-67).

The selection of the lesson form depends on the intended lesson outcomes and the appropriate learning content. After selecting these, the educator must decide on the lesson form in which he/she will cast the learning content (Kruger, *et al.*, 1983:135). In writing a lesson plan, the educator can choose from a number of formats. There are no particular formats recommended to be followed. However, the educator must choose the one that is easiest and most comfortable for him/her. Hereunder follows examples of lesson formats which are suggested by Van der Horst and McDonald (1997:150-155).

Some of them can be used for any lesson plan, while others are examples of formats for particular lessons.

CHAPTER 4

Format 1

Lesson topic:		Date:
Group:		Time/period:
Learning outcomes	Time	Activities/strategies
1		1
2		2
3		3
4		4
5		5
Resources		
Tasks		
Assessment		
1		
2		
3		

Format 2

Lesson topic:		Date:
Group:		Time/period:
Learning outcomes		
Knowledge and understanding		
Skills and abilities		
Attitudes/values/dispositions		
Time	Strategy	Materials/resources
Assessment		

CHAPTER 4

--

Format 3

Lesson topic:		Date:
Group:		Time/period:
Knowledge and understanding to be developed		
Learning outcomes		
Time — — — —	Phase and activities	Resources
Pitfalls to avoid during teaching	Transitions	Ending
Assessment		

Format 4: For group-work lesson

Lesson topic:		Date:
Group:		Time/period:
Learning outcomes		
Resources		
Organisation		
Group 1 Activities	Group 2 Activities	Group 3 Activities
Homework		
Assessment		

CHAPTER 4

--

Format 5: Problem-solving lesson

Lesson topic:		Date:
Group:		Time/period:
Learning outcomes		
Resources		
Problems solved		
Time	Phase and activities	Resources
—		
—		
—		
—		
—		
—		
Assessment		

CHAPTER 4

Integrated unit planning

Topic:

Grade:

Knowledge/understanding

Skills

Attitudes/values

1
2
3

1
2
3

1
2
3

			Lesson phase	Teaching and learning materials	Assessment strategies
			Turning in and preparing to find out		
			Shared experience		
			Sorting out the shared experience		
			Related experience		
			Sorting out the related experience		
			Reflection and action		

Educators, who are the main roleplayers involved in the implementation of outcomes-based education policy, are responsible for lesson planning and preparation. Before any lesson may be presented, the educator has to collect information about the topic to be taught and to organise it systematically into manageable units. Moreover, he/she has to plan the lesson in such a way that it could be presented within a specified period

CHAPTER 4

of time. Besides, any lesson must be purposive and serve as a link with the previous and subsequent lessons. Lesson planning and preparation also enables educators to be accountable to their supervisors.

Outcomes-based education policy dictates that teaching should be done in a specific manner. To achieve this objective, the policy provides that lesson planning and preparation should follow a specific format and principles. Stated differently, lesson planning and preparation serve as means of implementing outcomes-based education policy.

Outcomes-based education has completely re-engineered the entire education system with the resultant change in roles of educators and learners. Consequently, the next section describes the roles of educators and learners.

4.7 ROLES OF EDUCATORS AND LEARNERS

Prior to the introduction of outcomes-based education an often held and stereotypical view of an educator is that of a learned person disseminating information to a group of people hungry for knowledge. The group is often viewed as passive, and the main activity in such a learning environment involves the educator informing the learners what they need to know. Be that as it may, some educators came to realise that this view is extremely narrow and that telling is one of many tools an educator may employ.

In this regard Brady (1996:13) states that outcomes-based education places demands on educators to further individualise instruction, plan remediation and enrichment, administer diagnostic assessment and keep extensive records. Each of these activities dictates that the educator devise and employ an appropriate strategy or tool. Otherwise, the educator may be tempted to fall back on his/her comfort zone and use what Van Rensburg (1998:8) calls the recipe of teaching used for years. This requirement should be heeded when outcomes-based education is to be analysed to establish

CHAPTER 4

whether the policy is effectively implemented. Hence, the need to discuss the different roles educators should play.

In terms of outcomes-based education, educators mainly become facilitators of learning. Their main focus is to assist each learner to improve his/her skills, knowledge, values and attitudes. Educators can facilitate learning in spite of the fact that they are not directly participating in the learning process. To amplify this point Tema (1997:7) states that the educator's role can be compared to that of a soccer coach. He does not offer the same coaching to all players, but provides assistance that is appropriate to each player. The coach does not play the game on behalf of the players, but attempts to get each player to improve his/her skills. Therefore, the aforementioned parallelism is analogous to the role of the educator as a facilitator. It is, therefore, necessary for effective training in outcomes-based education to prepare for its successful implementation (Guskey, 1996: 54).

According to Jacobsen, Eggen and Kauchak (1999:5) the educator's roles are –

- ❖ promoting growth and achievement of both the social and intellectual enhancement of learners;
- ❖ another important role of the educator is to increase learners' desire or motivation to learn. This role is a crucial factor in promoting learners' success. Working with parents is central if the learners' experience is to be positive. In this regard suggestions that may be helpful to parents include that the educator –
 - ❖ be supportive with a 'keep-it-up' posture;
 - ❖ provide constructive engagement;
 - ❖ recognise the learner's effort;
 - ❖ communicate his/her confidence;
 - ❖ help the learner to pay attention to the task at hand; and
 - ❖ emphasise that to err is human and that all of us learn from our mistakes.

CHAPTER 4

Wessels and Van den Berg (1998:14 & 15) regard the educators as the classroom facilitators and identify their roles as follows –

- ❖ prepare and plan so that each learner knows in advance what to do;
- ❖ ensure attention when explanations or instructions or stories are read;
- ❖ keep learners actively involved during presentation and encourage learners to think and help one another;
- ❖ facilitate learning and help learners to achieve outcomes;
- ❖ plan thoroughly to ensure understanding the input of each lesson;
- ❖ know ahead what outcomes need to be achieved;
- ❖ choose activities that are simple to explain and will enhance comprehension;
- ❖ write steps of the lesson to be presented in logical sequence;
- ❖ give learners in a group specific instruction to perform specific tasks;
- ❖ know the abilities of learners and ensure that tasks given to the learners are within their comprehension level so that they can cope with the pre-teaching session;
- ❖ be well prepared and organised. For example, stimulus materials such as maps, pictures and newspaper clippings should be ready to be used by the learners;
- ❖ prepare problems, questions and instructions beforehand;
- ❖ decide upon the *modes operandi* of report-back required from the learners;
- ❖ formulate and employ a number of follow-up activities;
- ❖ introduce new units of learning material so that outcomes are achieved when learners demonstrate that they are able to apply and understand new information;
- ❖ run through activities with all learners simultaneously to save time as this exercise will ensure that all learners know exactly what to do. However, it is advised that this part of the lesson should take the minimum of time;
- ❖ allow all learners to participate in activities unhindered;
- ❖ set time limits. For instance, learners must know whether they are required to present a two-minute 'show-to-tell' or a ten-minute brainstorming session, and they must be told when time is almost up. For example, one minute to go;

CHAPTER 4

- ❖ visit the groups to establish whether real progress has been made, if the activities are to last longer than three minutes;
- ❖ stand back and allow learners to experiment with and explore the activity;
- ❖ teach learners to show respect when another learner is talking, especially during the report-back phase of the lesson;
- ❖ should at all times keep in mind the old Chinese maxim which states: *I hear, I forget; I see, I remember; I do, I understand;* and
- ❖ as facilitators the educators must bring the world into the classroom by means of –
 - ✧ simulations;
 - ✧ pictures;
 - ✧ role-play;
 - ✧ activities;
 - ✧ books;
 - ✧ periodicals;
 - ✧ newspapers;
 - ✧ audio and video-tapes; and
 - ✧ models.

These factors clearly indicate the complex nature of outcomes-based education. It illustrates the need to monitor the processes in executing the policy.

Finally, Cullingford (1995:158) states that there are two issues which underlie the role of the educator, and which explains the difference that educators make on learners. The first issue is that of the educator as mentor. The concept of the mentor draws attention to the capacity of one person to bring out the best in another. The mentor can be a parent or a role model. He/she has the authority to criticise as well as be constructive, to command as well as reflect. The relationship that learners make with the educator is the important factor in learners' learning, knowing that in the educator they have someone who can take an interest in having a discussion, in bringing out and extending their ideas, and in making them feel valued. The true mentor is the person

CHAPTER 4

to whom learners turn, the person who is seen as a source of interest as well as instruction.

The second issue is that of the educator as explainer. It is common cause that when learners describe what they like about best educators they often use the word “explain”. The educator makes the subject interesting; he/she sets up experiments, brings in interesting materials, and is not merely bound by routine. That is, the educator becomes a source of knowledge.

Outcomes-based education dictates that learners should play a particular role during teaching and learning. In order to put the roles of learners in perspective, it is firstly necessary to look at the nature of children and objects they need and like. Secondly, it is necessary to look at the kind of learner that is envisaged as a result of outcomes-based education intervention. Thirdly, it is also necessary to spell out the roles of learners in an outcomes-based education classroom.

For educators to be successful in teaching, it is not only essential that they know the learning material thoroughly, but they need to understand the nature of a learner. The things the learner likes and dislikes. It is important to know what the learner prefers in order to use that information as a point of departure in teaching. This approach to teaching makes the learners feel comfortable and welcome because they react to their surroundings and are sensitive to them. Cullingford (1995:106) states the things that learners like and which also contribute to the effectiveness of the educators in teaching, are –

- ❖ classrooms that are full of tasks to do;
- ❖ work that has a sense of purpose;
- ❖ producing work that has an audience and it is not just for the educator;
- ❖ to use what they have learned;
- ❖ being given tasks that are demanding and stimulating;

CHAPTER 4

- ❖ work that is relevant to them and their interests; and
- ❖ learners like what they need.

Outcomes-based education aims at the promotion of values not only for the sake of personal development, but also to ensure that a national identity is built. The kind of learner that is envisaged is one who will accordingly be imbued with the values and art in the interests of a society based on respect for democracy, equality, human dignity, life and social justice. Hence, the kind of learner envisaged will –

- ❖ be equipped with the linguistic skills and the aesthetic and cultural awareness to function effectively and sensitively in a multi-lingual and multi-cultural society;
- ❖ be inquisitive to make scientific discovery and display an awareness of health promotion;
- ❖ adapt to an ever-changing environment on account of challenges;
- ❖ use various and numerous effective problem-solving techniques that reflect different ways of thinking;
- ❖ use a variety of ways to gather, analyse, and organise information and to be able to communicate it to different audiences;
- ❖ make informed decisions and accept accountability;
- ❖ be able to work co-operatively with others and organise and manage himself/herself, his/her own activities and his/her leisure time responsibly and effectively;
- ❖ understand and show respect for the basic principles of human rights as well as acknowledging the symbiotic relationship between people and the environment;
- ❖ be equipped to deal with the spiritual, physical, emotional, material and intellectual demands in society; and
- ❖ be equipped to deal with the social, political and economic demands made of a democratic society locally, nationally and internationally.

CHAPTER 4

In evaluating the effectiveness of outcomes-based education it is necessary to consider not only the educator, but also the learner. The latter has to be fully acknowledged to ensure that the policy is effectively implemented.

Outcomes-based education has significantly altered the roles of learners. As Steyn and Wilkinson (1998:205) explain, unlike in the traditional approach to teaching, learners are at the centre of teaching and learning. That is, learners take responsibility for their own learning. Cockburn (1997:6) confirms this new role of learners. Apart from learners taking responsibility for their own learning, high expectations is placed on them to learn successfully. This point of view is expressed by Schwarz and Covener (1994:2). Therefore, in terms of outcomes-based education, the learner is shown respect and trust. The learner has changed from a passive to an active participant in teaching and learning. It, therefore, follows that the roles of learners have changed, and, according to Hay and Büchner (1998:3), the roles of learners as dictated by outcomes-based education are to be –

- ❖ active;
- ❖ able to think creatively and critically;
- ❖ able to extract and construct meaning;
- ❖ able to discover knowledge;
- ❖ able to identify and solve problems;
- ❖ intrinsically motivated and disciplined;
- ❖ able to use science and technology; and
- ❖ able to work co-operatively and effectively with others.

Teaching is a systematic, orderly and sequential activity which is goal-directed. Learning too does not take place haphazardly, but it occurs in an organised and logical manner. In keeping with the nature of teaching and learning, educators and learners have to play specific roles in performing their tasks of teaching and learning respectively. From outcomes-based education perspective, educators are facilitators of

CHAPTER 4

learning and are responsible for promoting growth and achievement as well as motivating learners. Outcomes-based education dictates that learners should be active and involved in the classroom. Therefore, the implementation of outcomes-based education policy necessitate that both educators and learners should play specific roles.

4.8 CONCLUSION

Outcomes-based education will deliver worthwhile results only if there are appropriate inputs by the educators as well as the learners. The educators must provide inputs that will meet the real needs of the learners who could have diverse backgrounds and thus require education to meet multifarious needs. This state of affairs is particularly relevant in the Republic of South Africa where the possible outcomes of education will have to be considered seriously before specific strategies and teaching methods are decided upon.

It is obvious from the foregoing arguments that outcomes-based education policy affects both educators and learners. To be effective outcomes-based education policy analysts should take note of the roles of each of the categories of participants. It should be focused not only on stating the requirements for successful implementation, but on the effects of outcomes-based education policy on educators and learners alike.

Education is about people for the development and improvement of their culture, environment, skills, character, and in general their conditions of living. This is by no means a complex process as it focuses on human beings, who are by nature complex. Education is also bound to be complex as it has to make children future productive and creative citizens. In the context of the research, outcomes-based education policy will serve as a vehicle to deliver to South Africa well educated and equipped citizens who can compete globally with other nations. At the centre of the outcomes-based education policy is curriculum development and assessment. The implementation of outcomes-based education policy demands that curriculum should be developed in a

CHAPTER 4

particular manner and assessment to be conducted continuously by different role players in education including the learner himself or herself. This is undoubtedly a complex process to implement. Hence, the next chapter, Chapter 5, will deal with complexities of implementation of outcomes-based education policy.