

CHAPTER 1

INTRODUCTORY ORIENTATION AND STATEMENT OF THE PROBLEM

1.1 Introduction

In every society, large numbers of students start university education with higher, medium or lower scores obtained at Grade twelve level. After several semesters at university, one will find that some students are successful, others are unsuccessful while a certain number of them drop out. What makes a student succeed or fail at university or college? This is a question of great concern to many prospective students who arrive at university unprepared for a higher level of academic activity. It is also a concern for those parents who are responsible for paying tuition, boarding fees and other expenses.

Recent tertiary education trends indicate that there is a high influx of students to former “white” institutions in the Republic of South Africa, leaving former black institutions struggling for survival because of low student numbers. The pass rates at some of these institutions have not been good for the past few years because of various factors. It is of critical importance that some of the factors that influence academic achievement be investigated. The University of Venda is one of the institutions which are in historically disadvantaged environments, offering educational opportunities to the largely rural population, deprived of chances to attend institutions of higher learning mainly due to poverty and policies of the past.

1.2 History and background of the University of Venda (UNIVEN)

At the beginning of 1979, three officials of the Department of Education in the former Venda homeland visited the University Branch of the Department of Education and Training, the Transvaal Technikon (Pretoria), the University Branch of the Department of National Education and the University of South Africa. Discussions which centred around the Black Universities Enabling Act of 1959, legislations of the Universities of the North, Fort Hare and Zululand were facilitated. It was from here that the Venda

delegation learned how the former and the latter formed branches for part-time students at Umlazi and Zwelitsha respectively.

The Venda delegation then indicated that Venda was ripe for a branch like that in Umlazi and Zwelitsha, especially after learning that the University of the North also has provision for the establishment of branches. This led to the Council of the University of the North visiting the Venda cabinet in April 1980 and in June during the same year it was decided that a branch of the University of the North for students in Venda was to be established. The University of Venda was consequently established in 1981 as a branch of the University of the North. The branch became independent on 06 November 1981 when the University of Venda Act (Act 19 of 1981) was passed by the then Venda Parliament.

The following statistics show the overall pass rate for the period 1995 – 2000 at the University of Venda.

Table 1.1: UNIVEN pass rates

Year	1995	1996	1997	1998	1999	2000
Pass rate	46,3	48,06	44,67	41,39	49,12	51,49

(Source: UNIVEN records)

1.3 Problem Analysis

1.3.1 Awareness of the problem

Many students visit the Career Development Unit presenting problems related to learning. Problems usually presented by students are, for example, feelings of demotivation, loss of interest in studying and reluctance to get fully involved in academic activities which result in deterioration in academic achievement.

Some of the feelings usually expressed by students during individual consultations at the unit are:

- Lack of interest in academic work.
- Poor concentration.
- Negative attitude of some staff toward students.
- Reluctance to approach staff when experiencing difficulties with the subject matter for fear of being ridiculed.

The preliminary research question is thus formulated as follows: are students' learning problems related to affective factors? If that is the case, is there a relationship between these factors and academic achievement?

1.3.2 Demarcation of the study

UNIVEN students will form the population of the investigation and the sample will be selected from the following schools at the university:

- School of Mathematics and Natural Sciences (MNS).
- School of Environmental Sciences (ES).
- School of Human and Social Sciences (HSS).
- School of Management Sciences and Law (MSL).

The majority of students at UNIVEN register in the above-mentioned Schools and that is why the investigation focuses on these Schools. About fifty (50) students will be selected from second year level in each of the Schools. The total sample will be about two hundred (200) students. Second year students are deemed to be already well-adjusted to

the academic environment at an institution of higher learning, hence their selection for investigation.

1.3.3 Preliminary review of literature

Bloom (1976:170) views affective factors as “an important part of the individual’s learning history which has consequences for each new learning situation”. Students with optimal attitude, motivation and positive self-concept employ the study time allocated to them efficiently and consequently exhibit high achievements (Bloom, 1976). According to Van den Aardweg and Van den Aardweg (1988:15), affective qualities accompany memories, thoughts, ways of thinking, responses, association of impressions and experiences and are inseparably joined to every perception.

According to Rice (1996:186), students who are confident have positive self-concepts and they are therefore motivated to achieve better in academic work. Students who have negative attitudes about themselves impose limitations on their own achievement. Thus, a person may rate himself as competent, a failure, a good athlete, etcetera. These conceptions of different aspects of the self may influence various forms of behaviour in different roles. For example, a negative self-concept with regard to competency in academic activities may result in poor achievement. Petrick, Wiechers and Oosthuizen (1990:19) view positive self-concept as follows: “When a person’s self-concept is positive, he wishes to identify with values such as honesty, loyalty, perfectionism, dedication to work and so on, with the result that his behaviour will correlate strongly with these values”.

1.4 Aims of the research

1.4.1 General aim

The purpose of the research is to investigate students’ affectivity with regard to their academic work and role of such affectivity in students’ academic achievement. The affective factors selected for investigation are self-concept, motivation and attitude. The aim is to identify shortcomings that may lead to poor academic achievement and ultimately come up with certain basic principles of enhancing positive self-concept,

achievement motivation and the right attitude toward academic activities. The following aspects will, among others, be included in the investigation:

- The nature of affectivity (emotionality) in the institution of higher learning and its development.
- Affective factors usually experienced by students.
- How these factors influence learning.
- The importance of affective (emotional) stability for academic achievement.

1.4.2 Specific aims

- To investigate students' self-concepts, attitudes and motivation toward learning.
- To help students develop positive thoughts and beliefs about themselves.
- To help students develop positive attitudes and achievement motivation toward academic tasks and thus realise their potentialities fully.
- To make the lecturing staff and other stakeholders aware of the role of psychological factors in students' academic achievement.

1.4.3 Aims of the theoretical investigation

The theoretical investigation will review the literature in the area to be investigated and includes:

- Elaboration of the concept “affective factors” and show the role of these in learning and academic achievement.
- The discussion focusing mainly on the three factors in the context of education, especially their relation to academic achievement.

1.4.4 Aims of the empirical investigation

- To investigate the relationship between self-concept, motivation, attitude and academic achievement.

- To investigate the relationship between the additional variables gender and the different Schools (Faculties) at UNIVEN and the above-mentioned factors.

1.5 Statement of the problem

The pass rate for the past few years was very low at the University of Venda (see Table 1.1). The researcher's personal experience gained when offering guidance to students with learning problems revealed that some of the students' problems seem to be related to affectivity. The purpose of this study is to investigate the relationship between selected affective factors and academic achievement of students at UNIVEN. The problem can be elaborated in question form as follows:

- Are students' self-beliefs or perceptions about themselves with regard to academic work affecting their academic performance?
- Are students' motivational orientations affecting their academic performance?
- Are students' attitudes toward lecturers and other academic activities affecting their academic performance?

1.6 Methodology

1.6.1 Research design

This is a quantitative survey research involving a questionnaire which will be administered to the respondents. The survey research design has been chosen as it can be easily applied to a large population by selecting a sample representing a particular population and it is the most suitable when investigating aspects such as attitudes, beliefs, opinions and other types of information. A literature study will be conducted concerning affective factors and their relation to academic achievement. The literature study will also enable the researcher to construct the items of the questionnaire for measuring the affective variables.

1.6.2 Measuring instrument

A self-constructed questionnaire will be used in the survey. Besides the section where some biographical data will be collected from the respondents, the questionnaire will also comprise sections where different affective factors will be measured by using items to be answered on a four-point scale. The responses to the items are coded and will be read into a computer for analysis.

1.6.3 Sample and sampling method

Random sampling will be used in selecting students who will be in various samples representing second year students in each school (about 50 students per sample). Random sampling has the advantage of avoiding biases and providing a statistical means for estimating sampling errors. The process of the actual random selection will be described in paragraph 4.2.1.

1.6.4 Data collection and analysis

The questionnaire will be administered to all students in the selected sample. The researcher will be in control during administering of the questionnaire and each member of the group will be given a questionnaire to which he/she has to respond. The questionnaires will be retained at the end of each testing session. The SPSS computer program will be used to analyse the data and to test the stated hypotheses (see 1.6.5). The following statistical techniques will be used:

- An item analysis will be performed to determine the suitability of the items and the reliability of the measuring instrument.
- F-test and t-test analysis.
- Pearson's correlation coefficients.

The respondents' average overall first semester examination results will be used as measures of academic performance.

1.6.5 The hypotheses

The following main hypotheses are formulated; they are divided into sub-hypotheses and tested statistically in chapter 4.

Hypothesis 1

Is there a significant difference between the average scores for achievement, self-concept, motivation, and attitude of male and female students?

Hypothesis 2

Is there a significant difference between the average scores for self-concept, motivation and attitude of the four different Schools?

Hypothesis 3

Is there a significant relationship between the achievement scores of the students and their scores for self-concept, motivation and attitude respectively?

Hypothesis 4

Is there a significant relationship between the scores for self-concept, motivation and attitude (mutually) of the group of students?

1.6.6 The pilot study

Twenty five (25) students from the Foundation Programme in Management Sciences for 2003 will serve as respondents in the pilot study. The questionnaires will be administered to these students as a group. The aims of the pilot study are:

- To determine whether students can follow questionnaire instructions and respond to them without difficulty.
- To see whether students understand the items in the questionnaire.
- To change items, wording, etcetera, if necessary.

1.7 Core concepts of the study

The following are regarded as the core concepts of the study:

1.7.1 Affective factors

According to Guinness (1990:166), the term 'affect' is regarded by some scientists as synonymous with emotion whereas others regard it as a feeling. The term 'affective' is derived from the word 'affect' which is defined by Tulloch (1993:26) as "a feeling,

emotion or desire, especially as leading to action”. Affective factors can therefore be regarded as emotions and feelings, which may be triggered by perceptions, desires, thoughts and beliefs about an issue or object. The perceptions and beliefs which one has about himself/herself may, for example, lead to the development of a positive or negative self-concept, depending on the type of feedback one receives from significant others in his/her life.

1.7.2 Self-concept (SC)

According to Drew and Watkins (1998:175), self-concept is a psychological construct which refers to a cluster of ideas and attitudes an individual holds about himself/herself. Mwamwenda (1995:365) regards self-concept as a person’s way of perceiving himself/herself and may be either positive or negative. Gouws and Kruger (1994:6) regard the self-concept as “the concept or image a person has of himself, and is unique, personal and highly meaningful to the person concerned”.

Based on the preceding definitions and descriptions, one may view self-concept as the way an individual regards himself/herself and as a psychological concept which forms an integral part of a person’s personality. It is never static, as it can change from positive to negative, depending on the perceptions the individual has about himself/herself due to the prevailing circumstances or situation. One should always strive toward developing a positive self-concept as it can lead to success rather than a negative self-concept which can make one feel inadequate and worthless, thus leading to failure.

1.7.3. Motivation (MOT)

Van den Aardweg and Van den Aardweg (1988:138) define motivation as “...the driving force, the impetus of the personality, which is put into effect by an act of the will in accordance with what a learner wants to do. It energizes behaviour and can be an intrinsic or an extrinsic force”. According to Campbell and Pritchard (quoted by Mellet, 1986:50), “... motivation has to do with a set of independent/dependent variable relationships that explain the direction,

amplitude, and persistence of an individual's behaviour, holding constant the effects of aptitude, skill, and understanding of the task, and the constraints operating in the environment". Deducing from what has been indicated by various authors, motivation can be defined as a driving force or an urge behind what an individual does. The driving force can be, for example, a desire to do well in a task. We can only see the extent of an individual's motivational state by his/her behaviour, that is, in the way he/she executes his/her duties. A highly motivated person tries to achieve to the best of his/her abilities and to be consistent in that achievement.

1.7.4 Attitude (ATT)

Allport (quoted by Rajecki, 1990:5) provides a definition of attitude as follows: "An attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related". Mohsin (1990:2) regards attitude as the evaluation of the attitude object, as comprising a person's likes or dislikes for the attitude object. An attitude object may be any real or imagined entity toward which a cognitive, evaluative, or intentional orientation of an individual is directed (Upmeyer, 1989:19). In the learning context an attitude may be described as a general tendency or state of preparedness to behave in a particular way with regard to a learning task (Vrey, 1979:267). An attitude may thus be defined as a perception or belief which develops after evaluation of a certain experience, topic or issue. This perception or belief may be of a positive or negative nature. An attitude can therefore influence an individual to behave in a particular manner.

1.7.5 Academic Achievement.

Rickson (1977) views achievement within any context as performance relative to some standard and he further states that academic achievement and other dimensions of learning can be measured by a variety of yardsticks or measuring instruments, the results of which is some type of combination of types of scores,

placement, ranks or grades. Van den Aardweg and Van den Aardweg (1988:8) regard achievement as a product which can be measured by means of achievement tests and is usually associated with mental success but it is also possible on the physical and social levels.

1.7.6 UNIVEN Students

Individuals who have registered at UNIVEN as full-time students. Most of the students who register at the University of Venda come from impoverished backgrounds generally characterized by:

- Low socioeconomic status among adults, resulting in inadequate incomes.
- Low level of education.
- Limited opportunities for cognitive development.
- Clashes between the value orientations of the home and school, resulting in inadequate educational incentives or stimulation.

1.7.7 Relationship

According to Tulloch (1993:1293), relationship refers to a connection, association or state of being related between variables. In this study the relationship between variables will be presented by Pearson's correlation coefficients and interpreted qualitatively.

1.8 The research programme

Chapter 1

This chapter serves as an introductory orientation to the study. It briefly explains the statement of the problem. The research problem, aims of the research and methodology are stated and briefly discussed.

Chapter 2

This chapter elaborates the role of affective factors in learning and academic achievement. The interrelatedness and the distinction between affective factors and

cognitive factors are discussed. The affective domain is explained with specific reference to self-concept, motivation and attitude.

Chapter 3

Chapter three comprises a discussion about self-concept, motivation and attitude. The information here is based on the literature which has been explored. The discussion mainly focuses on the three factors in the context of education, especially their relation to academic achievement.

Chapter 4

The chapter explains how the empirical investigation will be undertaken in this study. The planning, method, execution and analysis of the results are entailed in this chapter.

Chapter 5

Chapter five provides a summary of the investigation, statement of the findings, conclusions, implications and recommendations for enhancing affective factors in order to improve academic achievement.

CHAPTER 2

THE ROLE OF AFFECTIVE FACTORS IN LEARNING AND ACADEMIC ACHIEVEMENT

2.1 Introduction

Brody (quoted by Mc Coach, 2002:66) argues as follows:

“Why some students achieve in school and others do not remains a mystery. Although ability is the best predictor of academic achievement, it explains less than 50% of the variance in students”.

On the basis of Brody’s argument, one can conclude that besides intellectual ability there are other factors which play a role in learning and academic performance of students. Students’ interests and their involvement in various academic tasks, how they perceive their interactions with their lecturers and what they feel and think about themselves with regard to execution of academic tasks are important affective factors in learning.

Bloom (1976:73) notes the following about students’ affect:

“If we observe a group of students beginning a particular learning unit or task, we can note a great deal of variation in the affect with which they approach the task even before they have received any instruction on it. Some will approach it with interest and desire to learn the task. They appear to regard it as a relevant and desirable thing to learn. Others approach it as a duty or requirement. They expect to learn it, but with relatively little enthusiasm, joy, or delight. Finally, others approach the task with discomfort”.

The term ‘affective’ is derived from the word ‘affect’ which is defined by Tulloch (1993:26) as “a feeling, emotion or desire, especially as leading to action”. When one deals with students, one notices a number of characteristics which they reveal when executing their academic tasks. Some tend to be more motivated while others need regular encouragement to put more effort when doing their tasks.

The main objective of this chapter is to elaborate the concept “affective factors” and show the role of these factors in learning and academic achievement. The following aspects, among others, will be covered in this chapter:

- Affect as emotions and feelings.
- Affective development.
- Affectivity and intelligence.
- Subject-related affect and institution-related affect.

2.2 Affect as emotions and feelings

O’Keefe (1993:5) defines an emotion as “a pleasant or unpleasant internal physical state that can be brought about by our thinking and can motivate us to act”. According to this author, emotions are the result of what we think about an object or issue. Positive thinking about an issue will therefore lead to positive emotions while negative thinking will lead to negative emotions. O’Keefe (1993:5) considers happiness, joy and contentment as positive emotions because they are pleasant and can motivate constructive behaviour, whereas, anger, sadness and anxiety are considered negative emotions because they are unpleasant and can lead to negative actions. What happens to a student who declares that he or she feels happy in a certain class and in interacting with a particular lecturer? The student will definitely feel eager and enthusiastic to carry out the instructions and do the tasks given by the lecturer concerned. A student with a negative attitude toward a lecturer will consequently feel unhappy when attending classes of the lecturer concerned. Such a student will be reluctant to carry out instructions and do required tasks.

According to Combs (1982:495) student attitudes, feelings and emotions are important facets of the learning process and in order that an educational system be effective, they should be included in educational planning and practice. Combs (1982:496) refers to aspects of the self-concept, like feelings of success or failure, acceptability or rejection, happiness or sadness, triumph or defeat. Are educational systems doing enough in incorporating affective aspects of behaviour, as indicated by the above-mentioned

author? Are educationists still emphasizing the cognitive aspects of students while underestimating the affective aspects?

2.3 Feeling and emotion as indicators of meaning attribution

Combs (1982:495) states the following:

“Research tells us that our brains do not operate in simple stimulus-response terms, nor do they simply store facts for future reference. Instead, our brains are magnificent organs for the discovery and creation of meaning. Awake or asleep our brains constantly seek to make sense of inner and outer experience. We are seekers and creators of meaning and the meanings we create determine the ways we behave”.

Any new information or experience will affect a student’s behaviour according to the type of meaning he or she attaches to that information or event. The way the lecturer interacts or reacts to students’ requests can generate certain meanings in students’ opinions and consequently lead to certain behaviours by students. Christianson (1992:5) states that events regarded as achieving students’ concerns, or aiding plans to achieve them, lead to the positive emotions of pleasure, pride, delight and enjoyment, whereas events regarded as obstructing their plans or goals, lead to negative emotions of unhappiness, worry and feelings of inferiority and humiliation.

According to Combs (1982:495) “there is some degree of affect in every experience or behaviour, including learning”. The same author further states that emotion or affect gives an indication of the relevance of the learned material to the person concerned. A student who is, for example, emotionally touched by an event in his/her study material will try to understand and retain the information and he/she will find it easy to recall the information in the test or examination. The degree of emotion experienced is also an effective indicator of student involvement. Students who are fully involved in academic tasks find the study material personally relevant for their needs, motives and goals and consequently they become excited and enthusiastic over their studies.

2.4 Affective factors in learning

What students believe about themselves affects every aspect of their behaviour and learning. Students may see themselves as able or unable, but such concepts of themselves are always accompanied by affective feelings of success or failure, acceptability or rejection, happiness or sadness, triumph or defeat (Combs, 1982:496). Students who are confident that they can achieve better are more likely to try and thus are more likely to succeed. Students who are less confident will show less involvement and are therefore likely to experience failure. Success in academic tasks enhances students' positive self-concepts while failure leads to negative self-concepts.

The classroom situation and the way the teacher handles it play an important role in enhancing students' affectivity and consequently motivating them to work harder. Combs (1982:496) argues as follows with regard to learning situations:

“Student feelings, attitudes, and beliefs are powerful sources of motivation and empathic teachers, sensitive to the feelings and beliefs of students, are far more likely to achieve productive learning situations than those who pay no attention to the affective aspects of learning”.

Comb's views cannot be overemphasized. It is very common to hear students saying they rather not attend a certain lecturer's classes because of his/her negative attitude towards them or his/her negative responses to their requests. The most unfortunate consequence of this situation is that students end up being the sufferers as they usually fail at the end of the year. It is therefore clear that learning occurs best when teachers are successful in creating atmospheres that are inviting rather than threatening.

Another important factor is the feeling of belonging and being cared for. Combs (1982:497) states that student's feelings of belonging and being cared for vitally affect the learning process.

“If I know I am cared for and belong I feel excited, exhilarated; I want to get involved; I want to get on with it; I enjoy the activity. If I feel uncared for or left

out, I feel discouraged, disillusioned, and apathetic; I want to escape, to avoid humiliation or embarrassment” (Combs, 1982:497).

It is apparent that a student who experiences that his/her academic needs and requests are being cared for and that he/she is regarded as an important part of the group will be highly motivated to come forward and get involved in the learning situation. On the other hand, a student who feels that he/she is uncared for or left out may not be willing to participate actively in academic tasks. One may, for example, recall how the past education system which was designed for Blacks in the Republic of South Africa was so demotivating and discouraging because Black learners felt that they were uncared for and left out. This can also occur in the classroom situation when a student asks a question, and instead of a positive response he/she is ridiculed and humiliated in front of other students.

2.5 Affective development

Human emotions and emotional responses develop by a long process of acculturation acting upon an infants’ biological substrate (Christianson, 1992:7). The same author indicates that infant researchers agree that within the first year of life human infants display the facial expressions and gross action patterns appropriate to basic emotions such as fear, anger, sadness, affection, and joy. As time passes, infants develop a broader range of emotions and more complex, differentiated set of emotional appraisals involving more culturally specific interpretations of situations involving emotional displays. It follows then that emotional range and meaning should develop as the various subsystems develop.

Lewis (quoted by Christianson 1992:46) argues that secondary emotions are not observed until appropriate cognitive development has taken place. Lewis emphasizes the development of a ‘self’ as a prerequisite for certain emotions, for example, embarrassment, empathy, and envy, and for the yet later development of standards and rules prerequisite for emotions such as pride, shame and guilt. Similarly, Oatley and

Johnson-Laird (quoted by Christianson 1992) argue that only with the development of a reflective sense of self can the full set of complex emotions occur.

Piaget (quoted by Reed, Turiel & Brown, 1996:145) indicates that a view of intellectual development that includes only cognitive development without fully taking into account the affective aspect is incomplete. In Reed, Turiel and Brown, (1996:142), Piaget supports the idea that affective development goes through a series of stages similar to and correlated with the stages through which cognition passes. In a table laying out parallel stages of intellectual and affective development, Piaget divided development into two periods. He called the interval from birth to about two years the period of sensorimotor intelligence and intra-individual feelings. The second developmental period indicated in Piaget's table (verbal intelligence and interpersonal feelings) extends from two to about fifteen years. Piaget characterised it as the period of verbal or socialized intelligence.

Gouws and Kruger (1994:94) note that affective development consists of the development of such manifestations of personality as emotions, feelings, passions, moods, sentiments and whims. Affective development is therefore an umbrella term for a variety of aspects of a person's emotional life, and not merely a synonym for emotions. It is the expression of the total human being developing under the influence of hereditary and environmental factors. Educators, peer groups, social expectations, personality and other facets of development influence the emotional experience of an individual (Gouws & Kruger, 1994). This implies that the social environment in which one grows up plays an important role in influencing one's emotional traits. If, for example, one grew up in a home where the parents used to say that in order to achieve in life, one should endure hardships and respect people in higher authority, then it may be easy for that person to conform to rules and difficult conditions of an institution. On the other hand, a person who grew up in a situation where he/she found it easy to bully others and to do as he/she wished, may find it difficult to work and co-operate with other people such as classmates and teachers.

2.6 Affectivity and intelligence

According to Piaget (quoted by Reed, Turiel & Brown, 1996:142), purely cognitive or purely affective behaviours are non-existent. All behaviour has both cognitive and affective aspects. The affectivity aspect of behaviour, Piaget contends, serves two functions. On the one hand, it has a synchronic component that determines the intensity of behaviour by regulating energy. On the other, it has a diachronic component that determines the content of behaviour by assigning value. These two functions interact to form interest. Interest, Piaget argues, is the affective aspect, whereas understanding is the cognitive aspect. Because affectivity is essentially quantitative and dynamic in nature, whereas cognition is structural and qualitative, there is no possibility that affectivity could affect the final form that knowledge structures take. In this regard, Piaget says: “affectivity can cause accelerations and retardations in the development of intelligence. It can disturb intellectual functioning and modify its contents, but it can neither engender nor modify structures” (Reed, Turiel & Brown, 1996:142).

Garcia and Pintrich (quoted by Yaworski, Weber & Ibrahim 2000:216) indicate that in order to use cognitive learning strategies, a student must construct a self-schema of being a good strategy user as well as possessing knowledge of cognitive learning strategies. The high achievers are usually those who describe themselves as being good students. The low achieving students do not engage themselves fully in academic work because of lack of interest or lack of knowledge with respect to strategy use. According to Hidi (quoted by Yaworski, Weber & Ibrahim 2000:217), interest is integral to motivation since interest involves the selection of and persistence in processing information. Personal interest has been shown to increase memory, depth of processing, attention, comprehension and knowledge base. The foregoing implies that a student who is interested in his/her studies is able to do the following:

- He/she finds it easy to encode and retain the information in his/her memory.
- He/she tries to get deeper into the core of the information rather than the surface level.
- He/she gives full attention when studying or listening to a lecture in class.
- He/she tries to understand the information rather than learn by rote.

- His/her knowledge increases as he/she does not learn only to pass the test or examination but to gain more knowledge in various subjects.

Another aspect of motivation that may help to explain the reason for low achievement is the students' lack of self-regulatory behaviour. According to Yaworski, Weber and Ibrahim (2000:217), the low achieving students described many instances in which they felt powerless in motivating themselves to regulate their academic behaviour.

The same authors indicate that when students put forth effort and did not achieve their expectations, their belief that effort is related to success was undermined. If much effort is exerted and failure occurs, the individual will attribute failure to low ability and therefore, lower his expectations for future successes as each failure is attributed to lack of ability, a sense of hopelessness develops and the person stops trying altogether (Yaworski, Weber & Ibrahim, 2000:217). This may lead to the development of a negative self-concept which ultimately results in the individual experiencing the following, among others:

- Inadequate desire to get involved in academic activities.
- Withdrawal.
- Lack of goal-directedness.
- Feelings of hopelessness and inferiority.

Zajonc (quoted by Christianson 1992:43) points out another idea regarding the relation of cognition and emotion, namely, that affect may not be the result of cognitive processes at all but may accumulate from minimal perceptual and cognitive input and may be among the earliest reactions to a stimulus. Zajonc, however, indicates that the emotion system he has in mind deals only with simple emotional reactions, not with more complex emotional experiences. Zajonc (quoted by Christianson 1992:43) highlights the role of cognition in producing emotions by emphasizing that emotion is a consequence of how people analyse situations. For example, a student who failed a test may regard a remark by a lecturer on test failures to be personal and humiliating and as a result feel reluctant to attend the lecturer's classes. On the other hand, a lecturer's style of

presentation may be so appealing that students are willing and excited when attending his/her classes.

2.7 Some considerations on affective and cognitive factors with regard to academic achievement

Most of the research done on factors which influence academic achievement concentrated more on cognitive factors, while affective factors are ignored. For example, intelligence is regarded as a prerequisite for academic achievement and it is believed that an intelligent child is more likely to be successful in learning than a less intelligent child. Intelligence is, however, just one of the important factors which can influence academic achievement. It is generally accepted that affective factors such as motivation, attitude, interest and self-concept, play an important role in academic achievement, although this has not been clearly confirmed (Mellet, 1983:7; my translation).

Head (1981:339) argues as follows:

“The emphasis seems to be far more on cognitive issues – even where personality aspects seem most relevant they often are ignored. Problems of secondary school mathematics are discussed without any reference to the nature of the adolescent experience which the learners are undergoing”.

Bell (1978:182) agrees with Head when he says:

“Most testing and evaluation procedures measure, to a large extent, cognitive learning and there is a tendency to evaluate affective learning subjectively, if at all”.

Van den Aardweg and Van den Aardweg (1988:15) regard affectivity as basic to human behaviour and as a result determines personality. According to these authors, memories, thoughts, ways of thinking and responses are to a large extent influenced by affective qualities. Beliefs, attitude and whether one is interested in a particular activity or situation can have a great influence on one’s behaviour. The attitude that an individual has toward an activity or task has a definite impact on involvement in the task and its outcomes. The willingness to engage oneself in a task is also important. If, for example,

a learner is willing to attain a certain goal, his/her activities will involve moving in the direction of achieving that goal.

2.8 Subject-related affect and institution-related affect as distinguished by Bloom

The above-mentioned distinctions by Bloom (1976) are discussed with reference to their relation to learning and academic achievement.

2.8.1 Subject-related affect

This is a feeling of willingness or unwillingness, a positive attitude or negative attitude one may experience with regard to engaging oneself in activities concerning various subjects. It is common to hear a student saying that he/she likes one subject more than the other or that he/she does not like a certain subject because of various reasons. According to Bloom (1976:78) students tend to like those subjects they believe they have done before or can do successfully. How do students know that they have been or can be successful in certain subjects or some learning tasks? Bloom (1976:78) states the following: “The perception of what constitutes success is determined by the individual against the background of evidence he has received from the tasks (which he believes to be similar or related), and from the people who are in any way connected with the task or similar tasks – lecturers, parents, peers. If an individual believes he has done a number of prior related tasks successfully, he is likely to approach the next learning task with some degree of positive affect. If he believes he has been unsuccessful with such prior tasks, he is likely to approach the next learning task with some degree of negative affect”.

The relation between the present task and some future goals, purposes, or objectives the student has in mind may have some influence on his/her affect (Bloom, 1976:78). The same author says the following with regard to the foregoing:

“If he sees the present task as contributing to these goals, he is more likely to have positive affect; if he sees the task as conflicting with or unrelated to these goals, he is more likely to have negative affect and even clear opposition to the task” (Bloom, 1976:78).

It is of utmost importance, for example, that every student who is to register or who has registered at an institution of higher learning should ask himself/herself whether his/her selected field of study will contribute to the achievement of his/her further career goals. Aiken (2002:165) states:

“The relationship between attitudes and achievement in Mathematics, as in many other school subjects, is reciprocal: positive attitudes toward the subject motivate students to spend more time studying and thinking about it, and the resulting high grades and other rewards make them feel good about the subject and feel interested in pursuing it further”.

2.8.2 Institution-related affect

This refers to the attitude the student develops toward an institution, which may be either positive or negative because of various reasons. It is likely that a student develops a general attitude toward (or interest in) an institution and learning which may influence his affective characteristics for most of the learning tasks and courses within the academic framework of the institution (Bloom, 1976:85). Some students go to the institution of higher learning with encouragement to learn well and keep out of trouble, while others go with mixtures of pride and anxiety that they may not be able or mature enough to do what is wanted. Aiken (2002:162) argues as follows:

“Of all the factors that influence student learning, one of the most important is the classroom teacher. The abilities, attitudes and personality of the teacher can have a profound effect on the extent to which students benefit from school experiences”.

It is a common occurrence that students complain about the negative attitude of a lecturer at a tertiary institution. In such a situation students will develop a negative attitude toward a course offered by the lecturer concerned. According to Yaworski, Weber and Ibrahim (2000:207), students who develop positive relationships with their lecturers feel more comfortable in approaching the lecturer when they need assistance. The same authors further indicate that the professors who were interviewed in their study generally agreed that it was the high achieving students who perceived them as experts and sought

their advice. In contrast, the low achieving students did not perceive their professors as experts and often did not trust their professors' judgments concerning their work.

2.9 Academic achievement

Kobal and Musek (2001:889) regard academic achievement as a student's knowledge and his degree of adaptation to academic work, expressed in numerical scores. The same authors also view academic achievement in a psychological sense, implying that it is the student's attitudes towards his achievement and himself, as well as the attitudes of other people such as parents, teachers, lecturers, etcetera, towards his success and himself. Rickson (1977:5) views achievement within any context as performance relative to some standard and he further states that academic achievement and other dimensions of learning can be measured by a variety of yardsticks or measuring instruments, the result of which is some type of combination of types of scores, placement, ranks or grades. Van den Aardweg and Van den Aardweg (1988:8) regard achievement as:

“A product which can be measured by means of achievement tests and is usually associated with mental success but it is also possible on the physical and social levels. On the physical level achievement is evident in activities such as sport, dancing and motor skills and on the social level in aspects such as popularity and leadership”.

2.10 The connection between affective factors and academic achievement

Drew and Watkins (1998:174) regard variables such as motivational orientations, self-esteem and learning approaches as important factors influencing academic achievement in tertiary education. Motivational orientations and self-esteem are affective factors playing a role in learning and academic achievement. According to Vrey (1979:47) self-esteem is a component of 'self-concept', which refers to the way a person perceives himself/herself or the beliefs and thoughts a person may have about himself/herself. “How a person perceives himself is a function of both his perception of himself independently of others and his interpretation of how he is perceived by others” (Mwamwenda, 1995:363). According to Kobal and Musek (2001:888), self-concept is a psychological entity which includes our feelings, evaluations and attitudes as well as descriptive categories of ourselves. It is manifested outwardly by our behavioral and

personality traits and inwardly by how we feel about ourselves and the world around us (Kobal & Musek, 2001:888). As a psychological whole, self-concept has an effect on one's particular self-perceptions and on the perceptions of other people.

Mwamwenda (1995:363) states that as a person interacts with others, he evaluates his behaviour on the basis of the reinforcements or lack thereof received from others in his environment, for example his peers, parents, teachers and other members of the community. If the reactions of these people are positive, he is likely to accept himself and thus develop a positive self-concept. If the reactions of these people are negative, he is likely to develop a negative self-concept. Vrey (1979:115) states that "there is interaction between self-concept and achievement". The evidence from various investigations indicates that changes in self-concepts of children are related to corresponding changes in scholarstic achievement (Vrey, 1979:115). One can therefore conclude that a learner with a positive self-concept stands a better chance of performing better than a learner with a negative self-concept.

Leondari, Syngollitou and Kiosseoglou (1998:219) adopt the notion of "possible selves" to investigate the relationship between possible selves, academic performance, motivation and self-esteem. Possible selves are defined as conceptions of the self in future states. They are regarded as the cognitive manifestations of enduring aspirations and motives. Markus and Ruvolo (quoted by Leondari, Syngollitou & Kiosseoglou, 1998:219) state that:

"Possible selves are thought to influence the motivation process in two ways: on one hand by providing a clear goal to strive for – if they are positive – and to avoid – if they are negative. On the other, by energizing an individual to pursue the actions necessary for attaining that goal".

Markus and Ruvolo indicate that stimulating a desired end-state can produce positive affect and arousal, activate plans and strategies relevant to achieving this state and facilitate selective information processing that favours the desired end-state. Furthermore, specific clear goals have been shown to be more effective than vague or

general intentions to perform well. House (1997:105) states that “recent research findings have indicated that motivational attitudes such as self-efficacy beliefs and a high motive to succeed, were related to the achievement outcomes of Asian-American high school students”.

According to House (1997), two student attitudes that have received considerable research interest are achievement expectancies and academic self-concept. Considering achievement expectancies, several studies have found significant relationships between students’ initial academic expectations and their later cumulative grade performance and grades in specific courses and general education courses (House, 1997:96). House also indicates that academic self-concept has been found to predict the overall school performance and achievement test scores of elementary and secondary school students.

Research findings have consistently indicated that young people who achieve in school tend to be interested in learning (McCoach, 2002:67). Underachievers seem to exhibit more negative attitudes toward school than average and high achievers do. McCoach also found that children’s cognitive attitudes toward school demonstrated moderate, statistically significant associations with achievement. Students’ attitudes toward their courses are influenced by their interest in the course as well as the perceived personal relevance and future utility of the course. Therefore, students’ attitudes toward their teachers and courses are positively related to their academic achievement. Adetumbi (1992:27) makes the following comment with regard to interest and learning:

“There is no doubt that every student has favourite subjects. You get excited about the classes you enjoy. You attend these classes regularly and usually do well in them. On the other hand, when a student dislikes a subject, he or she is likely to complain about that subject, skip classes or cannot wait to leave the class room at the sound of the warning bell. The most likely result is poor performance or failure. Negative attitudes about schooling hinder academic progress”.

The student’s attitude, whether it is favourable or unfavourable stems mainly from his generalization of his own experiences with regard to learning. The number of successes

or failures required to create a positive or negative attitude to learning will differ from one learner to the other. Every individual will after a sufficient number of experiences of success or failure, develop a correspondingly positive or negative attitude towards learning (Vrey, 1979:268). Repeated experiences of failure will tend to create a negative attitude towards learning. The learner's efforts are likely to be directed towards withdrawal and this negative attitude will affect all his subsequent efforts in connection with learning. The learner's ability to complete a learning task successfully therefore depends, among other things, upon his attitude towards the task.

2.11 Brief explanation of selected affective factors

The following affective factors have been selected as the main factors with regard to their role in learning and academic performance of students. The factors are briefly explained as follows:

2.11.1 Self-concept

Gouws and Kruger (1994:6) regard self-concept as "the concept or image a person has of himself, and is unique, personal and highly meaningful to the person concerned". According to Drew and Watkins (1998:175), self-concept is a psychological construct which refers to the cluster of ideas and attitudes an individual holds about himself/herself. It involves all the ways he/she uses to describe himself/herself, and his/her evaluation of himself. Mashile (1999:59) defines self-concept as the "totality of the perceptions that we have about ourselves – our attitude towards ourselves, the language we use to describe ourselves". The self-concept also determines an individual's relationships and generally directs the individual's experience of life events (Gouws & Kruger, quoted by Mashile, 1999:59). Based on the various definitions and descriptions, one may view self-concept as the way an individual regards himself/herself and it is a psychological concept which forms an integral part of a person's personality. It is never static, as it can change from positive to negative, depending on the perceptions the individual has about himself/herself in relation to the prevailing situation. One should always strive toward developing a positive self-concept as it can lead to success rather than a negative self-

concept which can make one feel inadequate and worthless, thus leading to failure.

2.11.2 Motivation

Motivation is defined by Mwamwenda (1995:259) as “an energiser or a driving force, a desire or an urge that causes an individual to engage in a certain behaviour”. Mmyandu (2001:4) defines motivation in the learning context as the willingness to engage in meaningful tasks. If learners are motivated to attain a given goal, their activities will involve moving in the direction of achieving that goal. They experience pleasure in tackling the task and they tend to develop inner confidence and generally expect to succeed. The opposite is true for learners who are unmotivated. They tend to exhibit maladaptive behavioural patterns in that they do not value or establish reasonable goals, nor maintain striving towards these goals (Mnyandu, 2001:5). The behaviour of a learner may be either intrinsically or extrinsically motivated.

Deducing from what has been indicated by various authors, motivation can be defined as a driving force or an urge behind what an individual does. The driving force can be, for example, a desire to do well in a task. We can only see the extent of an individual’s motivational state by his/her behaviour, that is, in the way he/she performs his/her duties. A highly motivated person tries to achieve to the best of his/her abilities and to be consistent in that achievement. In the learning situation, students who are motivated show several characteristics, such as regular class attendance, preparing for classes, participating in class activities and obtaining good passes in tests and examinations.

2.11.3 Attitude

Mohsin (1990:2) regards attitude as the evaluation of the attitude object, as comprising a person’s likes or dislikes towards an object. Allport (quoted by RajECKI, 1990:5) defines attitude as

“A mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual’s response to all objects and situations with which it is related”.

In the learning context “an attitude may be described as a general tendency or state of preparedness to behave in a particular way with regard to a school” (Vrey, 1979:267). Generally, an attitude can be described as a person’s positive or negative position on some topic or issue. The core idea is that of preference and it involves evaluation. Preferences vary between people. One of the things which makes individuals what they are, and distinguishes them from others, is their sets of preferences. Attitude research can be seen as the attempt to specify and measure what we commonly think of as people’s views or preferences.

An attitude may be defined as a perception or belief which develops in an individual after evaluation of a certain experience, topic or issue. This perception or belief may be of a positive or negative nature. An attitude can therefore influence an individual to behave in a particular manner. For example, a student who has developed a negative attitude toward a lecturer may stay away from classes of the lecturer concerned.

2.12 Conclusion

This chapter attempted to shed light on the role of “affectivity” in academic achievement. It is commonplace that an atmosphere which fosters and promotes confidence and emotional stability will produce better students. If a student feels rejected and is afraid of being scoffed at whenever he makes a mistake, he will withdraw from the educational process and lag behind, both cognitively and emotionally.

The above-mentioned concepts, that is, self-concept, motivation and attitude, form the core of this study and the researcher deems it fit that they be discussed fully in the subsequent chapter (chapter 3).

CHAPTER 3

THE SELF-CONCEPT, ATTITUDE AND MOTIVATION OF STUDENTS

3.1 Introduction

According to McEachron-Hirsch (1993), a large amount of research has contributed greatly to our understanding of curricula, instructional strategies and student performance documented by grades and standardized test scores. Less is known, however, about students' perceptions of their schooling experience and the kind of self-identities individuals construct based upon these experiences, as well as the extent to which they are motivated to do their best in academic work. The affective aspect of the students should receive as much attention as the cognitive aspect in academic investigations and endeavours. This chapter tries to give a full discussion of the three selected affective factors - self-concept, motivation and attitude. Based on information from literature sources, an attempt will be made to describe these concepts and show their relation to learning and academic achievement.

3.2 The self-concept

3.2.1 Introduction

Mwamwenda (1995:365) regards self-concept as a person's way of perceiving himself, which may be either positive or negative. How a person perceives himself is a function of both his perception of himself independently of others and his interpretation of how he is perceived by others. According to Vrey (1979:47), the self-concept refers to "a configuration of convictions concerning oneself and attitudes toward oneself that is dynamic and of which one is normally aware or may become aware". Gouws and Kruger (1994:6) regard the self-concept as "the concept or image a person has of himself and is unique, personal and highly meaningful to the person concerned".

Self-concept develops from childhood through adulthood as a result of a person's interaction with his environment, which includes his peers, his parents, his teachers and

the various tasks and responsibilities he is assigned and the way in which he copes with them (Mwamwenda, 1995:363). Whether a person develops a positive or negative self-concept depends on how he is treated and how he perceives such treatment.

3.2.2 The self-concept as an organisation of self attitudes

Burns (1984:52) states that the belief, knowledge or cognitive component of an attitude represents a proposition about, or a description of, an object irrespective of whether the knowledge is true or false, based on either objective evidence or subjective opinion. To be a success or a failure, hardworking or lazy, a sportsman or spectator, or any other attribute, involves some evaluative connotations derived from subjectively interpreted feedback from others and from comparison with subjectively interpreted cultural, group and individual standards and values (Burns, 1984:54). Petrick, Wiechers and Oosthuizen (1990:19) state that “self-evaluation is a person’s assessment of his behaviour, possibilities and attitudes according to his personal standards and values. The latter are shaped through interaction with the community and significant others”. For example, if a person regards himself as short in stature, it may evoke a strong emotional feeling and negative self evaluation since lack of height does not fit with the cultural belief of a typical sportsman and may prevent his development as a good rugby player. This may lead the person to take up other activities such as athletics and academic activities as compensation.

Self evaluation is not fixed, it can alter in direction and strength as other experiences are encountered. For example, a person may have a concept of himself as a bright student deriving from his performance in school examinations and the feedback he receives from teachers and peers. This brings pleasure and satisfaction, since being a bright student has positive connotations within society and at home where the achievement motive and success have been positively reinforced. However, this positive self evaluation may fluctuate as increasingly harder work brings poorer examination results or as significant others in the peer group begin to evaluate other behaviours, for example, performance in athletics, as more important.

According to Burns (1984:57) “a positive self-concept can thus be equated with positive self-evaluation, self-respect, self-esteem, self-acceptance; a negative self-concept becomes synonymous with negative self-evaluation, self hatred, inferiority and a lack of feelings of personal worthiness and self-acceptance”. Persons with high self-appraisal and self-esteem generally accept themselves positively and those who attribute negative values to themselves have little self-esteem, self-respect or self-acceptance. Finally, the following definition of self-concept by Rogers (quoted by Burns 1984:57) accords with the explanations given above:

“The self-concept is composed of such elements as the perceptions of one’s characteristics and abilities; the percepts and concepts of the self in relation to others and to the environment; the value qualities which are perceived as associated with experiences and objects; and the goals and ideals which are perceived as having positive or negative valence. It is then the organised picture, existing in awareness either as figure or ground, of the self and the self-in-relationship, together with the positive and negative values which are associated with those qualities and relationships as they are perceived as existing in the past, present or future”.

Rogers’s definition indicates that self-concept is influenced by factors such as one’s abilities, characteristics, relations with other people, etcetera. But the core factor appears to be one’s perceptions, which stem from self-evaluation. For example, how an individual perceives his/her abilities in various spheres can have a positive or negative impact on his/her self-concept. A student who considers himself/herself as inferior to other classmates with regard to academic work may develop a negative academic self-concept.

3.2.3 The structure of the self-concept

According to Shavelson (quoted by Bracken, 1996:58), self-concept is not an entity within the person, but a hypothetical construct that is potentially useful in explaining and predicting how a person acts. The person’s self-perceptions influence the way he or she acts, and these acts in turn influence the person’s self-perceptions (Bracken, 1996:58).

Shavelson (quoted by Bracken, 1996:58) identified the following seven features that are critical to the definition of the self-concept and its structure:

- It is organised or structured, in that people categorise the vast amount of information they have about themselves and relate these categories to one another.
- It is multifaceted, and the particular facets reflect a self-referent category system adopted by a particular individual and/or shared by a group.
- It is hierarchical, with perceptions of personal behaviour in specific situations at the base of the hierarchy, inferences about self in broader domains (for example, social, physical, and academic) at the middle of the hierarchy, and a global, general self-concept at the highest point.
- The hierarchical general self-concept – the highest point of the hierarchy is stable, but as one descends the hierarchy, self-concept becomes increasingly situation-specific and, as a consequence, less stable. Changes in self-perceptions at the base of the hierarchy may be attenuated by conceptualisations at higher levels, and changes in general self-concept may require changes in many situation-specific instances.
- Developmentally, self-concept becomes increasingly multifaceted as the individual moves from infancy to adulthood. Infants tend not to differentiate themselves from their environment; young children have self-concepts that are global, undifferentiated, and situation-specific, and it is only with increasing age and the acquisition of verbal labels that self-concept becomes increasingly differentiated and integrated into a multifaceted, hierarchical construct.
- Self-concept has both a descriptive and an evaluative aspect such that individuals may describe themselves (“I am happy”) and evaluate themselves (“I do well in mathematics”). Evaluations can be made against some absolute ideal, a relative standard based on comparisons with peers, or the expectations of significant others.
- Self-concept can be differentiated from other constructs to which it is theoretically related. Thus, for example, academic achievement should be

more highly correlated with academic self-concept than with social or physical self-concept, and self-concepts in specific school subjects (for example, Mathematics, English) should be more highly correlated with achievement in matching school subjects than achievements in other subjects.

The following figure is Shavelson's representation of the hierarchical organisation of the self-concept (quoted by Bracken 1996:54):

In figure 3.1, general self-concept at the highest point is divided into academic and non-academic components of self-concept. The academic component is divided into self-concepts specific to general school subjects and non-academic self-concept is divided into physical and social components, which are further divided into more specific components. The various components of the self-concept will now be discussed briefly.

3.2.3.1 Social self-concept

Social self-concept may be referred to as people's perceptions of how much other people like and admire them (Bracken, 1996:171). In other words, social self-concept is defined as self-perceptions in terms of social acceptance. Some scholars have defined the social self-concept as self-perceptions in terms of social acceptance. Other scholars have defined the social self-concept by people's perceptions of their social competence or social skill. For example, people are assumed to have a positive social self-concept when they feel comfortable talking to strangers, and are confident about their social competence. People who perceive themselves as more accepted by other people are likely to perceive themselves as more socially skilled.

3.2.3.2 Physical self-concept

Bracken (1996:375) defines physical self-concept as "people's perceptions and/or estimations of their physical performance and physical appearance". The physical self is about the acceptance or non-acceptance of one's body and physical skills or abilities. Someone with a positive concept of his physical self will accept his body. He will be proud of it. The one who does not accept his body will find fault with it, for instance, "I am too fat; I can't play soccer". How one perceives his physique has an important influence on his self-concept.

3.2.3.3 Academic self-concept

Cokley (2000:149) defines academic self-concept as "attitudes, feelings and perceptions relative to one's intellectual or academic skills". The same author considers academic self-concept to be how a student views his/her academic ability when compared with other students. Students attach a lot of importance to academic ability, so that self-

acceptance is based largely on cognitive abilities. A student with a negative academic self-concept might just avoid studying hard because he would regard the subject content as too difficult. So he would not even try because then he would not face failure and therefore humiliation. Academic self-concept will be fully discussed later in this chapter as it is regarded as the main component of the self-concept in this study.

3.2.4 Development of the self-concept

Hattie (1992:125) identified the following developmental stages which are briefly discussed below.

3.2.4.1 Development between conception and two years

Hattie (1992) argues against the notion that the child is born into the world as an empty vessel and then learns bit by bit and skill by skill the knowledge and abilities that eventually emerge in adulthood as the competence of the social actor. Hattie claims that a child should be seen as a component of a synthetic but complete social individual in the mother-child relationship and he explains the situation as follows: “The birth of the self occurs at the moment at which the mother-child dyad is formed. Careful studies of the way mothers speak to infants suggest that much of the mother’s speech serves to complete the infant by attributing intentions, wants, and plans to him. She does for the baby what he cannot presently do for himself, so that the baby is always part of a fully competent, social individual” (Hattie, 1992:125).

3.2.4.2 Development between 3 and 9 years

According to Hattie (1992:126) during this period there is a rapid development of language skills and a broadening of experience on which the content of self-concept depends and most of the development relates to the immediate family, a concern with a restricted environment, the development of concrete operations, and the formation of a sense of personal causation (Hattie, 1992:126). By the age of three, many children have begun to identify their own welfare with that of others. Initially these others are the immediate family, but soon they include peers and those at preschool or school. The child’s conception of self develops as a consequence of his or her interactions, and the

development of the acceptance of self depends on the nature of various facets of this interaction (Hattie, 1992:126).

Hattie (1992) argues that “empathy” is very much a part of social behaviour and is a very important part of interacting with others. This is because empathy involves an awareness of the feelings and reactions of others. This empathic relationship means that the parent not only sees and hears the child but also feels and knows what the child needs (Vrey, 1979:74). Vrey further states that the child knows and understands the parent’s intentions concerning himself. Thus to be empathetic, a person must have some awareness of the other as distinct from the self. According to Hattie (1992), this is the case with infants, although they typically assume that the others' feelings are identical to their own. The development of ‘trust’ is said to be very important for this age group. Without the development of trust, children do not learn empathy effectively. The quality of the ‘nurturance’ that the young child receives affects the development of conceptions of self.

3.2.4.3 Development between 9 and late teens

According to Hattie (1992), approximately from the age of 8 or 9 onward, children face some massive changes that consequently lead to changes in their self-concept. At about 8 or 9 there is a sharp increase in the development of brain cells, particularly in the frontal lobes, that lead to the development of more planning, intentional and abstract behaviour. At this time there are also changes in the body associated with the onset of puberty and subsequent growth. Adolescents find that they look and feel different, and that others are responding to them differently and expecting them to act differently. The child also begins to place more emphasis on peer group rather than family influences and there is an accompanying loosening of parental bonds.

Hattie (1992) has given some explanations about the changes in self-concept as the individual moves from middle childhood to adolescence. The basic explanation of the change in adolescent self-concept is related to the different cognitive processes of children and adolescents. In this regard, Hattie (1992) claims that younger children are fundamentally egocentric, whereas older children are less wrapped up in their own

private world and more attuned to external reality. Older children are more able to adopt an objective and detached view and tend to think more of themselves in terms of unobservables. This, according to Hattie (1992), is because the adolescent has developed the tendency to introspect, to reflect on an inner world of thought, feeling and wish. These changes in cognitive abilities also lead to more interest in ideals and the ideal self. The onset of puberty and adolescence causes direct and serious challenges to the 'self'. The individual becomes keenly aware of him-or herself as an object of observation by others and, in the attempt to see him-or herself through others' eyes, a new order of complexity is introduced. The adolescent learns what others expect of him or her, establishes a more stable view of his or her strengths and weaknesses and gains a new appreciation of the self.

3.2.4.4 Late teens to adulthood

Mortimer, Finch, and Kumka (quoted by Hattie, 1992:128) note that it is in this period that other dimensions of self-concept become influential. These dimensions include sexuality, vocation, adulthood, ageing self-concepts, and self-actualisation. These authors conclude that during this period, most individuals would have completed their formal education, married, became parents and embarked on their occupational careers. In spite of these changes, studies by Mortimer et al reflect some evidence of stability of self-concept during this period.

3.2.5 The self-concept in the context of education

Burns (1984:274) says that "although education may superficially appear to be purely a cognitive domain, academic performance is a function of a number of factors, some being of non-cognitive character". This is explained in the preceding chapter and self-concept is indicated as one of the major factors in academic performance. In this regard it would be appropriate to refer to this concept as academic self-concept and its definition is given in the preceding paragraphs.

* **Academic self-concept and academic attainment**

Burns (1984:275) concludes that “not only is the self-concept present in all learning but is also a major outcome of all learning situations, though its presence might pass unnoticed by teachers intent on the inculcation of academic knowledge and skill”. The emphasis here appears to be on the fact that educators usually regard learners as crammers of academic facts, ignoring social and emotional development. Given the heavy emphasis on competition and the pressures applied by teachers and most parents on learners to achieve success, it is not surprising that learners regard academic attainment as an important indicator of self-worth. The evaluations of others become self-evaluations, so that a successful student feels competent and significant, a failing student feels incompetent and inferior (Burns, 1984:275). It is therefore clear that success in academic work leads to positive academic self-concept whereas failure leads to negative academic self-concept.

Cokley (2000:149) examined whether academic self-concept was a significant predictor of academic success among African American college students. He found that academic self-concept became the only variable that correlated significantly with grade point average (GPA) scores. Subsequently, academic self-concept was the best predictor variable for academic success. Cokley (2000:149) states that Black students tend to have a higher academic self-concept at historically Black colleges and universities than Black students attending predominantly White colleges and universities. He concludes that although cognitive variables such as the SAT have traditionally been better predictors of GPA than academic self-concept, these results show that the non-cognitive variable of academic self-concept is a better predictor of GPA for minority and low socio-economic background students than standardized test scores. House (1997:97) reports that academic self-concept and achievement expectancies are both significant predictors of the grade performance of Asian-American students. Other results also indicate that self-concept and realistic self-appraisal are significant predictors of Asian-American students' grade performance in post-secondary education (House, 1997:97).

The link between academic performance and self-concept gains further support from research carried out in Africa. Heyneman (quoted by Mwamwenda, 1995:365) hypothesises that “a child who felt more confident and more self-assured would perform better on the Primary Leaving Examination”. His subjects were 2 293 randomly chosen standard seven pupils from five districts in Uganda and he found that the level of self-confidence is related to school achievement in the areas of mathematics, English language and general knowledge, irrespective of sex, ethnic group and district. Heyneman therefore holds the view that in Uganda academic performance will suffer due to pupils’ lack of confidence and not due to their impoverished backgrounds.

Mwamwenda and Mwamwenda (quoted by Mwamwenda 1995:368) carried out a research in response to the public call for quality education at primary level in the Republic of Botswana. Self-concept was proposed as one of the variables contributing to quality education. The primary objective of the research was to establish whether, in the context of Botswana, a pupil’s self-concept could be used as a predictor of his or her academic achievement at the end of the seven-year period of primary education. The relationship between the two variables was to be examined on the basis of a pupil’s overall performance as well as his or her performance in Mathematics, English, Science and Social Studies. The sample consisted of 2559 standard seven pupils selected from 51 schools, covering every district of Botswana. There were 1042 boys and 1517 girls and their ages ranged from 12 to 14 years, with a mean age of 13,9 years. With the aid of research assistants from the University of Botswana, two personality tests – the self-appraisal scale and the Canadian self-esteem inventory – were administered to each subject. On the basis of their scores on these tests, the subjects were divided into pupils with good self-concepts and the performance of the two groups in the national final examination written by all Batswana school children at the end of their seven years of primary education was compared.

The results of the research indicated that there was a relationship between a pupil’s self-concept and his or her performance in the final set of examinations. This held true for both good and poor self-concepts. Pupils with good self-concepts performed

significantly better than pupils with poor self-concepts. This held true not only for overall performance, but also for the individual subjects examined. Thus the hypothesis of the research was supported, confirming that a pupil's self-concept can serve as a reliable predictor of his or her academic achievement.

3.2.6 Measurement of academic self-concept

A self-constructed instrument based on a 4-point Likert-type scale format can be used. Byrne (1996:17) suggests some aspects of academic self-concept which may be included in items of a questionnaire. The aspects are briefly discussed as follows:

3.2.6.1 Level of aspiration

This is an indication of the extent to which a student strives to achieve his/her goal with regard to academic work.

3.2.6.2 Anxiety

An indication of a student's level of emotional instability, which may be characterized by nervousness with respect to tests and examinations and low self-esteem.

3.2.6.3 Academic interest and satisfactions

An indication of a student's inner desire for learning and his/her interest in academic work.

3.2.6.4 Leadership and initiative

How far is a student prepared to take role with regard to academic work? This may be indicated by a student's ability and willingness to help fellow students with their academic tasks.

3.2.6.5 Identification versus alienation

An indication of the extent to which a student feels accepted and respected by fellow students and teachers, as opposed to feelings of isolation and rejection.

3.3 Attitude

3.3.1 Introduction

It is very common for one to find statistics in the newspapers about opinions of people on certain aspects of their lives, after some research has been done. People's opinions are expressions or reflections of attitudes they have about a particular issue. The study of attitudes is important because much of our personal and social lives are influenced by our attitudes. For example, if one can undertake some research on why there is such a huge influx of students to historically white institutions of higher learning in the RSA, one can most probably find fascinating facts in the form of beliefs, convictions, desires, hopes, wishes, etcetera.

This section of the chapter will provide, among others, a comprehensive definition of attitude, how attitudes and behaviour are related and components and structure of attitudes.

3.3.2 Defining attitude

Allport (quoted by Rajecki 1990:5) provides a definition of attitude as follows: "An attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related".

Allport's definition of attitude is discussed in four subsections as follows:

3.3.2.1 An attitude is a mental and neural state of readiness

The terms 'mental' and 'neural' mean that attitude is in an individual's mind and as such is part of the nervous system (Tulloch, 1993). One can therefore say that attitude is a psychological entity which we cannot experience directly. We can only assume that an individual has a certain attitude by, for example, what he/she reports.

3.3.2.2 An attitude is organized through experience

An attitude develops in an individual's mind through experience. The contacts we have with other people and the activities in which we are involved in our daily lives lead to the development of particular attitudes. For example, a student may have a positive attitude towards an institution due to what he/she experiences.

3.3.2.3 An attitude exerts a directive or dynamic influence

An attitude can influence an individual to act in a certain way. For example, a student who has developed a negative attitude towards a lecturer may decide to stay away from classes of the lecturer concerned.

3.3.2.4 An attitude has an influence upon the individual's response to all objects and situations with which it is related

An attitude does not only influence an individual to do things but also directs him/her to do them in a particular fashion. A student in the example above may not only stay away from classes but he/she may even try to incite other students to act against the lecturer. Many of the disruptions which occur in institutions of higher learning stem from students' attitudes which gradually develop and end up in disruptive actions.

3.3.3 Attitudes and their functions

It was noted in the preceding outline that attitudes are a source of behavioural motivation and organisation. But what purpose do attitudes serve? In other words, why do attitudes exist and what functions do they serve? McGuire (quoted by Rajecki, 1990:10) outlines four functions:

3.3.3.1 Utilitarian or adaptive function

An individual will develop a positive attitude towards things that lead him/her to the attainment of his/her goals. In this way, an attitude can serve a utilitarian function. On the other hand, one will try to avoid things that lead to failure.

3.3.3.2 Economy or knowledge function

People have a tendency to categorise individuals and then react to these individuals according to what they assume about the category. For example, if all students who graduate at a certain institution are considered to be lazy and disruptive, then it will be easy for prospective employers to deal with applicants from that institution because they will not even bother to consider the applications individually. If a lecturer considers all students to be lazy by virtue of their being students, then it will be easy to deal with students' requests for extension of deadlines for assignments. A student asking for such an extension might just receive a denial because of that attitude.

3.3.3.3 Expressive, self-realising function

A lecturer who states that he/she will never turn away a student from his/her office if that student has some academic problems can be regarded as a determined and dedicated person and thus expressing his/her social image as a suitable one.

3.3.3.4 Ego-defensive function

People sometimes do things that they consider to be undesirable or unacceptable. For example, a student who does not submit an assignment knows that his/her actions are unacceptable to lecturers. But if it is a general tendency that almost all students in the class do not submit their assignments in time, the student may project his/her feelings on others and he/she may see himself/herself in a corrupt class. The student may therefore not regard his/her actions as offensive to the lecturers.

3.3.4 Components and structure of attitude

3.3.4.1 The components of attitude

(i) The affective component

Mohsin (1990:2) regards 'attitude' as "the evaluation of the attitude object, as comprising a person's likes or dislikes for the attitude object". An 'attitude object' may be any real or imagined entity toward which a cognitive, evaluative, or intentional orientation of an individual is directed (Upmeyer, 1989:19). An entity becomes an attitude object if a person sets

himself the task – or accepts the task as given from others – to state an evaluative judgment concerning this entity. Thursone (quoted by Mohsin, 1990) regards attitude to be learned dispositions to respond to an object in a favourable or unfavourable manner. In short, the affective component is the evaluative element in an attitude, on the basis of which the attitude holder judges the object to be good or bad.

(ii) The conative component

The conative component has to do with the will or striving to attain the object (goal) of the attitude (Pintrich & Schunk, 2002:22). Rajecki (1990:40) calls this component the “behavioural” or “action tendency” component.

(iii) The cognitive component

Rajecki (1990) regards the term ‘cognition’ in this context as any bit of information, fact, or knowledge relevant to the attitudinal object. That is, cognitions tell us about the functions, implications, or consequences of the object of the attitude. Considered as such, attitude involves a system of beliefs about the attitude object as furthering or hindering the attainment of a set of valued objects, or as satisfying some psychological needs or purposes of the individual or group concerned.

(iv) Responses used to infer attitudes

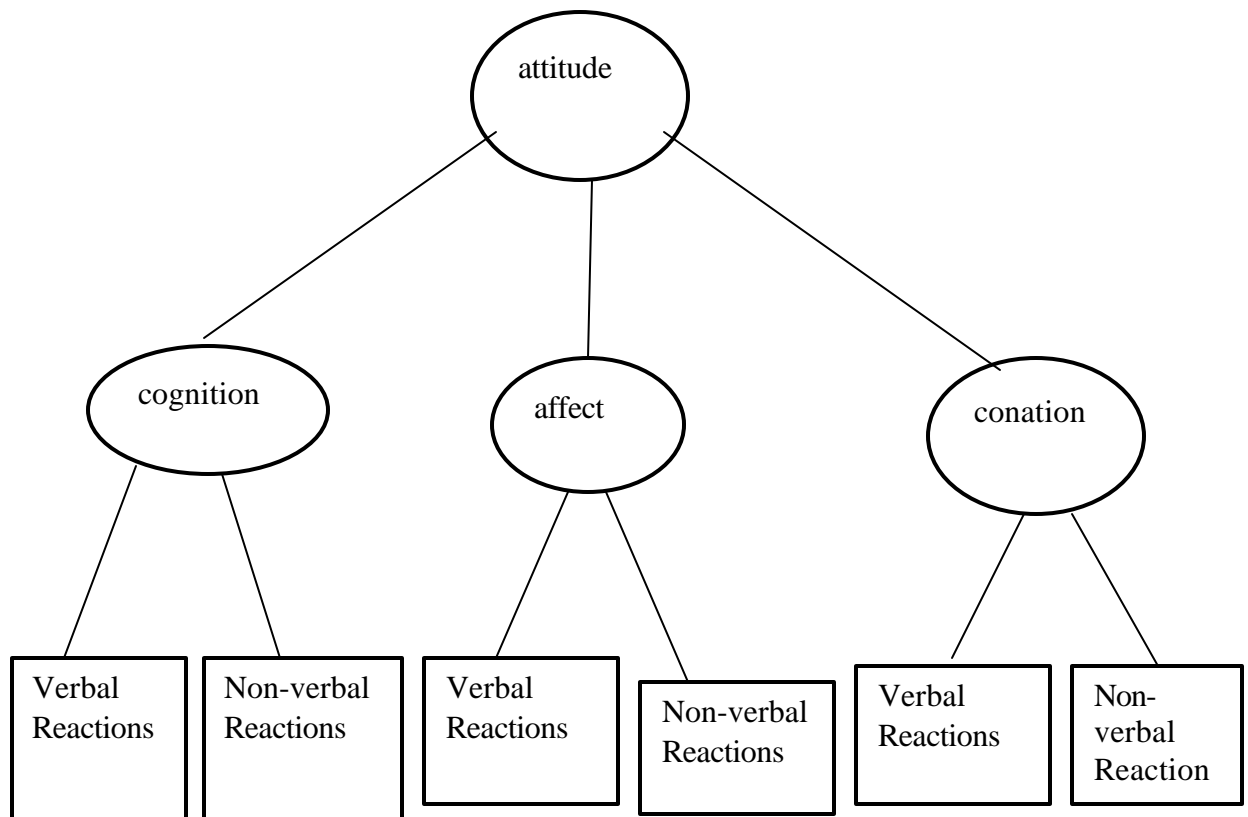
Based on Rosenberg and Hovland (quoted by Krebs & Schmidt (Eds.), 1993:42), the following table shows the different types of responses from which attitudes can be inferred:

Table 3.1: Responses for inferring attitudes

Response mode	Cognition	Affect	Conation
Verbal	Expressions of beliefs	Expressions of feeling	Expressions of intentions
Non-Verbal	Perceptual reactions	Physiological reactions	Motor responses

Krebs and Schmidt (1993:42) regard attitude as a latent variable, and cognitive, affective, and cognitive reactions, verbal or non-verbal, are manifest indicators of attitude. In this view, attitude is a multidimensional construct consisting of cognition, affect, and conation. To extend this line of reasoning, Rosenberg and Hovland (quoted by Krebs and Schmidt (Eds.) 1993:42) offer the hierarchical three-component model of attitude. In this model, the three components are defined independently and yet comprise, at a higher level of abstraction, the single construct of attitude. Each component is made up of verbal and non-verbal responses, and each of these is further comprised of a large number of very specific response tendencies. Attitudes are thus always inferred from specific responses to the attitude object. The hierarchical three-component model of attitude mentioned above is shown schematically in figure 3.2.

Figure 3.2: Hierarchical Model of attitude



3.3.4.2 The structure of attitudes

According to Rajecki (1990:65), the consistency theories inform us that an attitude does not exist in a vacuum and that certain attitudes can have implications for other attitudes. Bem (quoted by Rajecki 1990:65) sketches the structure of attitudes in terms of what he calls the vertical structure, the horizontal structure, and the centrality of beliefs.

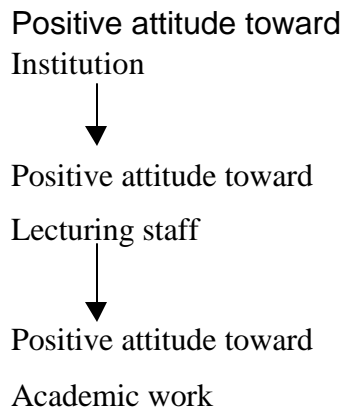
- **Vertical structure, horizontal structure and centrality**

In discussing structure and centrality, let us take an example of a student who registered at the university with a positive attitude toward the institution. That student may have great liking for the institution; this emotional state reflects an affective component. The student may also feel that the institution is a prominent one, he will benefit by studying there and he can achieve much academically.

These ideas represent a cognitive component. The student may intend to act in ways that will really enable him to achieve, an intention that reflects a conative or behavioral component.

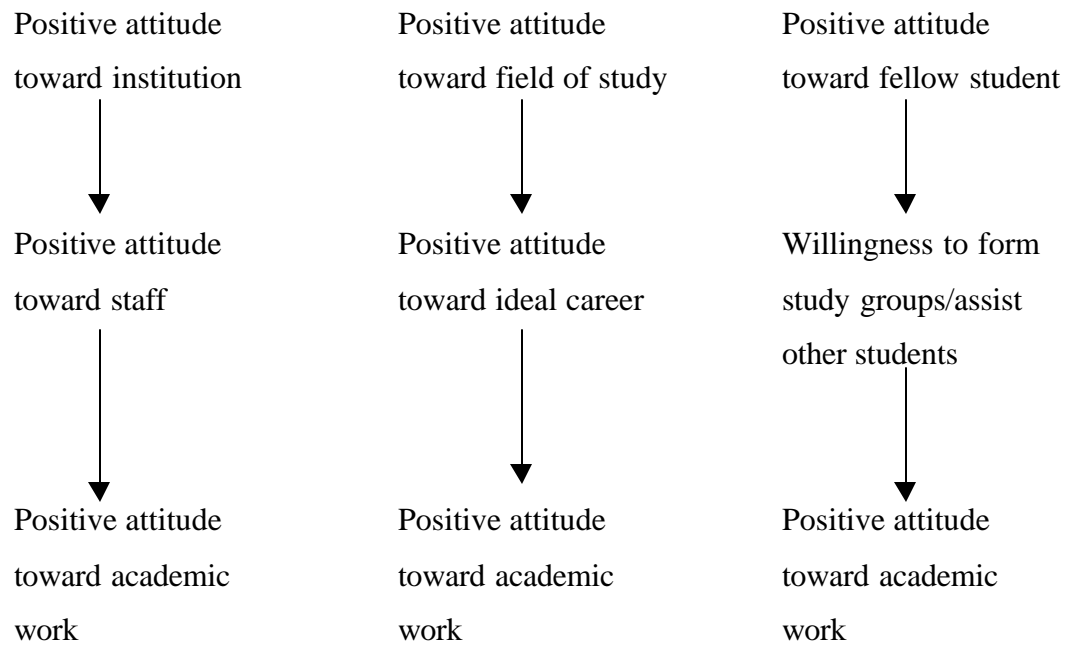
It will then not be surprising to discover that the student has other related attitudes such as positive attitudes towards the lecturing staff and academic work. This is illustrated in figure 3.3 in the form of a vertical structure.

Figure 3.3: Vertical structure (adapted from Rajecki, 1990)



The student's positive attitude toward academic work may be broadly based. This means that other attitudes may develop in a horizontal form. For example, positive attitude toward field of study, an ideal career, fellow students, etc. This is illustrated in figure 3.4 in the form of a horizontal structure.

Figure 3.4: Horizontal Structure Source: (Rajecki, 1990)



Certain attitudes are obviously more important than others. The idea of ‘centrality’ implies that there are some attitudes that are central to one’s basic concerns (Rajecki, 1990:68). For example, attitudes toward the self are central, because much of what one does or does not do is based on one’s judgements of one’s own capacities and strengths, limitations and weaknesses. If an attitude as central as that toward oneself undergoes a drastic change, no doubt one’s viewpoint on many other things would be changed as well.

3.3.5 Attitude formation

According to Fishbein and Ajzen (quoted by Krebs and Schmidt, 1993), attitudes develop reasonably from the beliefs people hold about the object of the attitude. Generally speaking, we form beliefs about an object by associating it with certain attributes, i.e., with other objects, characteristics, or events. For example, as a result of watching a television program, one may come to believe that the communist system (the attitude object) is repressive, inefficient, and outdated (attributes). A reaction, whether verbal or non-verbal, whether cognitive, affective or conative, that reflects a positive or negative

disposition toward an object can be used to infer the latent attitude, but only cognitions that come to mind spontaneously, for example, beliefs, provide a picture of an attitude's informational foundation (Krebs & Schmidt, 1993:44).

3.3.6 The relation of attitudes to behaviour

As a result of varied experiences we form beliefs about an object that combine to produce an attitude toward it, an attitude that remains relatively stable across time and situations. The actual or symbolic presence of the object elicits this attitude in the form of a generally favourable or unfavourable evaluative reaction. The attitude, in turn, predisposes cognitive, affective, and conative responses whose evaluative tone is consistent with the overall attitude. For example, individuals with positive attitudes toward the medical profession would exhibit various favourable response with respect to hospitals, doctors, nurses, and so on, whereas individuals with negative attitudes toward the medical profession would exhibit unfavourable responses toward these objects. We generally associate with people we like and avoid people we dislike, we tend to eat foods we consider tasty and nutritious, we watch television programs we enjoy, and so on.

There is a respected assumption among scientists and lay people alike that knowledge of a person's attitudes permits a fuller understanding of his or her behaviour (Rajecki, 1990:75). This means that the presence of a given attitude is thought to allow for the prediction of some future behaviour or the interpretation of some past behaviour. A considerable amount of research and theorising appear to have been devoted to the issue of attitude-behaviour consistency. Mohsin (1990) regards a crucial test of the action tendency – the conative component of the attitude construct as whether a consistent relationship has been found to exist between a person's measured attitude and his non-verbal overt behaviour to the attitude object.

Mohsin (1990) cites several research studies which indicate that attitude is but one variable that influences behaviour. These authors propose that various other influences, besides attitude, have to be taken into consideration to arrive at any conclusion regarding the value of the prediction about one's behaviour from a knowledge of his measured

attitude. Despite the fact that the extent to which attitudes are predictive of behaviour has for long been controversial in social psychology, Mohsin (1990:6) observes that “early pessimism about the predictive validity of attitudes, however, has recently given way to the suggestion that strong attitude-behaviour relations can indeed be obtained under certain conditions”. He points out, in this connection, to the question raised in the same source: “Under what conditions do what kinds of attitudes, of what kinds of individuals predict what kinds of behaviour?” (Mohsin, 1990:6).

The foregoing implies that certain conditions can lead to the development of attitudes which can enable us to predict the behaviours of the people concerned, also depending on the types of people in those conditions. For example, if a survey is conducted in the Republic of South Africa at present about the feelings of the people on crime and what kind of punishment they consider fit for criminals, will the people be willing to participate and what kind of responses will they give? Judging on the level of crime and the number of people who have been the victims of crime, it is obvious that people can participate overwhelmingly in the survey and one can even predict their responses.

3.3.7 The drive value of attitudes

Allport's definition of attitude has been referred to earlier in this section on attitudes. The latter part of the definition, “exerting a directive or dynamic influence on the individual's responses”, suggests that attitudes have a drive value, and do not only direct or channel but also control the existing level of energy at the disposal of the individual. Mohsin (1990) raises the problem of consistency between the elicited attitude and the drive it is supposed to generate if attitude is conceived to have drive value. Mohsin points out that drive may vary independently of an attitude. For example, the same attitude, say, towards marital difficulties, may be accompanied by the impulsion to do something about it when it concerns one's friend, rather than a stranger. “Does the strong impulsion”, Mohsin asks, “in one case, and lack of impulsion in the other signify that there are really two different attitudes of different drive strengths?” Consequently, drive strength varies with variation in the preceding conditions. But the presumed strength or weakness of a person's attitude to a given object is likely to remain more or less constant

under ordinary conditions. Mohsin (1990:8) maintains that “the drives associated with some attitudes” do not stem from the attitudes themselves; “the motivational force comes from factors beyond the attitudes themselves”.

It can be concluded from the foregoing discussion that attitude is a learned, enduring predisposition to evaluate an object or person; it has only a directional or channelling influence on the energy of the individual. Attitudes do not possess drive value and may not, therefore, be credited with variation in strength (Mohsin, 1990:8). In this respect, attitude is different from motive, though it may be associated with a motive.

3.3.8 Measuring attitudes

3.3.8.1 Developing own measures

Attitude rating scales

According to Rajecki (1990:22), the most commonly used scale in measuring psychological entities such as attitude is the Likert rating scale. An attitude rating scale yields a single score that indicates both the direction and intensity of a person’s attitude (Henerson, 1987:84).

3.3.8.2 Using existing psychometric tests

Survey of Study Habits and Attitudes (SSHA), Form C

The SSHA, Form C, was constructed for use with students at universities and colleges of education as a supplement to the SSHA, Form H, which is used in secondary schools. The fact that some students with apparently high scholastic aptitude underachieve in academic work while others with only mediocre aptitude do comparatively well, presents a continual challenge to educators. The SSHA was developed to help meet this challenge. It is an easily administered measure of study methods, motivation for studying, and certain attitudes towards scholastic activities which contribute to academic achievement.

3.4 Motivation

3.4.1 Introduction

Human learning is a complex phenomenon and motivation is an essential part of it. Motivation affects almost all student activities. For example, one may say that motivated students display interest in academic activities, work diligently, feel self-confident, stick with tasks, and perform well. When students perform poorly, teachers may say they were not motivated to learn. Each year, many school workshops and in-service programs are devoted to motivational topics. The so-called ‘motivational speakers’ are invited to schools to address students.

Despite its importance, there is much that remains unknown about motivation. Professionals disagree over what motivation is, what affects motivation, how motivational processes operate, the effects that motivation has on learning and performance, and how motivation can be improved. According to Volet and Jarvela (2001:3), our knowledge is further limited because most of the early research on motivation was associated with the consequential behaviour of animals, human beings being considered too complex for researchers to study directly.

This section examines some basic issues in the field of motivation, starting with the definition of motivation, after which the relation of motivation to learning and performance will be discussed, among others.

3.4.2 Definition of motivation

There are many definitions of motivation and much disagreement over its precise nature. According to Pintrich and Schunk (2002:5), the term ‘motivation’ is derived from the Latin verb ‘movere’ (to move). The idea of movement is reflected in such common ideas about motivation as something that gets us going, keeps us moving, and helps us complete tasks. Van den Aardweg and Van den Aardweg (1988:138) define motivation as “... the driving force, the impetus of the personality, which is put into effect by an act of the will in accordance with what a learner wants to do. It energizes behaviour and can be an intrinsic or an extrinsic force”. Mashile (1999:61) defines motivation as “... what

moves us from boredom to interest. It is what energizes us and directs our activity. Energy and direction are at the centre of the concept of motivation”.

Pintrich and Schunk (2002:6) offer a general definition of motivation that contains the elements which are regarded by most researchers and practitioners to be central to motivation: “motivation is the process whereby goal-directed activity is instigated and sustained”. An in-depth examination of this definition from the above-mentioned source is as follows:

- **Motivation is a process rather than a product**

As a process, we do not observe motivation directly, but rather we infer it from such behaviours as choice of tasks, effort, persistence, and verbalizations (e.g. “I really want to work on this”).

- **Motivation involves goals that provide impetus for and direction to action**

Cognitive views of motivation are united in their emphasis on the importance of goals. Goals may not be well formulated and may change with experience, but the point is that individuals have something in mind that they try to attain or avoid.

- **Motivation requires activity – physical or mental**

Physical activity entails effort, persistence, and other overt actions. Mental activity includes such cognitive actions as planning, organizing, monitoring, making decisions, solving problems, and assessing progress. Most activities that students engage in are geared toward attaining their goals.

- **Motivated activity is instigated and sustained**

Starting toward a goal is important and often difficult because it involves making a commitment to change and taking the first step. But motivational processes are critically important to sustain action. Many major goals are long-term, such as obtaining a university degree. Much of what we know about motivation comes

from determining how people respond to the difficulties, problems, failures, and setbacks they encounter as they pursue long-term goals.

3.4.3 Relation of motivation to learning and performance

Students who are motivated to learn about a topic are apt to engage in activities they believe will help them learn, such as attending carefully to the instruction, mentally organizing and rehearsing the material to be learned, taking notes to facilitate subsequent studying, checking their level of understanding, and asking for help when they do not understand the material (Pintrich & Schunk, 2002:6). In contrast, students unmotivated to learn are not apt to be as systematic in their learning efforts. They may be inattentive during the lesson and not organise or revise material. Note-taking may be done haphazardly or not at all. They may not monitor their level of understanding or ask for help when they do not understand what is being taught.

A key point is that motivation influences learning and performance and what students do and learn influences their motivation. When students attain learning goals, goal attainment conveys to them that they possess the requisite capabilities for learning (Pintrich & Schunk, 2002). These beliefs motivate them to set new, challenging goals. To sum up, one can regard the following as indications of students who are motivated to learn:

- They attend and participate actively in the learning process during class time.
- They develop working relationships with their lecturers and they thus feel more comfortable in approaching them when they need assistance.
- They are prepared for class, that is, they read through the subject matter beforehand and this helps them in understanding what the lecturer is talking about and will facilitate taking notes.
- They have short-term and long-term goals and they are determined to achieve them.
- They adhere to an organized study routine.
- They develop greater sense of responsibility towards academic work.

3.4.4 Intrinsic and extrinsic motivation

Two types of motivation (Van den Aardweg & Van den Aardweg, 1988:138) are discussed below:

3.4.4.1 Extrinsic motivation

The driving force or impetus behind this type of motivation stems from without the learner in order to gain parents' or teachers' approval or praise; to work for some reward or gain high marks, etcetera. The reason for an activity, be it work or play, lies primarily externally. Extrinsic motivation is heavily dependent upon others; the teacher is the assertive person and the learner remains motivationally passive. Extrinsic motivation needs continuous reinforcement for if it is withheld, motivation may cease. This type of motivation should be gradually eliminated as the child develops. Motivation such as blame or approval has a different effect on different learners.

3.4.4.2 Intrinsic motivation

Intrinsic motivation, on the other hand, is an inner drive which urges an individual on, fuelled by his own intrinsic goals, curiosity and interests. Intrinsic motivation in itself sustains learning. It is independent of external motivation although external motivation does feature to a certain degree. An inner drive may achieve good marks and the teacher's praise may further motivate the student. There is a self-perpetuating energy behind intrinsic motivation which can function in the complete absence of extrinsic motivation.

Harter and Connell (quoted by Pintrich and Schunk 2002:250) offer the following aspects which are regarded as part of intrinsic motivation:

- Preference for challenge rather than for easy work.
- Incentive to work to satisfy one's own interest and curiosity rather than working to please the teacher and obtain good grades.
- Independent mastery attempts rather than dependence on the teacher.
- Independent judgment rather than reliance on the teacher's judgment.
- Internal criteria for success and failure rather than external criteria.

3.4.4.3 Some characteristics of the learner who is intrinsically motivated (Mellet, 1986:62):

- A desire for internal enrichment
- Purposefulness
- He/she anticipates the realisation of a goal.
- Concentrates on the learning task.
- Perseveres and exercises.
- He is interested in the objective
- Independent study.
- Learning is for him a meaningful activity.
- Intellectually inquisitive.
- Has a strong will for successful completion of a task.
- He sets a standard for himself.
- Unsuccessful first attempts are not regarded as total failures and they are repeated.

3.4.4.4 Some characteristics of a learner who is extrinsically motivated (Mellet, 1986:64):

- He usually feels uncertain about himself and doubts his abilities.
- He is not creative
- His task-orientation is mainly dependent on external pressure or encouragement.
- He lacks the urge to extend his basic knowledge further.
- He shows a high rate of lack of dedication and does nothing further than what is required of him.
- He is usually pessimistic about his chances of success.
- He strives mainly for the achievement of short-term goals.
- He is heavily dependent on the assistance of the teacher and other external factors such as acknowledgement, approval and encouragement.
- He is usually anxious and tense due to a possible danger of failure.
- He strives for social approval from friends, teachers, parents and other adults.

3.4.4.5 Differences between intrinsic and extrinsic motivation

In conclusion, the differences between intrinsic and extrinsic motivation are now given in the form of a table (Mellet, 1986:66).

Table 3.2: Differences between intrinsic and extrinsic motivation

Intrinsic motivation	Extrinsic motivation
Originates internally.	Originates externally.
Cognitively rooted.	Ego-strengthening (from externally).
Forms the basis for meaningful learning.	Forms the basis for mechanical learning.
Aims at achievement of short-term goals as well as long-term goals.	Mainly aims at short-term goals.
No external stimulus is needed.	Depends on external stimulus (e.g pressure).
Positive in nature and has an element of satisfaction and pleasure.	Can be negative also, such as fear for failure and punishment, uncertainty.
Interest, perseverance, desires, attitudes and wishes are important.	The emphasis is on approval, reward, punishment, competition, prices, certificates, etc.

3.5 Summary

This chapter has offered an in-depth discussion on self-concept, attitude and motivation, with more emphasis on educational context. It can be concluded that these variables are influential in learning and academic achievement. The following are brief indications, deduced from definitions and descriptions by various authors, of how the information gathered from literature sources on self-concept, attitude and motivation relates to learning and academic achievement and thus important for formulation of items of the questionnaire for the next chapter (chapter 4), which explains how the empirical investigation will be undertaken in this study.

3.5.1 Self-concept

What a student believes about himself with regard to the following aspects will affect his learning attempts:

- How a student views his/her academic ability when compared with other students.
- Perceptions of the student relative to his/her intellectual or academic skills.
- The student's level of aspiration with regard to academic performance.
- The extent to which the student feels accepted as opposed to feelings of isolation and rejection.
- The student's ability and willingness to take leadership roles and being initiative.

3.5.2 Attitude

A student's attitude, whether positive or negative, stems mainly from his evaluation of his own experiences with regard to the learning situation as it is indicated in the following examples:

- The student's attitude towards the institution.
- The student's attitude towards academic activities in general.
- How the student views his/her relationship with fellow students.
- How the student views his/her relationship with the lecturers.
- How the student views his/her field of study.

3.5.3 Motivation

The way a student involves himself in a learning task can indicate the extent of his motivational state. The following are examples of aspects characteristic of a student who is motivated to learn:

- The student's goal-directedness.
- Student's perseverance and strong will for successful completion of a task.
- The student's intellectual inquisitiveness.
- The student's level of interest in learning.
- The extent to which the student can study independently.

CHAPTER 4

THE EMPIRICAL INVESTIGATION

4.1 Introduction

This chapter provides an account of the way in which the empirical research has been planned, structured and executed. It focuses on systematic research methods which are used for constructing a research questionnaire and collecting data from which interpretations or conclusions are drawn after statistical analysis. Sampling of the research group, ethical considerations, the pilot study, measurement of academic achievement and administering of the questionnaire are briefly discussed.

4.2 Planning and execution of the empirical investigation

4.2.1 The research group

The sample consisted of two hundred second year students at the University of Venda. Fifty students were randomly selected from the second year class list in each of the following four Schools targeted for investigation:

- School of Management Sciences and Law (MSL).
- School of Mathematics and Natural Sciences (MNS).
- School of Environmental Sciences (ES).
- School of Human and Social Sciences (HSS).

The respondents for each sample were randomly selected from the class list of each School by first calculating the sampling interval, and then using the interval as a random selection method. For instance, to sample 50 names from 400, the sampling interval is $400/50 = 8$ (Neuman, 1997:211). After a random starting point, the researcher selects every eighth (8th) name of the 400 to get a sample of 50. The sample characteristics are shown in table 4.1.

Table 4.1: The research group (Sample Characteristics)

School	Number of Students		Total
	Male	Female	
MSL	22	21	43
MNS	29	22	51
ES	22	27	49
HSS	10 (20%)	40 (80%)	50
Total (N)	83 (43%)	110 (57%)	193

The male and female students are more or less evenly spread amongst the four Schools, except in the School of Human and Social Sciences where the female students (80%) outnumbered the male students (20%).

4.2.2 Ethical considerations

The Director of Research and Development at the University was consulted to find out if there are rules and regulations which govern the conducting of research within the campus, and if so, to obtain permission to proceed with the research. School officers (administrators) of the Schools to be investigated were consulted as well as the lecturers who assisted in granting the periods during which the questionnaires were administered to the respondents. All the respondents signed a “Declaration of consent”, thereby showing their willingness to answer the research questionnaires.

4.2.3 The pilot study

Twenty five students from the Foundation Programme in Management Sciences for 2003 served as respondents in the pilot study. The questionnaires were administered to the students as a group. It was noted during administering of the questionnaires that the respondents could follow questionnaire instructions and respond to them without difficulty and that the items in the questionnaire were well understood. It was therefore not necessary to change items or the wording in the questionnaire.

4.2.4 Measurement of academic achievement

The respondents' first semester examination results for 2003 were used as measures of academic achievement. Average percentages were calculated by adding the marks obtained by the respondents in the examination and dividing the total by the number of the modules (subjects) written.

4.2.5 The questionnaire

4.2.5.1 Construction of the questionnaire

According to Neuman (1997: 233), good survey questions give the researcher valid and reliable measures. They also help respondents feel that they understand the question and that their answers are meaningful. Questions that do not match with a respondent's view point or that respondents find confusing are not good measures. To ensure reliability of a questionnaire, the following guidelines are given by Schumacher and McMillan (1993: 240):

- **Make items clear**

Vague and ambiguous items should be avoided. Words such as a few, sometimes and usually should be avoided as they can make items unclear. For example, it can be difficult for a respondent to know what 'sometimes' really means.

- **Avoid double-barreled questions**

Double-barreled questions contain two or more ideas which are usually connected by the word 'and'. It is possible that a respondent may give two different answers.

- **Respondents must be competent to answer**

The items should enable the respondents to give their true feelings or opinions. The respondents should feel confident when they give their responses and this will make the information reliable.

- **Questions should be relevant**

It is important that questions should be about things which affect the respondents or those things which are relevant to them in one way or another.

- **Simple terms are best**

Items should be, as far as possible, simple, easy to understand, and easy to respond to.

- **Avoid negative items**

Negative items can be misleading as the respondents may not give particular attention to a negative word when they answer, with the result that they give answers which are different from what they truly wanted to say.

- **Avoid biased items or terms**

The wording of the items or the inclusion of certain terms may result in what we call 'biased items'. Biased items may encourage respondents to give particular responses more than others.

4.2.5.2 Format of the questionnaire

Schumacher and McMillan (1993:242) state that "the general layout and organisation of the questionnaire is very important. If it appears to be carelessly done or confusing, respondents are likely to set it aside and never respond". A well-designed format and appearance will stimulate interest in the respondents and this can result in co-operation and reliable responses.

The following rules by Schumacher and McMillan (1993:242) were adhered to when compiling the questionnaire:

- Printing is clear and easy to read.
- Instructions are brief and easy to understand.
- Avoid abbreviated items.
- Keep the questionnaire as short as possible.
- Use a logical sequence, and group related items together.

- Number the items and pages.
- Print response scales on each new page.

The type of items in the questionnaire are scaled items which are in the form of a question or statement followed by a scale of potential responses. The respondents check the place on the scale that best reflects their beliefs or opinions about the statement. The use of scales is the most suitable for this type of research as they can be fairly accurate in assessment of beliefs or opinions (Schumacher & McMillan, 1993). The final questionnaire is composed of forty-nine items (see appendix 1). The grouping of the items is shown in table 4.2.

Table 4.2: Grouping of items

	Item numbers	Total
Biographical	1 – 4	4
Self-Concept	5 – 19	15
Motivation	20 – 34	15
Attitude	35 – 49	15
Total		49

4.2.5.3 Items for self-concept (SC)

From the literature study (see chapters 2 and 3), the self-concept (SC) was selected as one of affective factors which have an important role in academic achievement. The following are examples of the characteristics of a student with a strong academic self-concept as identified from the literature study:

- Has a high level of aspiration in academic activities.
- Shows academic interest and satisfaction.
- Shows leadership and initiative.
- He/she anticipates the realisation of a goal.
- Attaches a lot of importance to academic ability.
- Is confident when carrying out academic tasks.

These characteristics are examples of the operational constructs of the self-concept and form the basis for the construction of items to measure the self-concept.

Fifteen items on self-concept were formulated. An example of an item which measures a student's self-concept is: 'I have trust in myself when writing tests or exams'.

4.2.5.4 Items for motivation (MOT)

From the literature study, motivation (MOT) was selected as another affective factor in this study (see chapters 2 and 3). The following examples of the characteristics of a student who is motivated were identified from the literature:

- Has a strong will for successful completion of a task.
- Conducts more independent study.
- Learning is for him a meaningful activity.
- Prefers challenge rather than easy work.
- Has a desire for internal enrichment.

These characteristics are examples of the operational constructs of motivation and form the basis for the construction of items to measure motivation.

Fifteen items on motivation were formulated. An example of an item which measures a student's motivation is: 'When I was absent from a class I will try to catch up with the work that I have missed'.

4.2.5.5 Items for attitude (ATT)

Attitude (ATT) was selected as another affective factor in this study (see chapters 2 and 3). The following are examples of students' attitudes towards academic work or educational settings as identified from the literature study:

- A positive attitude towards the institution.
- Develops a great liking for the institution.
- Willingness to assist other students.
- Positive attitude toward a particular field of study.
- Positive attitude toward the lecturers.

These characteristics are examples of the operational constructs of attitude and form the basis for the construction of items to measure attitude.

Fifteen items on attitude were formulated. An example of an item which measures a student's attitude is: 'I think lecturers are doing everything they can to make UNIVEN a good place for learning'.

4.2.6 Administering of the questionnaire

The researcher administered the questionnaire to the four groups of the sample on various occasions during normal class periods. A period of fifty minutes was sufficient as it took approximately thirty five minutes to answer the questionnaire in each session. Each respondent was given a questionnaire to which he or she had to respond. All questionnaires were retained at the end of each session. Prior to completing the questionnaire the respondents were informed that:

- They were going to be used as research subjects.
- They have the right to withdraw if they feel uncomfortable.
- It is a questionnaire and not a test. There are therefore no right or wrong answers.
- They were to give their own answers and to be as honest as possible.
- Their opinions would be treated as confidential and used for research purpose only.

One hundred and ninety three questionnaires (193) were correctly completed out of the two hundred (200) handed out. The data analysis was therefore based on these 193 questionnaires.

4.3 Data analysis

4.3.1 Methods used for analysing data

The Computer program known as the Statistical Package for Social Sciences (SPSS 11.5) was used for analysing data. The procedures used and the results obtained are discussed in paragraph 4.3.2 to 4.3.4

4.3.2 Item analysis

Item analysis is a statistical technique used to assign weights to a number of items measuring a particular construct. Item analysis results tell a researcher how well the items relate to a factor or construct (Neuman, 1997:170). An item analysis was

performed on the sections of the questionnaire measuring each of the three affective factors. The aim of item analysis is to establish whether each item makes a positive contribution to the total of that section of the questionnaire (Schnel, 2001:106). In order to determine whether to omit or retain an item, two procedures were followed. Firstly, item-total correlations were calculated and the item was omitted if the item-total correlation was very low or negative (Schnel, 2001:105). Secondly, an Alpha reliability coefficient was calculated for each section of the questionnaire, in the event that all items were retained. The Alpha reliability coefficient was also calculated when a specific item was left out. An item was omitted if doing so resulted in a significantly higher Alpha reliability coefficient. Thus, on the basis of the item-total correlation, and the Alpha reliability coefficient one can decide whether a specific item should be retained or left out (Schnel, 2001:106). The findings of the item analysis for each section are shown in Tables 4.3 to 4.5.

Table 4.3 Item analysis of the section self-concept (SC)

Item	Item- Total Correlation	Alpha if item is Deleted
Q5	.5566	.7253
Q6	.3289	.7478
Q7	.4758	.7353
Q9	.2038	.7627
Q11	.4335	.7384
Q12	.5901	.7189
Q14	.4602	.7365
Q15	.3965	.7413
Q16	.2939	.7505
Q17	.3765	.7443
Q19	.3138	.7488
Q8	.3686	.7442
Q10	.3357	.7472
Q13	.2404	.7568
Q18	.1287	.7685
N = 193	N of Items = 15	
Alpha reliability coefficient = 0.758		

There were no items which correlated negatively with the total. Therefore all items were retained.

Table 4.4 Item analysis of the section motivation (MOT)

Item	Item- Total Correlation	Alpha if item is deleted
Q20	.4232	.5204
Q23	.4340	.5270
Q24	.2920	.5493
Q26	.2567	.5525
Q28	.2779	.5553
Q29	.3080	.5491
Q30	.1849	.5664
Q31	.3555	.5435
Q32	.2345	.5658
Q33	.4227	.5288
Q34	.0705	.5901
NQ21	.1475	.5774
NQ22	.1605	.5718
NQ25	-.0492	.6319
NQ27	.1949	.5673
N of Items = 15 items		
Alpha = .5775		

One item (item 25) correlated negatively with the total and was omitted. The other items were retained.

Table 4.5. Item analysis of the section attitude (ATT)

Item	Item - Total Correlation	Alpha if item is deleted
Q35	.5864	.8118
Q36	.5819	.8128
Q37	.6405	.8088
Q38	.6478	.8076
Q39	.3834	.8253
Q40	.4576	.8211
Q41	.5986	.8106
Q42	.2080	.8336
Q43	.3609	.8268
Q44	.4369	.8227
Q45	.4698	.8202
Q46	.3137	.8289
Q47	.2782	.8324
Q48	.2221	.8321
Q49	.4804	.8195
N = 193 No. of items = 15		
Alpha = .8313		

There were no items which correlated negatively with the total. Therefore all items were retained.

4.3.3 Reliability of the questionnaire

The closer the reliability of a measuring instrument is to 1, the smaller the difference is between the variance of the actual score and the observed score (Pienaar, 1994:78). Ideally when an instrument is developed, its reliability should be as close to 1 as possible (Pienaar, 1994:78). Reliability was established by calculating the alpha reliability

coefficient for each section (see Table 4.3 to 4.5). The reliability coefficients are presented in Table 4.6.

Table 4.6. Reliability coefficients

Factor	Alpha coefficient	No. of items
Self-concept	0.7578	15
Motivation	0.5775	14
Attitude	0.8313	15

Although the reliability coefficient for motivation appears to be lower than the other two sections, the questionnaire as a whole can be regarded as a reliable measuring instrument.

4.3.4 Testing of the hypotheses and results

A total of four main hypotheses were formulated in chapter 1 (see 1.6.5). These main hypotheses are divided into sub-hypotheses and stated in the form of null hypotheses.

4.3.4.1 Hypothesis 1

The following null hypotheses will be tested:

- 1A There is no significant difference between the average self-concept scores of male and female students.
- 1B There is no significant difference between the average motivation scores of male and female students.
- 1C There is no significant difference between the average attitude scores of male and female students.
- 1D There is no significant difference between average achievement scores of male and female students.

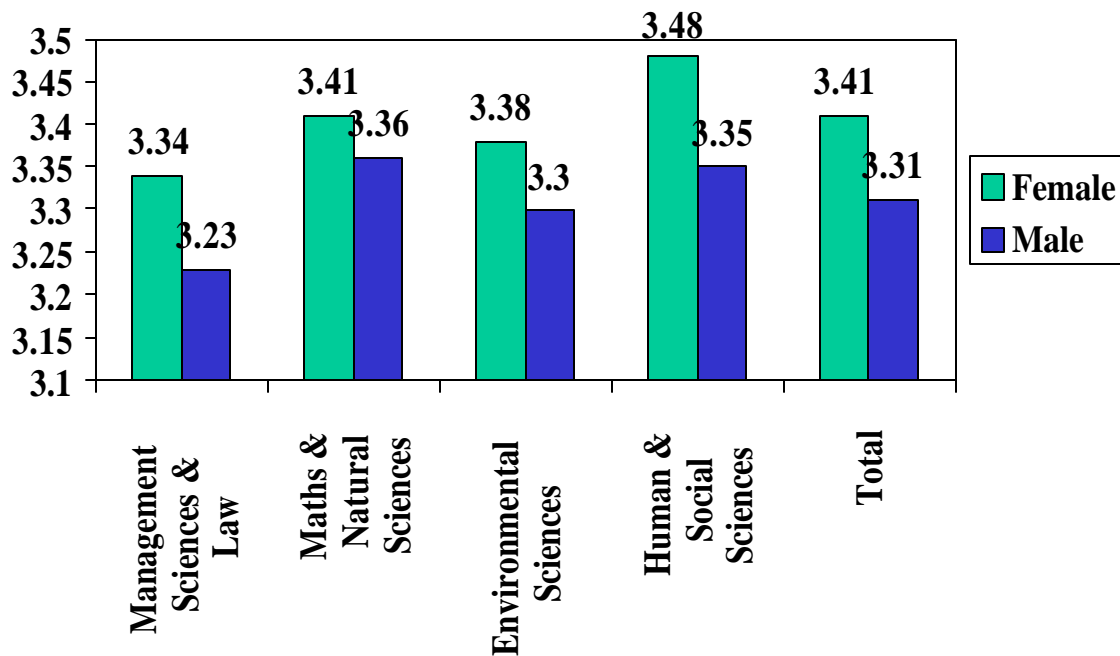
To determine whether males and females differ significantly, a t-test was used to compare the averages. The results appear in table 4.7.

Table 4.7: Difference between the mean scores for SC, MOT, ATT and ACH of male and female students

Variable	Gender	Mean	N	SD	T	df	P
SC	Male	3.180	83	0.382	0.806	191	P>0.05
	Female	3.224	110	0.362			
MOT	Male	3.306	83	0.307	2.642	191	P<0.05
	Female	3.414	110	0.259			
ATT	Male	2.881	83	0.453	1.609	191	P>0.05
	Female	2.990	110	0.476			
ACH	Male	56.08	83	7.092	0.470	191	P>0.05
	Female	56.55	110	6.483			

The t-values in table 4.7 show that there is a significant difference between the average motivation of males and females ($P < 0.05$). Hypothesis 1B can therefore be rejected. Females have higher motivation scores than males. Males and females do not differ significantly regarding their average self-concept, achievement and attitude ($P > 0.05$).

Figure 4.1: Average motivation by gender and School



According to Brophy (1998:236), boys generally place less value on engaging in academic activities than girls do, so that the quality of their engagement is more variable. They are more likely than girls to adopt work-avoidant goals or display task resistance. When they adopt learning or performance goals, however, they are likely to focus on achieving mastery or competitive success. In contrast, girls are more likely to focus on consistently putting forth their best efforts and pleasing their teachers. In a study of cooperative and competitive attitudes from grades 2 through 12 (Pintrich, Brown & Weinstein, (1994:313), girls showed consistently more positive attitudes toward cooperation in schools and boys showed consistently more positive attitudes toward competition. According to the above-mentioned authors women might view competition more in person-related terms and thus perceive these competitive situations in a more negative light, namely as situations that cast persons against each other instead of situations that aim at co-operation and giving social support. Men, on the other hand, might approach competition in a more positive way. Their mastery orientation values might lead to their appraisal of competition as more positive and as a challenge they want to live up to.

There is no significant difference between the average self-concept scores of males and females. Allen (quoted by Cokley, 2000) reports that gender is significantly associated with self-confidence. He found that Black females report higher self-confidence than Black males. In a psychometric investigation of the Academic Self-Concept Scale (ASCS), Reynolds (quoted by Cokley, 2000) found no statistically significant differences between men and women on academic self-concept. Mwamwenda(1995:366) examined sex differences in self-concept among Black African adolescent secondary school pupils in the former Transkei homeland of South Africa. The sample was made up of 59 girls with an average age of 17.7 years and 38 boys with an average age of 18 years. The results showed that there was no significant difference between boys and girls' self-concept as assessed by the Canadian self-esteem Inventory. The lack of sex difference in self-concept was attributed to the fact that both girls and boys had exposure to education. There was no question that exposure to education fosters positive self-concept in both male and female pupils. Both boys and girls in South African schools are expected to

work hard in order to pass their national examinations in the final year of secondary school. The expectations that parents and teachers have for both girls and boys are more or less the same and therefore likely to contribute positively to self-concept.

4.3.4.2 Hypothesis 2

The following null hypotheses will be tested:

- 2A There is no significant difference between the average self-concept scores of the four different Schools.
- 2B There is no significant difference between the average motivation scores of the four different Schools.
- 2C There is no significant difference between the average attitude scores of the four different Schools.

The F-test was used to determine whether there are significant differences between the average scores of SCC, MOT and ATT of the different Schools. The results appear in table 4.8.

Table 4.8: Difference between the mean scores of SC, MOT and ATT of the different schools

Schools		Mean values		
	N	SC	MOT	ATT
MSL	43	3.089	3.81	2.879
MNS	51	3.240	3.379	2.895
ES	49	3.194	3.379	2.986
HSS	50	3.280	3.453	3.005
		F(3.189)=2.275	F(3.189)=3.031	F(3.189)=0.875
		P>0.05	P<0.05	P>0.05

The F-values in table 4.8 show that the self-concept and attitude of the four Schools do not differ significantly (P>0,05). However, the F-values show that student motivation differs significantly (P<0.05) between the four Schools. Hypothesis 2B can therefore be

rejected. The School of Management Sciences and Law has significantly lower average motivation score than the School of Human and Social Sciences, which has the highest motivation score for all four Schools. The School of Human and Social Sciences shows the highest mean values for all three affective factors, while the School of Management Sciences and Law shows the lowest values for all three affective factors. The attitude scores for all four Schools are lower than self-concept and motivation scores. This is an indication of the importance of attitude in the findings of this study and it must be treated as an integral part of the other two affective factors.

4.3.4.3 Hypothesis 3

The following null hypotheses will be tested:

- 3A There is no significant correlation between achievement and self-concept scores of students.
- 3B There is no significant correlation between achievement and motivation scores of students.
- 3B There is no significant correlation between achievement and attitude scores of students.

Pearson's Product moment correlation was used to test the hypotheses. The results appear in table 4.9.

Table 4.9: Correlations between scores of SC, MOT, ATT and ACH

	ACH	MOT	SC	ATT
ACH	1.000	0.215*	0.358*	0.116
MOT		1.000	0.555*	0.335*
SC			1.000	0.245*
ATT				1.000

* Significant at 0,01 level

On the basis of the information in table 4.9, the null hypotheses 3A and 3B can be rejected. There is, however, no significant correlation between achievement and attitude scores of students.

In an investigation of academic achievement in African American College students (Cokley, 2000), there was a strong positive correlation between academic self-concept and grade point average (GPA) scores. It was also found that students with higher GPAs had statistically higher academic self-concept scores than students with lower GPAs. In a study by Kobal and Musek (2001), French students turned out to be more successful in school than Slovenians and it is further stated that the findings support the possibility that the higher academic achievement of French students is mostly related to their higher academic self-concept.

McCoach (2002) indicates that academic self-concept is a significant predictor of academic achievement. The same author further states that as much as one third of the variance in achievement can be accounted for by academic self-concept alone, positive self-concept seems to be linearly related to subsequent academic achievement. In a study to investigate the relationship between self-beliefs, academic background and achievement of adolescent Asian-American students in postsecondary education (House, 1997), academic self-concept was found to be a significant predictor of Asian- American students' subsequent academic performance. In another study (Drew & Watkins, 1998) academic self-concept was found to be directly and significantly related to the deep rather than the surface learning approach. This is probably because when a learner has a positive concept of his academic ability he is more confident in his ability and his motivation becomes intrinsic (Drew & Watkins, 1998). The above findings have shown that academic self-concept has a direct effect on student approach to studying and consequently influences achievement outcomes.

According to Castejion and Vera-Munoz (quoted by Mashile, 1999), motivation correlated positively with academic achievement, accounting for seven percent (7%) of the variance in a science cognitive test. A study by Goldberg and Cornell (1998) reveals

statistically significant correlation between intrinsic motivation and academic achievement. Mnyandu (2001) finds a significant positive correlation between intrinsic motivation and learners' performance. Deci and Ryan's self-determination theory (quoted by Mnyandu 2001) maintains that there is a positive relationship between intrinsic motivation, learning and achievement. In a study to examine the pattern of motivation associated with school achievement (Bergin, 1987), intrinsic motivation correlated significantly with grade point average (GPA).

There is no significant correlation between achievement and attitude scores of students. These results are in contrast with McCoach (2002) who reveals that students' attitudes toward their teachers and courses are positively related to their academic achievement. McCoach (2002) further states that although there seems to be a relationship between attitudes toward school and academic achievement, this does not suggest or determine any flow of causality between the two variables. Negative attitudes toward school could stem from doing poorly at school.

4.3.4.4 Hypothesis 4

The following null hypotheses will be tested:

- 4A There is no significant correlation between the scores for self-concept and motivation.
- 4B There is no significant correlation between the scores for self-concept and attitude.
- 4C There is no significant correlation between the scores for motivation and attitude.

Pearson's Product moment correlation was used to test the hypotheses. The results appear in table 4.9. The mutual correlations between the three variables are significant. Therefore, null hypotheses 4A, 4B and 4C can be rejected. There is a significant correlation between SC, MOT and ATT mutually. The fact that the three affective factors correlate significantly shows that self-concept, attitude and motivation are interrelated and influence each other mutually; the three factors should be seen as of equal importance in student learning and the enhancement of these three factors should

be pursued interdependently. There is a significant correlation between SC, MOT and ATT.

4.4 Summary

The research group consisted of two hundred second year students who were randomly selected from class lists in each of the Schools mentioned above. Administering of the questionnaire was very successful due to an appreciable co-operation from the lecturers, school administrators as well as the respondents themselves. All the respondents signed a “Declaration of consent” form to show their willingness to participate in the research. The respondents’ first semester examination results for 2003 were used as measures of academic achievement.

The following results were obtained after testing the hypotheses:

- There is no significant difference between the average self-concept scores of males and females.
- There is a significant difference between the average motivation scores of males and females.
- There is no significant difference between the average attitude scores of males and females.
- The School of Management Sciences and Law has a significantly lower average motivation score than the other Schools.
- The four Schools do not differ significantly regarding their average scores for self-concept and attitude.
- There is a significant correlation between achievement and the self-concept of students.
- There is a significant correlation between achievement and motivation of students.
- There is no significant correlation between achievement and attitude of students.
- There is no significant difference between males and females regarding their average achievement scores.

- There is a significant correlation between self-concept, motivation and attitude mutually.

In conclusion, it is important to note that the results of the empirical investigation tally very well with the information gathered from the literature study. For example, the positive correlation between academic achievement and the self-concept of students has been indicated by various authors in the literature. One can, on the basis of these findings, say that self-concept, motivation and attitude play an important role in academic achievement of students. It is therefore imperative that educationists should pay particular attention to implications of the findings as well as the recommendations.

Conclusions, implications for educationists and recommendations of the study will be discussed in chapter five.

CHAPTER 5

CONCLUSIONS, IMPLICATIONS FOR EDUCATIONISTS AND RECOMMENDATIONS

5.1 Introduction

In the learning situation it is a common occurrence that some students achieve good results while others perform poorly. Certainly, students' perceptions about themselves, their attitudes toward academic work, and motivations influence their academic achievement. Self-perceptions (self-concept), attitudes and motivations are affective (psychological) factors which are said to be correlated with students' academic achievement by various researchers in literature sources.

The purpose of this study is to determine the relationship between the above-mentioned affective factors and academic achievement of students at UNIVEN. The aim of chapter five is to demonstrate whether the investigation has provided answers to the initial statement of the problem. Conclusions and implications for educators are discussed in this chapter and recommendations for enhancing academic achievement are given.

5.2 The theoretical study: summary of findings, discussion and conclusion

5.2.1 Introduction

The theoretical study (chapter 2 & 3) has yielded valuable insights with regard to the role of affective factors in learning and academic achievement. The following is a summary of the findings of the theoretical study.

5.2.2 Affective factors and their importance in learning and academic achievement

5.2.2.1 Students' perceptions about themselves

What students believe about themselves affects their learning and ultimately their achievement in academic work. Students who see themselves as academically incapable are likely to experience feelings of failure, rejection or defeat. Students who are confident that they can achieve better are more likely to try and thus are more likely to succeed. Students who are less confident will show less involvement in academic tasks and are therefore likely to experience failure.

5.2.2.2 The classroom situation

The way the teacher/lecturer interacts with students in class can be a motivating or demotivating factor. Teachers who are sensitive to the feelings and beliefs of students are far likely to be successful in their motivation attempts than those who are ignorant of the affective aspects of students.

5.2.2.3 How the students view an institution

It is likely that a student develops a general attitude toward an institution which may influence his affectivity when performing academic tasks. Is the institution doing enough to make students feel that they are being cared for? A student's attitude, whether it is favourable or unfavourable, stems mainly from his/her generalization of his/her own experiences with regard to the institution and learning.

5.2.2.4 Motivated students

Students who are motivated to learn involve themselves in activities which ultimately lead to academic achievement. Such students attend and participate actively in the learning process and they tend to develop good working relationships with their lecturers. In contrast, students who are unmotivated may be inattentive in class and not organised. They may be reluctant to ask for help when they do not understand what is being taught.

5.2.3 Self-concept

Based on the definitions and descriptions of different authors, one may view self-concept as the way an individual regards himself/herself and as a psychological concept which forms an integral part of a person's personality. It is unique, as no two individuals can have the same or equal self-concepts. The ideas, beliefs and attitudes we have about ourselves are never static, as they can change from positive to negative.

In the learning situation, a student with a positive self-concept stands a better chance of performing better than a student with a negative self-concept. A student should therefore always strive toward developing a positive self-concept rather than a negative self-concept. A student may develop a positive self-concept if he/she feels confident with regard to academic ability, intellectual or academic skills and taking a leadership role, among others. Success in academic tasks can lead to the development of a positive self-concept while, on the other hand, failure can lead to experiencing of feelings of rejection, isolation, worthlessness and consequently a negative self-concept.

5.2.4 Motivation

Motivation can be regarded as a driving force or an urge behind what an individual does. There is always a motive or an urge which causes an individual to act in a particular way. A desire to do well in a task can be a driving force behind an individual's success. A motivated person tries to achieve to the best of his/her abilities and to be consistent in that achievement.

In the learning situation, students who are motivated show several characteristics, such as regular class attendance, preparing for classes, participating in class activities and obtaining good passes in tests and examinations. It is important to note that even when students show these characteristics, they may be either intrinsically, or extrinsically motivated. Intrinsic motivation is an inner drive which stems from an individual's own desires, curiosity and interests. This type of motivation sustains learning. Extrinsic motivation, on the other hand, is the driving force or impetus which stems from without the learner. The reason for an activity may be to gain parents' or teachers' approval or

praise, to work for some reward or gain high marks, etcetera. Extrinsic motivation is dependent on continuous reinforcement for if it is withheld, motivation may cease.

5.2.5 Attitude

In the learning situation it is common that a student develops a positive or negative attitude towards a certain subject or lecturer. The development of such an attitude may be due to a perception or belief which the student has about the lecturer. An attitude may be defined as a perception or belief which develops in an individual after evaluation of a certain experience, topic or issue, and this perception or belief may be of a positive or negative nature. An attitude can therefore influence an individual to behave in a particular manner. A student may develop a positive or negative attitude towards the institution, academic activities, fellow students, the lecturers and the field of study he/she has chosen.

5.3 The empirical study: summary of findings, discussion and conclusion

- Based on the information from the empirical study, it can be concluded that female students are significantly more motivated than their male counterparts. Females appear to be consistent in their involvement in academic activities whereas males tend to accept their shortcomings and do not try hard to overcome them. Males, it can be concluded, react strongly to academic challenges when they are faced with tests and examinations in order to pass or obtain high marks. Females, on the other hand, regard their lecturers and academic work positively and try their best even when encountering difficulties.
- There are no significant differences between male and female students regarding their mean scores for self-concept, attitude and achievement.
- There is a significant correlation between academic achievement and self-concept. Although disagreeing about the direction of causality, numerous researchers have demonstrated a positive relationship between self-concept and academic achievement. Researchers consistently agree that there is a relationship between students' evaluations of themselves and their level of academic achievement. One can therefore conclude that students who have more positive perceptions of

themselves and their abilities are more persistent at academic tasks than those who have poor self-concepts.

- It was also found that there is a significant correlation between motivation and students' academic achievement. Various researchers in the literature study also indicated a positive relationship between motivation and academic achievement.

- It has been found that students' attitudes do not correlate significantly with their achievement. This is a direct contradiction of the literature study which revealed that students' attitudes toward their teachers and courses are positively related to their academic achievement.

- When the four Schools are compared regarding each of the three selected affective factors, the following was found:
 - There is a significant difference between the mean motivation scores of students of the four different Schools. However, the four Schools do not differ significantly regarding their mean scores for self-concept and attitude.
 - The School of Management Sciences and Law has a significantly lower average motivation score than the School of Human and Social Sciences, which has the highest motivation score for all four Schools. The School of Human and Social Sciences shows the highest mean values for all three affective factors, while the School of Management Sciences and Law shows the lowest values for all three affective factors. The attitude scores for all four Schools are lower than self-concept and motivation scores. This is an indication of the importance of attitude in the findings of this study and it must be treated as an integral part of the other two affective factors. The School with a higher average motivation score is expected to achieve higher than the School with a lower average motivation score. The fact that there is no difference in achievement across Schools may be due to students' apparent diverse levels of motivation, which seem to peak during

examination times. This type of motivation appears to be extrinsic and students' serious engagement in academic tasks tends to aim at obtaining high marks or pass examinations.

5.4 Recommendations and implications

It has been indicated in the preceding sub-sections that motivation is an important factor in academic achievement. It is therefore essential that educationists should understand the differences in motivational orientations of their students in order to facilitate effective learning. Educationists need to help students to focus not only on the extrinsic gains such as passing tests or examinations but to also stimulate them intrinsically to be involved proactively in their academic tasks.

The literature is filled with reports indicating that learning increases when self-concept increases. The data analysis of the empirical study has also revealed a positive relationship between self-concept and academic achievement. It is therefore true that one's self-concept affects effort which, in turn, affects success. Students have a concept of themselves – as learners generally, and also as learners of specific subjects. Students require sufficient confidence in themselves and their abilities to make some effort to succeed. It is the responsibility of the educationists to provide a wide range of learning activities that will enhance the self-concepts of their students.

Attitude was found to be significantly related to self-concept and motivation. According to Ruggiero (1998:13), an attitude is habitual emotional response driven by belief. Beliefs are ideas we hold to be true. Before students can be motivated to alter their attitudes, they must first understand which ones are beneficial and which create obstacles to their success and personal fulfilment. Educationists should help students analyse their own behaviour and evaluate the underlying beliefs and decide whether they are reasonable or not.

In the following sections recommendations and implications based on the findings of this study are given. These serve as guidelines that can be utilized by educationists, the

Institution and the Centre for Student Counseling, Social and Academic Development to enhance the affective factors of the students which may, in turn, lead to better academic achievement.

5.4.1 Educationists

- Educationists should communicate a sense of caring and a sense of students' personal worth. This can have a significant impact on self-concepts of students.
- Educationists should help students see themselves as capable of learning rather than making them feel hopeless and incapable.
- If educationists can be truly open to their students and accept them for who they are, then they too will begin to accept themselves as worthwhile beings.
- Beane (quoted by Purkey and Novak, 1996) suggests three general approaches to improving student self-concept:
 - One approach involves such activities as sensitivity training. For example, students might sit in a circle for 15 minutes once a week and talk about how much they like themselves.
 - A second approach involves introducing self-concept courses or programs that are taught during the school day. These would include locally prepared instruction units built around self-esteem exercises.
 - A third approach to addressing self-concept is to consider the importance of the total school environment as an ecological system in which positive and realistic self-concepts can be fostered.
- Educationists should perceive students as valuable. When educationists perceive their students positively, they are more likely to involve themselves with their students, both personally and professionally. Education should be a co-operative exercise. An atmosphere of mutual respect and positive regard increases the likelihood of co-operation and students' success in a learning situation.
- Educators should teach for understanding, appreciation and application of the learning material.
- Help students set goals, evaluate their progress and recognize the outcomes of their efforts.

- Respond to students' autonomy needs by encouraging them to function as autonomous learners and allowing them to make choices.
- Stimulate situational motivation to learn by making abstract content more personal, concrete or familiar. Students can, for example, be encouraged to:
 - Relate new subject matter to existing knowledge. They should try to associate new facts with facts they have known for some time.
 - Look for links between the subject matter and their own ways of life.
 - Make use of their knowledge.
- Create an environment in which students can discover that their serious effort toward learning makes it possible for them to attain a sense of academic competence. Students should have some opportunities of applying their knowledge in the following:
 - Interacting with fellow students on chosen subjects or topics in other institutions.
 - Work places relevant to their fields of study.
 - Rendering services in the community.
- Be enthusiastic about course content and find ways to make learning more interesting and enjoyable.
- Develop student self-regulatory capabilities: According to Alderman (1999), self-regulation entails characteristics such as goal-directedness, self-initiativeness and self-control, and the degree to which students are active participants in their own learning.
- See students as responsible. According to some research findings (Purkey & Novak, 1996), feelings of self-control and personal responsibility elicit more creative thinking in students and encourage greater cognitive flexibility and persistence. Students choose to learn just as they choose not to learn in the face of ridicule, embarrassment or coercion. Students will elect to learn those things they perceive to be significant in their personal lives. Educationists should, therefore, see to it that classes are conducted in such a way that students consistently perceive the significance of course content.

- Educationists should try to resocialise the attitude and behaviours of apathetic students by developing and working in close relationships with them, discovering and building on their existing interests, helping them to develop and sustain more positive attitudes towards academic work. Educationists should be able to do the following:
 - Identify students who are experiencing emotional problems.
 - Refer such students to relevant professionals for assistance.
 - Help such students to cope with academic work.

5.4.2 The Institution (UNIVEN)

- The University should create a teaching and learning environment that will encourage students to reach their full potential, that is supportive of students from disadvantaged backgrounds.
- It should provide safe and well-equipped learning facilities that will make learning meaningful and valuable for students, including those facilities designed specifically for disabled students. As a University of Science and Technology, it should see to it that the necessary and proper science facilities are made available to the relevant departments.
- It should strive to provide the best administrative services, especially with regard to students' needs.
- The university should try to promote excellence and innovation in teaching and learning by recruiting and retaining well-qualified staff and providing staff and students with access to relevant academic development programmes. The university should, among others, see to it that:
 - Various study fields are catered for with regard to affiliation or accreditation to relevant bodies or organizations.
 - There are mechanisms which are specifically for the needs of staff members, including those who may be intending to leave.
- It should make provision for sufficient financial aid for needy students. The majority of students at the university are from poor financial backgrounds. The university should try to cater for needy students by:

- embarking on vigorous fund-raising programmes.
- Recruiting more donors who can give financial assistance to students in the form of bursaries, loans, scholarships, etcetera.
- It should provide a variety of residential, sporting, cultural and leadership opportunities for the development of students.
- It should provide a safe and enabling student support system.
- Provision of a safe environment that is conducive to learning is imperative.
- Provision of sufficient accommodation for proper running of all sectors of the university.

5.4.3 Centre for Student Counselling, Social and Academic Development

Being at university can be frustrating. Many students have difficulties in dealing with problems such as family pressures, loneliness, relationships and other personal issues or coping with the teaching and learning styles at university or uncertainty about career direction. All these can have a negative impact on the affectivity of the students. The Centre for Student Counselling, Social and Academic Development should see to it that there are properly trained professionals to offer the following services to all students, both on an individual or group basis:

- **Counselling/Therapy**

Individual and group counselling/therapy for any personal, interpersonal and developmental problems.

- **Academic and Learning Skills Development**

The focus should be on study skills, time management, stress management, preparing for and handling of examinations.

- **Psycho-educational programmes**

Programmes such as self-esteem enhancement, assertiveness training, leadership training and self-awareness should be made available to students.

- **Career Development**

This involves helping students choose careers for which they are well-suited and from which they gain satisfaction. It includes career planning, guidance and psychological assessment which, in turn, ensures that students make career choice decisions in accordance with their aptitudes, interests and personalities.

5.5 Limitations of the study

The following are some limitations of this study:

- Only students at a single institution (UNIVEN) were included in the study. Further research incorporating students at other institutions would allow an investigation of the generalisability of the findings.
- Another limitation of the study is that only second year students were included. Additional study is needed to determine if the results would be consistent for students in other levels such as first year, third year and post-graduate.

5.6 Suggestions for future research

- Further research is needed to further investigate the relationship between affective factors such as self-concept and students' achievement in specific academic subjects.
- The empirical investigation of this study has revealed a significant correlation between self-concept, motivation and attitude. Further research could be done to develop programmes for enhancing these affective factors and consequently improving students' academic achievement.
- Research can be done to assess learners' motivation longitudinally at multiple points of individual school career to better understand how and where motivation may fluctuate.

- Further research can be done to explore how the values and beliefs that learners attach to education affect the manner in which they spend effort on classroom achievement.

5.7 Concluding remarks

The purpose of this study, as indicated in the statement of the problem (see 1.5), is to investigate the relationship between selected affective factors and academic achievement of students at UNIVEN. Self-concept, motivation and attitude are affective factors selected for this study. The literature sources indicate that there is a relationship between students' self-concepts, motivation, attitudes and academic achievement.

The empirical investigation reveals that there is a significant correlation between self-concept, motivation and academic achievement of students. The empirical investigation also reveals that there is a significant correlation between self-concept, motivation and attitude. One can therefore conclude that these affective factors do play a role in the academic achievement of students. It is also important to note that these affective factors cannot be treated as separate entities, but as an interdependent collective.

It is the researcher's sincere hope that the implications of the findings and the recommendations based thereon will be taken into consideration since this can go a long way towards enhancing students' self-concepts, motivation and attitudes with regard to academic work. This can lead to an increase in students' academic achievement. It is also the wish of the researcher that further research should be conducted in the areas specified.

Appendix 1

Questionnaire

Instructions

- (i) This is a questionnaire and not a test. There are therefore no right or wrong answers. Your opinion is what is wanted.
- (ii) Make sure that you answer all the questions.
- (iii) Provide your choice to each statement honestly.

Answer the first 4 items in this page by writing the appropriate number in the open box in the column on the right.

1. What is your gender (sex)?
Female = 1, Male = 2 K1
2. What average percentage did you get in the half-year examinations? K2-3
3. What is your age (in years)? K4-5
4. In which school are you registered? K6
 - School of Management Sciences and Law = 1
 - School of Mathematics and Natural Sciences = 2
 - School of Environmental Sciences = 3
 - School of Human and Social Sciences = 4

Answer questions 5 – 49 by writing the appropriate number of your choice in the box on the right. The numbers have the following meanings:

- 4 = Strongly Agree
- 3 = Agree
- 2 = Disagree
- 1 = Strongly Disagree

Please turn over to start answering.

Strongly Agree=4	Agree=3	Disagree=2	Strongly Disagree=1
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			For Office use only
5.	I am satisfied with my academic work	<input type="checkbox"/>	K7
6.	I try my best when assignments are difficult	<input type="checkbox"/>	K8
7.	I have trust in myself when writing tests or exams	<input type="checkbox"/>	K9
8.	I feel that I am not good at all in my academic work	<input type="checkbox"/>	K10
9.	I do not mind if my lecturer asks me to answer questions in class	<input type="checkbox"/>	K11
10.	My parents/guardians and other people think I am a failure in my academic work	<input type="checkbox"/>	K12
11.	My lecturers are satisfied with my work	<input type="checkbox"/>	K13
12.	I am proud of my academic performance	<input type="checkbox"/>	K14
13.	I find it difficult to cope with my studies	<input type="checkbox"/>	K15
14.	I act with confidence when doing my academic tasks	<input type="checkbox"/>	K16
15.	I feel that I have a sense of purpose and direction as a student	<input type="checkbox"/>	K17
16.	I deal with academic challenges effectively	<input type="checkbox"/>	K18
17.	I feel that I am responsible and accountable for my academic work	<input type="checkbox"/>	K19
18.	My academic performance does not measure up to the standard of others	<input type="checkbox"/>	K20
19.	I have perseverance when completing my academic work	<input type="checkbox"/>	K21

Strongly Agree=4	Agree=3	Disagree=2	Strongly Disagree=1
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			For Office use only
20.	Even though I do not like a subject I still work hard to obtain high marks	<input type="checkbox"/>	K22
21.	I lose interest in my studies after the first few days of a new semester	<input type="checkbox"/>	K23
22.	I give up easily when I battle with my studies	<input type="checkbox"/>	K24
23.	I work hard in my studies	<input type="checkbox"/>	K25
24.	I like the subjects (modules) that I am studying	<input type="checkbox"/>	K26
25.	I become discouraged when I obtain lower marks in a test	<input type="checkbox"/>	K27
26.	I am eager to do well in my studies	<input type="checkbox"/>	K28
27.	I do not like to study for tests or exams	<input type="checkbox"/>	K29
28.	I want to achieve as high as possible in the coming exams	<input type="checkbox"/>	K30
29.	I pay attention in my classes	<input type="checkbox"/>	K31
30.	I like challenges in my studies	<input type="checkbox"/>	K32
31.	I work as hard as I can in my studies	<input type="checkbox"/>	K33
32.	My studies are important for my future	<input type="checkbox"/>	K34
33.	When I was absent from a class I will try to catch up with the work that I have missed	<input type="checkbox"/>	K35
34.	I enjoy the courses that I take at UNIVEN	<input type="checkbox"/>	K36
35.	I feel that lecturers understand the needs and interests of students	<input type="checkbox"/>	K37

Strongly Agree=4	Agree=3	Disagree=2	Strongly Disagree=1
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			For Office use only
36.	I enjoy the lecturing styles of my lecturers	<input type="checkbox"/>	K38
37.	I feel that lecturers are friendly and helpful	<input type="checkbox"/>	K39
38.	I think lecturers are doing everything they can to make UNIVEN a good place for learning	<input type="checkbox"/>	K40
39.	I have good relationships with my lecturers	<input type="checkbox"/>	K41
40.	I support UNIVEN when talking to strangers (other people)	<input type="checkbox"/>	K42
41.	I am proud to be a student at UNIVEN	<input type="checkbox"/>	K43
42.	I attend my classes regularly	<input type="checkbox"/>	K44
43.	I attend social gatherings and other activities at UNIVEN regularly	<input type="checkbox"/>	K45
44.	Administrative services for students are good at UNIVEN	<input type="checkbox"/>	K46
45.	I think my degree will be valuable and marketable when I graduate from UNIVEN	<input type="checkbox"/>	K47
46.	I enjoy the company of my fellow students	<input type="checkbox"/>	K48
47.	I feel that students are doing enough in helping each other with academic tasks	<input type="checkbox"/>	K49
48.	I am serious with my studies at UNIVEN	<input type="checkbox"/>	K50
49.	I think one can learn a lot from other students at UNIVEN	<input type="checkbox"/>	K51

Very important: Please, check again to see whether you did not omit any statement. All the information you provide will be treated with confidentiality.

Thank you for your co-operation!!

BIBLIOGRAPHY

ADETUMBI, M. (1992). *You are a better student than you think: a guide to memory improvement, effective study skills, and motivation for academic success*. Huntsville: Adex Book Company.

AIKEN, L.R. (2002). *Attitudes and related psychosocial constructs: theories, assessment and research*. Thousand Oaks: Sage Publications.

ALDERMAN, M.K. (1999). *Motivation for achievement: possibilities for teaching and learning*. New Jersey: Lawrence Erlbaum Associates.

BELL, F.H. (1978). *Teaching and learning mathematics*. IOWA: Wm. C. Brown Company Publishers.

BERG, A.S. (1990). *The relationship between self-concept, family factors and academic achievement*. MEd dissertation. Johannesburg: University of the Witwatersrand.

BERGIN, D.A. (1987). *Intrinsic motivation for learning, out-of-school activities, and achievement*. Stanford University Ph.D thesis. Michigan: Stanford University.

BLOOM, B.S. (1976). *Human characteristics and school learning*. New York: McGraw Hill Book Company.

BRACKEN, B.A. (1996). *Handbook of self-concept: development, social, and clinical considerations*. New York: John Wiley & Sons, Inc.

BROPHY, J. (1998). *Motivating students to learn*. Michigan State University: McGraw-Hill.

BROWN, S; ARMSTRONG, S & THOMPSON, I. (1978). *Motivating students*. London: Kegan Page Limited.

BURNS, R.B. (1984). *The self-concept: theory, measurement, development and behaviour*. New York: Longman Group Limited.

BYRNE, B.M. (1996). *Measuring self-concept across the life span: issues and instrumentation*. Washington, DC: American Psychological Association.

CANFIELD, J. & WELLS, H.C. (1994). *100 Ways to enhance self-concept in the classroom: A handbook for teachers, counsellors and group leaders*. Massachusetts: Allyn and Bacon.

CHAPMAN, E.N. (1990). *Attitude: your most priceless possession*. Los Altos: Crisp Publications.

CHETTY, P. (1996). *The influence of pupils' perceptions on their academic achievement*. MEd dissertation. Pretoria: University of South Africa.

CHRISTIANSON, S.A. (1992). *The handbook of emotion and memory: research and theory*. Hillsdale: Lawrence Erlbaum Associates.

COKLEY, K. (2000). An investigation of academic self-concept and its relationship to academic achievement in African American college students. *Journal of Black Psychology*, volume 26(2): 148-164.

COMBS, A.W. (1982). Affective education or none at all. *Educational Leadership*, Volume 39(7): 495-497.

DREW, P.Y. & WATKINS, D. (1998). Affective variables, learning approaches and academic achievement: a causal modelling investigation with Hong Kong tertiary students. *British Journal of Educational Psychology*, volume 68:173 – 188.

DU TOIT, L.B.H. (1996). *Survey of study habits and attitudes (Form C)*. Pretoria: Human Sciences Research Council.

EAGLY, A.H. & CHAIKEN, S. (1993). *The psychology of attitudes*. Orlando: Harcourt Brace Jovanovich, Inc.

ELLIS, D. (1994). *Becoming a master student*. Boston: Houghton Mifflin.

GOLDBERG, M.D & CORNELL, D.I. (1998). The influence of intrinsic motivation and self-concept on academic achievement in second- and third-grade students. *Journal for the Education of the Gifted*, volume 21 (2): 179 – 205.

GOUWS, E. & KRUGER, N. (1994). *The adolescent: an educational perspective*. Durban: Butterworths.

GUINNESS, A.E (Ed.). (1990). *ABC's of the human mind: a family answer book*. New York: The Reader's Digest Association, Inc.

HATTIE, J. (1992). *Self-concept*. New Jersey: Lawrence Erlbaum Associates, Inc.

HEAD, J. 1981. Personality and the learning of mathematics. *Educational studies in mathematics*, volume 12(3):339-350.

HENERSON, M.E. (1987). *How to measure attitudes*. California: Sage Publications.

HOUSE, J.D. (1997). The relationship between self-beliefs, academic background, and achievement of adolescent Asian American students. *Child Study Journal*, volume 27(2): 94–111.

KOBAL, D. & MUSEK, J. (2001). Self-concept and academic achievement: Slovenia and France. *Personality and Individual Differences*, volume 30:887-899.

KREBS, D. & SCHMIDT, P. (Eds). (1993). *New directions in attitudes measurement*. Berlin: Walter de Gruyter & Co.

KUHLEMEIER, H. (1996). Attitudes and achievements in the first year of German Language Instruction in Dutch secondary education. *The Modern Language Journal*, volume 80(4): 494 – 508.

LEONDARI, A; SYNGOLLITOU, E & KIOSSEOGLOU, G. (1998). Academic achievement, motivation and possible selves. *Journal of Adolescence*, volume 21: 219 – 222.

LOWMAN, J. (1990). *Mastering the techniques of teaching*. San Francisco: Jossey Bass Publishers.

MASHILE, E.O. (1999). *Psychological and social factors related to physical science achievement and attitude of secondary school students*. DEd thesis. Pretoria: University of South Africa.

McCOACH, D.B. (2002). A validation study of the school attitude assessment survey. *Measurement and Evaluation in Counselling and Development*, volume 35:66-77.

McEACHRON-HIRSCH, I. (Ed.). (1993). *Student self-esteem: integrating the self*. Lancaster: Technomic Publishing Company.

MELLET, S.M.(1983). *Die invloed van enkele nie-kognitiewe persoonlikheid faktore op die leerprestasie in wiskunde van a groep standerd ses-leerlinge*. MEd dissertation. Pretoria: University of South Africa.

MELLET, S.M. (1986). *Die motivering van wiskundeleerlinge*. DEd thesis. Pretoria: University of South Africa.

MNYANDU, P.T. (2001). *The relations between self-determination, achievement motivation and academic achievement*. UNISA MA Dissertation. Pretoria: University of South Africa.

MOHSIN, S.M. (1990). *Attitude: concept, formation and change*. New Delhi: Wiley Eastern Limited.

MOUTON, J. (1996). *Understanding social research*. Pretoria: J.L. van Schaik Publishers.

MWAMWENDA, T.S. (1995). *Educational psychology: an African perspective*. Durban: Butterworth.

NEUMAN, W.L. (1997). *Social research methods: qualitative and quantitative approaches*. Massachusetts: Allyn & Bacon.

O'KEEFE, E.J. 1993. *Self-management for college students: the ABC approach*. New York: Partridge Hill Publishers.

PADWAL, R.S. (1984). The relationship of self-concept to intelligence, anxiety and academic achievement. *S.S.T.A Research Report* No. 108.

PETRICK, H.C; WIECHERS, E & OOSTHUIZEN, J.D.L. (1990). *School guidance & counselling (B.Ed): only study guide for OSV451-3*. Pretoria: University of Pretoria.

PETTY, R.E. & CACIOPPO, J.T. (1996). *Attitudes and persuasion: classic and contemporary approaches*. Colorado: Westview Press.

PIENAAR, G.E. (1994). *The role of time perspective in the career choice of secondary school pupils*. Unpublished MEd dissertation. Pretoria: University of South Africa.

PINTRICH, P.R; BROWN, D.R & WEINSTEIN, C.E (Eds.) (1994). *Student motivation, cognition, and learning: essays in honor of Wilbert J. McKeachie*. New Jersey: Lawrence Erlbaum Associates.

PINTRICH, P.R. & SCHUNK, D.H. (2002). *Motivation in education: theory, research, and applications*. New Jersey: Pearson Education, Inc.

PURKEY, W.W. & NOVAK, J.M. (1996). *Inviting school success: a self-concept approach to teaching, learning and democratic practice*. Belmont: Wadsworth Publishing Company.

RAJECKI, D.W. (1990). *Attitudes*. Sunderland: Sinauer Associates.

RAFFINI, J.P. (1996). *150 Ways to increase intrinsic motivation in the classroom*. Massachusetts: Allyn & Bacon.

RECHLER, R. (1992). *Student motivation, school culture, and academic achievement: what school leaders can do*. Oregon: University of Oregon.

REED, E.S; TURIEL, E. & BROWN, T. (Eds.) (1996). *Values and knowledge*. New Jersey: Lawrence Erlbaum Associates, Inc.

RICE, F.P. (1996). *The Adolescent: development, relationships and culture*. Massachusetts: Allyn & Bacon.

RICKSON, S.C. (1977). *Self-esteem, reference group orientation, and academic achievement*. Unpublished Ph.D thesis. Washington: University of Washington

RUGGIERO, V.R. (1998). *Changing attitudes: a strategy for motivating students to learn*. Massachusetts: Allyn & Bacon.

SALILI, F; CHIU, C.Y. & HONG, Y.Y. (2001). *Student motivation: the culture and context of learning*. New York: Kluwer Academic/Plenum Publishers.

SCHNEL, N.D. 2001. *Guidance implications related to the eating habits of adolescents*. Unpublished MEd dissertation. Pretoria: University of South Africa.

SCHUMACHER, S. & McMILLAN, J.H. (1993). *Research in education: A conceptual introduction*. New York: Harper Collins College Publishers.

SNODGRASS, J.G. & THOMPSON, R.L. (Eds.) (1997). *The self across psychology: self-recognition, self-awareness, and the self-concept*. New York: New York Academy of Sciences.

STIPEK, D. (1998). *Motivation to learn: from theory to practice*. Massachusetts: Allyn & Bacon.

THORKILDSEN, T.A. & NICHOLLS, J.G. (2002). *Motivation and the struggle to learn: responding to fractured experience*. Boston: Allyn and Bacon.

TULLOCH, S (Ed.). (1993). *The reader's digest Oxford complete wordfinder*. London: Oxford University Press.

UPMEYER, A. (1989). *Attitudes and behavioral decisions*. New York: Springer-Verlag Inc.

VAN DEN AARDWEG, E.M & VAN DEN AARDWEG, E.D. (1988). *Dictionary of educational psychology*. Pretoria: E & E Entreprises.

VOLET, S & JARVELA, S (Eds.). (2001). *Motivation in learning contexts: theoretical advances and methodological implications*. Oxford: Elsevier Science Ltd.

VREY, J.D. (1979). *The self-actualising educand*. Pretoria: University of South Africa.

WADSWORTH, B.J. (1996). *Piaget's theory of cognitive and affective development: foundations of constructivism*. New York: Longman.

YAWORSKI, J; WEBER, R & IBRAHIM, N. (2000). What makes students succeed or fail? The voices of developmental college students. *Journal of College Reading and Learning*, volume 30(2):194 – 217.