HOME FACTORS RELATED TO POOR ACADEMIC PERFORMANCE IN NORTH WEST PRIMARY SCHOOLS

by

ESTHER DIBOANENG MONYELA

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SUPERVISOR: DR S BURGER

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DECLARATION

I declare that HOME FACTORS RELATED TO POOR ACADEMIC PERFORMANCE IN NORTH WEST PRIMARY SCHOOLS is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

ESTHER DIBOANENG MONYELA
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KEY WORDS

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SOCIO-ECONOMIC STATUS
EDUCATIONAL LEVEL OF PARENTS
FAMILY SIZE
STRUCTURE OF THE FAMILY
HOME FACTORS RELATED TO POOR ACADEMIC PERFORMANCE IN NORTH WEST PRIMARY SCHOOLS

by

ESTHER DIBOANENG MONYELA

Degree : Master of EDUCATION
Department : Psychology of Education
Promoter : Doctor S. Burger
University : University of South Africa

A literature and an empirical study were undertaken to investigate home factors affecting the academic performance of a group of learners in three primary schools in the Brits district.

From the literature it became evident that the early years of an individual’s life are critical for development, especially cognitive development. Parents, as a child's primary educators have an important role to play in their child's cognitive development. By establishing a challenging and stimulating environment in which the child is exposed to a variety of experiences, the parents can enhance their child's cognitive development and by implication his/her later academic performance. Various other factors such as parental involvement, expectations, parenting style and home background were found to affect a child’s academic performance.

In the empirical study a group of academic achievers and underachievers were compared with regards to early cognitive stimulation received, degree of parental involvement and the quality of their homes.
Dedicated to

My mom and dad Mmapisto Susan
Monyela and Joseph Mashaole Monyela
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Chapter 1

Introduction, statement of problem and aim of study

1.1 INTRODUCTION

Because of the challenges of present day life, people must arm themselves in order to meet these challenges, for example, economical challenges, such as being able to afford the basic needs (buying a house, providing one’s family with food and clothes, and being able to pay for the education of one’s children); also to meet rapid technological changes by having a television set, telephone, be computer literate, etcetera. Parents want to see their children being educated even though many of these parents are themselves not educated. Many parents are employed because they want to invest in the education of their children so that they may have a bright future. Up to quite recently, most women in the black culture were not employed, because their main concern was the upbringing of their children. Education as such was not important then. Today most women are employed to assist their spouses financially with the education of their children. One way of meeting life’s challenges, is to arm oneself with a sound education.

Many parents are satisfied when they can afford to pay for the education of their children. They then place the responsibility of the child’s education completely on the school and become less involved in the child’s education. Education should be a cooperative endeavour, which involves the child, the teacher, the school, the home, the community, the school district and government. Children learn, grow and develop both at home and at school. There is no clear-cut boundary between home and school experiences for children, rather there is a mutually influencing quality among home and school experiences (Christenson & Conoley 1992:20). Nothing can compensate for parents' failure to inculcate a desire for education in the home environment and for their failure to support the learning process. This support must be continuous. It must be
manifested in both the attitudes and actions of parents all through a child's public school years (Bell 1976:1).

Many learners experience learning problems at an early age. Their poor performance influences their attitude towards the school in a very negative way. This negative attitude ultimately lead to early school drop-outs. An individual who withdraws from school before completion of primary school may stagnate on a low level of literacy. Lack of education leads to the fall in standard of living, child employment, street kids, poverty, deprivation, juvenile delinquency, etcetera. A large number of failures are casualties due to wrong handling of children either at home or at school. Many children who fail are not dull, but have their own peculiar difficulties due to emotional and social maladjustment (Wadkar 1989:2). Achievement gains are most significant and long lasting when parent involvement is begun at an early age (Christenson & Conoley 1992:23). This research project intends to investigate factors in the home and especially early cognitive stimulation provided by parents and how they affect the child's later academic performance.

1.2 AWARENESS OF THE PROBLEM

The researcher realised that there is a high rate of illiteracy in her area, Ga-Rankuwa. Although the government has made education free and compulsory, children continue to drop out of school. These children create a big problem in the community because they are involved in juvenile delinquent actions, such as house breaking, stealing cars, robbing and killing people because they do not have other means of getting money. The researcher has decided to focus on home circumstances that may lead to poor academic performance and eventually early school drop-out.

1.3 PRELIMINARY LITERATURE STUDY

From a preliminary literature study it became evident that there are broadly two groups of factors which relate to poor academic performance, namely intrinsic and extrinsic factors. It has also been found that there are various viewpoints that explain learning problems. These factors as well as relevant theories will be discussed.
1.3.1 Intrinsic factors

Intrinsic factors refer to those aspects inside the person and include aspects such as general health, sensory problems, affective factors and lack of readiness for learning. These factors will now be briefly discussed.

1.3.1.1 General health

According to the American Academy of Pediatrics (Reinisch & Minear 1978:1), good health is a dynamic state of physical, mental and social well-being which is influenced by many environmental and hereditary factors over which an individual exercises varying degrees of control. It is a constantly changing entity. Health is a condition for the organism that may be represented on a continuum from so-called good health to so-called poor health, or from wellness to illness, with many variations in between (Cornacchia, Nickerson & Olsen 1988:8). People desire to find themselves at the positive end of the health scale and not at the negative end. Where any person fits on the continuum at any given time depends on the following factors:

(a) Health is personal

Each person is born with a specific constitution or physical body that is provided through the genetic structure inherited from parents. Individuals are the same in many ways and different in many ways. Some learners have susceptibilities to certain diseases and conditions. Thus health is individual and variable.

(b) Health is frequently changing

It is the result of the interaction of the individual with many factors and experiences in the environment.

(c) Health depends on self-actualisation

It necessitates internalisation by the individual. Each person must make a decision whether to promote and preserve his or her own health.
(d) Health is a means to an end

Health is necessary for effective learning and living. A child with poor health may have difficulty learning to read, doing arithmetic, or speaking and may have problems later in life. Health is a complex phenomenon that includes a composite of physiological, psychological, sociological and spiritual interrelated components. These components have special significance in helping learners make intelligent decisions as to the environmental health factors and experiences they face in society. The child’s health is determined by three basic factors: heredity, environment and behaviour (Cornacchia et al. 1988:10).

1.3.1.1 Heredity

It is heredity that establishes a child’s health. What is passed on to the child by the genes from the parents, grandparents and more distant ancestors has much to do with the child’s capacity for good health. Heredity also plays a part in the predisposition to some mental disorders, infectious diseases, and chronic conditions such as cancer, heart diseases, etcetera.

1.3.1.2 Environment

The environment has a direct bearing on the health of learners. Learners must interact with and adjust to an environment that is physical, biological and social. Physical factors, such as weather and climate, housing, soil, water and food supply, medicines, radiation, clean or polluted air, hospitals, school buildings, and many more physical things can affect health for better or for worse. Biological factors include germs, plants, animals and other people. These too may be helpful or harmful to health. Social or cultural factors comprises all the interactions between and among people.

1.3.1.3 Behaviour

Behaviour or lifestyle results from the interaction between psychological, social and spiritual factors. Behaviour includes decision making and is the most influential factor in the learner’s health. With proper guidance and motivation, learners can make
corrections in their behaviour or learn to make adjustments to heredity limitations and environmental factors.

According to Cornacchia et al. (1988:11), some children have certain personality traits that leave them defenceless against life’s traumas. They have difficulty in dealing with tension. These children are particularly vulnerable to the development of affective problems. Learning problems, on the other hand, often follow affective problems because any destabilising experience may restrain cognition. Children who are chronically ill are also highly at risk for having developmental and learning problems because they do not feel well, cannot pay attention and are often absent from school. The child in poor health is already handicapped because he\textsuperscript{1} cannot keep up with either the work or other learners in the classroom situation. His poor health can also have a detrimental effect on his attention span, his interest, his vivacity and his diligence (Grové 1991:40).

\subsection*{1.3.1.2 Sensory problems}

Sensory problems include visual and auditory defects.

\subsubsection*{1.3.1.2.1 Visual defects}

Visual defects can make it impossible for a child to learn because it will be difficult for him to read and write. Children with eye defects who attempt to read, are apt to feel uncomfortable, to be restless and to tire easily. Their eyes begin to burn and they develop a headache. Defective visual perception prevents the child from seeing a word in its totality, thus preventing the child from recognising the word. Inadequate visual discrimination causes inability to discriminate between letters that are fairly similar. This can result in a dislike for and eventually, a completely negative attitude towards reading. This condition will inevitably cause the child to lag behind at school (Grové 1991:41).

\footnotetext[1]{The use of both genders tends to be cumbersome. The masculine pronoun also implies the feminine gender, unless specifically stated otherwise.}
1.3.1.2.2 Auditory defects

Learning in the classroom is predominantly oral work; as such a child should have good hearing in order to make normal progress at school. If he cannot distinguish properly between speech sounds, his reading will be adversely affected. A child with poor auditory perception cannot analyse a word auditorily into syllables, letters or sounds. He is, therefore, also unable to synthesise sounds or syllables auditorily to form a word.

1.3.1.3 Affective factors

Two main affective factors that influence learning are motivation and self-image.

1.3.1.3.1 Motivation

In most cases a person learns something if he receives some or other form of reinforcement or reward through learning. The reward may be intrinsic or extrinsic. Extrinsic motivation occurs if the reward is external to the learning task, for example, good marks, a present, recognition or an award. In intrinsic motivation, the result is found in the learning task itself. A learner is intrinsically motivated if he learns for the sake of extending his knowledge, because he is curious about a certain subject or simply if he wants to use his time constructively. Learners with learning problems are unlikely to receive external rewards for academic achievement and hence lack extrinsic motivation. Such learners also lack intrinsic motivation. They will not learn to expand their knowledge if they find learning difficult.

According to Maehr and Braskamp (1986:35), we are what we are expected to be and we do what the task and significant others allow and demand. A taxonomy for the study of a situation that affect motivation are, according to Renchler (1992:13), the following:

- NORMATIVE EXPECTATIONS apply to all group members; each member is expected to adhere to the established norms of the group. Such expectations can exist in very basic social units, including the family, clubs and schools. Because individuals are influenced by this social groups quite early in life, they can acquire
at a young age basic attitudes about what is worth achieving and how it can be achieved.

- **INDIVIDUALISED EXPECTATIONS**, that is what significant people, such as teachers and principals, believe about a specific learner. The teacher's belief about the effectiveness of a learner influences the academic performance of that learner.

- **INHERENT TASK CHARACTERISTICS**, a task that possesses a certain optimum level of uncertainty and unpredictability, tends to be generally attractive. Although social experiences can reduce the search for novelty, new information and challenge, it appears that from the start, human beings have a built-in attraction to these features in tasks (Maehr & Braskamp 1986:35). Thus it is likely that in schools where the learners feel appropriately challenged to be academically successful and where the rewards of learning take the form of problem solving or successfully meeting challenges, there will be a higher level of motivation among its learners.

- **SOCIOCULTURAL DEFINITION** involves the degree to which an individual's social or cultural group supports a particular task or goal. In this context, schools where academic achievement is emphasised and rewarded might logically be expected to have more highly motivated learners.

- **INTERPERSONAL DEMANDS**. Individuals react differently to different educational settings. Some learners thrive in group learning situations where co-operation and personal interaction are operative, while others seem to do best working alone. Schools in which opportunities exist for all learners to participate in ways that are best suited to their personal needs and preferences are more likely to have a larger number of motivated learners.

- **INCENTIVES** are central to the study of motivation in schools. Grades are obviously an incentive of great importance to most learners, but the use of grades as an incentive or as a form of punishment can have a long-term impact on student motivation.
Learning problems can be exacerbated by a learner's lack of motivation. Sometimes learners are simply uninterested in overcoming the problem. Instead of mastering their energy to solve the problem, they try all sorts of strategies to achieve success and avoid failure. Everyone wants to achieve success and avoid failure. Consequently, when the learner does not achieve success at school, he or she tries to avoid learning activities as a form of self-protection.

A learner who tries to avoid failure, ascribes failure to his defective ability. To retain his self-respect, he avoids situations in which he has experienced failure. He therefore lacks venturesomeness, something that is necessary to achieve success. Instead of working harder, this learner tends to withdraw from the situation.

1.3.1.3.2 Self-concept

In a learning situation, a learner perceives himself in various ways. His test and examination marks, comments on written work, teachers' remarks, and so forth, provide him with opportunities for self-perception, which in turn enables him to form an image of himself as a learner. Not only does a learner perceive himself, he also evaluates himself. Three factors play an important role in self-evaluation: how successful he is, how successful he would like to be and how others evaluate him.

In order to determine how successful he is, a learner evaluates himself in the light of his friends' achievements. He also evaluates himself in terms of the ideals he sets for himself. Besides his own evaluation, there are others who evaluate him as well, such as his friends, teachers and parents. All these evaluations influence a learner's self-concept.

Maehr and Braskamp (1986:37) have identified three areas in which self-concept plays an important role. These areas are: self-consistency, self-confidence and self-determination.
(a) **Self-consistency**

This concept involves an individual's proclivity to behave in a manner consistent with his/her self-image. Once a self-image has been formed, an individual begins to perceive circumstances and respond to them in a way that reinforces that image. Self-image is often formed during the early stages of an individual's development and can be very difficult to overcome because the opinion of significant others are especially powerful at various critical stages in a person's life. This plays an obvious role in educational settings, where a learner might well appear to be unmotivated in order to maintain a sense of consistency with the self-image shaped by the experience of having been labelled as a "failure".

(b) **Self-confidence**

A person's sense of self-confidence is a critical variable in achieving success and in becoming motivated to attempt certain tasks. Individuals develop pre-conceived notions about their chances for success or failure based upon their level of self-confidence. Maehr and Braskamp (1986:46) demonstrated that when individuals with a low sense of self-confidence succeeded in carrying out a task, they often attribute their achievement to luck or to the lack of difficulty of the task rather than their own skill. On the other hand, individuals with a high level of self-confidence usually took full credit for accomplishing the task successfully.

(c) **Self-determination**

One should cultivate a sense of ownership or of control over a situation before an individual can become motivated to act. In a school situation a sense of self-determination could well be a critical element in engendering motivation among learners (Renchler 1992:15).

A child who performs poorly because of learning problems often has a poor concept of himself as a learner. On top of his learning problems, such a learner might also develop a personality problem, which can, in turn, aggravate the learning problem.
1.3.1.4 Lack of readiness for learning

Learning readiness depends on the child's total development and includes physical, intellectual, emotional and neuro-motor readiness. Physically the child should be capable of making progress at school. His hearing and his sight should be well developed so that he can identify and discriminate both auditory and visually. The child must have the ability to walk rhythmically and run, skip and jump. He must also have the ability to hold and adequately control a pencil, to cut out something and to pick up things (Wentzel 1989:7).

Children must have an adequately organised central nervous system for coordinating and linking visual symbols with their meaning. These associations take place in the central nervous system, where association fibres between the sensory areas of the brain are coordinated with each other and with motor responses. If the brain is damaged by birth injuries or as a result of illness, so that the association fibres are injured, there may be an organic basis for a child's difficulty in learning (Monroe 1951:62). A child with a neurological dysfunction can experience learning problems. Impeded or belated maturation, a dysfunction or injury to the central nervous system can cause learning problems (Grove 1991:117).

1.3.2 Extrinsic factors

Extrinsic factors are factors outside the child but are related to the child. The most influential factors here, as far as learning problems are concerned, are the learner's home circumstances and school factors, such as the teacher and the instruction that the learner receives.

1.3.2.1 Home circumstances

An unhappy home can cause maladjustment and emotional instability. Parental disputes, a broken home, child neglect, domineering and harmful competition among siblings can cause feelings of insecurity, which may influence the learner's learning ability (Grové 1991:44).
Fraser (1973:75) in a study determined to what extent the school progress of a child is related to factors in the home environment, and then compared this relationship with what is existing between home environment and intelligence. The results have clearly shown that environmental factors, which contribute most to differences in children’s academic performance, are partly economic, partly motivational and partly emotional. The efficiency of the learning process depends on the level of innate potential, and the amount and quality of stimulation which the environment provides. If either is restricted or inadequate, it will set a limit to the level of efficiency which the organism can attain. Poverty of environmental stimulation at an early age results in a stunting of the learning process, which may be very difficult to remedy later on. A child with a given innate potential will learn to be intelligent up to the limit of that potential, provided he has, from an early age, an environment which gives him an opportunity for learning and, provided intelligent behaviour is rewarded, no serious inhibiting factors are present.

According to Walberg (1984:400), the curriculum of the home predicts academic learning. The curriculum of the home include informed parent conversations about everyday events, encouragement and discussion of leisure reading, monitoring and joint analysis of television viewing, expression of affection, interest in children’s academic and personal growth.

Clark (1983:18) also supports the importance of the curriculum of the home. Certain patterns were evident in homes of high-achieving children. Family life of high-achieving poor children was characterised by frequent dialogues between parents and children, strong parent encouragement of academic pursuits, warm and nurturing interactions, clear and consistent limits, and consistent monitoring of how time is spent. Parents of high achievers feel personally responsible to help their children gain knowledge and basic literacy skills, communicating regularly with school personnel and are involved in school functions and actions.

Hess and Holloway (1984:204) found that family process variables associated with achievement are: verbal environment of the home, parental expectations for the child’s success or press for achievement, parental warmth and nurturance toward the child, parental control and parental beliefs and attributions. This study shows that families indirectly influence academic achievement, learner motivation and classroom
performance of their children in many ways: fostering children's interest and skill in reading and maths, providing quality reading material, modelling by reading and using maths in the home, reading with children, engaging in discussions about reading with their children, requesting verbal responses from their children, and believing that their children's effort and not luck, will result in learning.

Chetty (1985:16) found that material conditions of a poor home have an inhibiting and depressing effect and by implication on achievement. Overcrowding and other deficiencies at home have a progressive and depressive influence on performance. Extreme poverty of environment leads to a progressive deterioration in academic ability. Chetty said that the family environment is a vital factor in the education of a child. The pre-school environment and early environmental situation at home must, therefore, be exacting and meaningful to the child. Early experience is lasting and lay foundations for later ones. McLoyd and Flanagan (1990: 312) also found that poverty and economic loss diminish the capacity for supportive, consistent and involved parenting, poverty means an excess of negative life events, undesirable chronic conditions, or the absence and disruption of marital bonds.

1.3.2.2 The school

The following factors in the school situation can lead to poor academic performance: the teacher's leadership, the teacher and self-fulfilling prophecies and quality of instruction.

1.3.2.2.1 The teacher's leadership, atmosphere in the classroom and discipline

Brophy and Good (1974: 244) discuss three types of teacher leadership. Firstly, the authoritarian teacher accepts full responsibility for what happens in the classroom and are in total control. The teacher issued detailed orders about what to do and how to do it, leaving no room for the learners to deviate from instructions or make contributions of their own. An authoritarian atmosphere may lead to anxiety, lack of initiative and autonomy, which can impede the learning act. A learner with a learning problem might be too scared to discuss it with the authoritarian teacher.
A teacher with a laissez-faire style abandons his leadership role by avoiding to take responsibility and by adopting a passive, uninvolved stance. This teacher does not provide structure, make suggestions or give help in answering learners' questions. He leaves learners to their own devices without providing leadership. This type of teaching can harm learning activities because of the lack of order and discipline. Poor control may cause learners to neglect their duties and this may lead to learning problems.

A democratically-oriented teacher assumes ultimate responsibility but shares decision making with the learners. He leads by posing questions, seeking group consensus, and stimulating the learners to create and implement their own ideas towards learning. Discipline in the classroom is maintained in such a way that learning activities are not disrupted by disorder (Brophy & Good 1974:245).

1.3.2.2.2 The teacher and self-fulfilling prophecies

Teachers must like children and respect them as individuals. This means avoiding such behaviour as nagging, threatening, shaming, rejecting, etcetera, as this will cause the child to develop a negative attitude towards school and ultimately may lead to poor academic performance. According to Brophy, Good and Nedler (1975:263), if teachers genuinely enjoy children and teaching, they should show it. They should smile easily, show interest and enthusiasm when children are relating to events or showing off their creations, teachers should be able to express affection physically to those children who seem to want or need it without embarrassment, and be able to work closely with children naturally and comfortably.

Teachers sometimes cause learning problems because they expect certain things from their learners. These expectations are frequently unfounded and incorrect. Some teachers are influenced by physical appearance. They assume that attractive learners are more intelligent than unattractive learners, are better adjusted socially, come from better homes and have greater chances of success in life. All these assumptions are based purely on a learner's appearance (Brophy & Good 1974:20).

Many teachers form differential expectations regarding the achievement potential and personal characteristics of the learners in their classrooms. Some of these initial
expectations are inappropriate, and some are generally rigid and resistant to change even in the face of contradictory learners' behaviour. Teachers treat learners differently in accordance with their differential expectations for them. Where teacher expectations are inappropriate and rigid, treatment of learners will be inappropriate. A learner's response to the teacher's behaviour is reciprocal, that is, a teacher's warmth and initiation will lead to a learner's warmth and initiation; a teacher's coldness or hostility will lead to a learner's withdrawal or hostility (Brophy & Good 1974:39). This will cause the learner to develop a negative attitude towards school and hence again may lead to poor academic performance.

1.3.2.2.3 Quality of instruction

There are a number of factors in the classroom that can lead to poor academic performance. Overcrowding in the classrooms prevent the teacher from differentiating in the classroom with the result that individual differences are not taken into account. The lesson may have no challenge to other learners because it is too easy to them and to other learners it may be too difficult and they then lose confidence and under-achieve. Incorrect teaching methods which do not take the specific needs of a particular learner into account, can result in learning problems (Grove 1991:119). The teacher's lack of knowledge in his subject matter together with lack of interest in his teaching, may lead to the learner's lack of interest in learning.

1.3.3 Theories related to the development of learning problems

Different viewpoints by Gagné (1977), Ausubel, Novak and Hanesian (1978) and Piaget (1977) have shown how a child may develop learning problems. These three theories will be discussed briefly.

1.3.3.1. Gagné's theory

Gagne's (1977:48) model is based on the classification of learning outcomes, such as verbal information, intellectual skills, cognitive strategies, motor skills and attitudes. A learner's learning problems may manifest themselves in one or more of these learning outcomes.
1.3.3.1.1 Intellectual skills

An individual may learn to interact with the environment by using symbols. The child uses oral language to deal with the environment symbolically. Reading, writing and using numbers are basic kinds of symbols learned in early grades. As school learning continues, symbols are used in more complex ways. Intellectual skills pertain also to symbols other than numerals and number operations. In a larger sense, the symbols used to represent the environment to the learner constitute language. Since language is used to record and communicate the relationships can be expected to involve the learning of intellectual skills.

It is apparent that some conditions for this learning must exist within the learner's internal conditions, while others are external to the learner and may be arranged for in instruction. The internal conditions for learning an intellectual skill consist of:

- previously learned skills that are components of the new skill, and
- processes that will be used to recall them and put them together in new form.

The external events serve the purpose of:

- stimulating recall of the subordinate skills;
- informing the learner of the performance objective;
- guiding the new learning by a statement, question or hint; and
- providing an occasion for the performance of the just-learned skill in connection with a new example.

An intellectual skill has a number of forms, some simple and some more complex. A significant characteristic of an intellectual skill is that the learning of any one skill depends upon the prior learning of one or more simpler skills. Certain notable differences exist in the conditions of learning required for each type of intellectual skill. A diagrammatic summary of the interdependence of intellectual skills and their dependence upon basic forms of learning, may be presented as follows:
Intellectual skills are based on essential forms of learning such as stimulus-response learning and chaining. A learner can only form a concept of a dog if he is able to distinguish between a dog and a cat. According to Gagne (1977:55), the main cause of learning problems is that a learner may be required to learn an intellectual skill without having mastered the necessary preceding skills.

1.3.3.1.2 Cognitive strategies

These are the skills by which learners regulate their own internal processes of attending, learning, remembering, and thinking. Besides the increasing repertoire of competencies for dealing with their environment, learners acquire increasingly skilful strategies that they use to activate and regulate their learning, retention and use of their own skills. If the learners have improved their strategies of attending, this strategy will apply to the learning of any subject, regardless of content. Similar generality of application would be true of strategies of retrieval and strategies of thinking (Gagne 1977:68). Learners with learning problems often fail to develop such a strategy and have difficulty attending, recalling subject matter, solving problems and performing other learning activities, they might even find those activities impossible.
1.3.3.1.3 Verbal information

Individuals are expected to learn verbal information during the course of their lives and to retain a great deal of such information so that it is immediately accessible. Successful learning requires the ability to communicate verbally. The subject matter conveyed to learners is usually presented in the form of verbal communication. Learners have learned some verbal information when they are able to tell about it. If the learner have difficulty understanding verbal communication, this impedes the learning act.

The learning of verbal information requires its own set of internal and external conditions. The conditions for internal learning are the following:

- The learner must have available, from previous learning, linguistic rules that make possible the comprehension of a sentence as a structure composed of agent, action, locations, object and so on.
- The learner must be able to interpret the passage as a proposition with conjunctions, dependent clauses, modifiers and other elements if the passage itself has a complex syntactic structure.

External conditions are the following:

- Stimulation that makes a cognitive structure readily accessible to the learner.
- The learner should be informed of the learning objective.

1.3.3.1.4 Motor skills

Throughout the years of school, the learner learns the various motor skills involved in games and sports. In many different kinds of courses, the learner is likely to learn a number of tool-manipulation procedures that include motor skills. An individual has acquired motor skills not simply when he can perform certain prescribed movements but when movements are organised to constitute a total action that is smooth, regular and precisely timed. The smoothness and timing of performances have a high degree of internal organisation (Gagne 1977:62). A learner may experience learning problems if
he has difficulty in remembering what he learns or sees, and if there is insufficient visual presentation or demonstration of the motor skill when it was first introduced.

1.3.3.1.5 Attitudes

Attitude is defined by Gagné (1977:62) as an internal state that influences the choices of personal action made by the individual. The kinds of actions taken by human beings are obviously influenced by attitudes. Attitudes are learned in a variety of ways. They can result from single incidents, as when an attitude towards snakes is acquired because of an instance of fright experienced in childhood. They can result from the individual's experiences of success and pleasure. Every learning situation involves certain preferences, dislikes, anxiety, need satisfaction etcetera. Many learners have difficulty learning certain subject matter simply because they dislike it, are scared of it and feel that it has no value to them. When a learner develops an overwhelmingly negative attitude towards learning, it may lead to learning problems and hence poor academic achievement.

1.3.3.2 Ausubel's theory

According to Ausubel, the most important single factor influencing learning is what the learner already knows (Ausubel, Novak & Hanesian 1978:iv). To Ausubel, learning is discovering the relation between new information and existing knowledge. When a learner succeeds in making this discovery, the subject matter is meaningful and learning takes place. Ausubel regards the absence of meaningful learning as the primary cause of learning problems. In order to understand meaningful learning, Ausubel discusses the cognitive structure of the learner.

1.3.3.2.1 Cognitive structure of the learner

Ausubel et al. (1978:124) believe that when a learner learns subject matter it is arranged in his memory according to a specific structure, known as cognitive structure. This cognitive structure involves the impact of all prior learning experience on current learning processes. Thus the cognitive structure itself is the principal factor influencing meaningful learning and retention in the same field. If cognitive structure is clear, stable
and suitably organised, accurate and unambiguous meaning emerge and tend to retain their dissociability strength or availability. If, on the other hand, cognitive structure is unstable, ambiguous, disorganised or chaotically organised, it tends to inhibit meaningful learning and retention. Thus it is largely by strengthening relevant aspects of the cognitive structure that new learning and retention can be facilitated (Ausubel et al. 1978:164).

1.3.3.2.2 Meaningful learning

According to Ausubel (Ausubel et al. 1978:144), meaningful learning occurs when a learner learns new subject matter and can relate this to existing knowledge in his cognitive structure. If a learner is unable to link new subject matter to existing subject matter in the cognitive structure, he is forced to memorise it in a mechanical fashion. Subject matter that is learned mechanically tends to be somewhat unstable and is easily forgotten.

Learning problems arise when learners cannot learn meaningfully and end up memorising new subject matter mechanically. Parrot learning does not extend the learner's existing cognitive structure. This means that the learner will not be able to relate any new subject matter he is presented with in future to his existing cognitive structure. This compels him to continue with the process of mechanical learning, a process that becomes increasingly difficult as the volume of subject matter he needs to understand grows.

1.3.3.3 Piaget's theory

Piaget (1977) holds that all children, from birth to adolescence, go through four phases of cognitive development, namely

- the sensori-motor phase, (0-2 years)
- the pre-operational phase (2-6 years)
- the concrete-operational phase (6-12 years)
- the formal-operational phase (12 years and older)
All normal children go through the stages in the same order. No child skips from the pre-operational stage to the formal operational without going through the stage of concrete operations. This is because each stage builds on, and is derivative of the accomplishments of the previous one. At each stage, new, different, more adaptive cognitive capabilities are added to what has previously been achieved (Mussen, Conger, Kagan & Huston 1984:227). Piaget's theory will be discussed in detail in Chapter 2.

Learners can develop learning problems if they are confronted with subject matter that outstrips their mental development. A child can learn new information only if his cognitive structure is ready to assimilate it. This means that when the learner has to learn new subject matter, the teacher must make sure that this subject matter matches his developmental level. If he does not understand the information, then either it is too advanced for him or the presentation is too abstract.

1.4 STATEMENT OF THE PROBLEM

1.4.1 General statement

The above preliminary literature study showed that there are many factors that may lead to poor academic performance in school. The general problem addressed by this study is:

In what way do home factors influence a learner's academic performance?

1.4.2 Specific statement

From the general problem the following questions come to mind:

- Does early cognitive stimulation (and by implication lack thereof) have an influence on a learner's later academic performance?

- Is there a relationship between the child's academic performance and parental involvement?
• Is there a relationship between the child’s academic performance and family background?

1.5 DEMARCATION

1.5.1 General

The focus of this research will be on the home factors that lead to poor academic performance of primary school children in the Brits district in North West Province.

1.5.2 Specific

As has been stated in section 1.4.1, there are quite a number of factors that may lead to poor academic performance, for instance factors within the child such as general health, sensory problems, and extrinsic factors which include the school situation and home circumstances. The focus in this study will be on how home circumstances and early cognitive stimulation by parents and other caregivers may influence the child’s later academic performance.

1.6 AIMS

1.6.1 General aim

• The general aim of this study is to investigate home factors relating to poor academic performance in primary school children in the Brits district.

1.6.2 Specific aims

• To investigate the relationship between the child’s poor academic performance and early cognitive stimulation.

• To investigate the relationship between the child’s poor academic performance and parental involvement.
• To investigate the relationship between the child's poor academic performance and family background.

1.7 STRUCTURE OF THESIS

In Chapter 1 the awareness of the problem was stated. A preliminary literature study was undertaken. The problem and aims of the study were formulated.

In Chapter 2 the influence of early cognitive stimulation on the child's academic performance will be discussed.

Chapter 3 deals with the influence of home circumstances including parental involvement on the academic performance of a child.

Chapter 4 will deal with the empirical design.

In Chapter 5 the results of the empirical investigation study will be discussed.

Chapter 6 deals with the summary, findings, conclusions and recommendations of the study.
Chapter 2

The influence of early cognitive stimulation on the child's academic performance

2.1 INTRODUCTION

The early years are critical years in the life of a person. During the first five years rapid development takes place. Several factors, even before birth (prenatal), are at play to influence the child's development, especially his intellectual development. In this chapter these factors will be discussed. The connection between brain development and later cognitive abilities will also be discussed.

To stimulate the child cognitively, it is important to know how the child learns. Three ways in which pre-school children's thinking can be enhanced will be discussed, namely mediated learning, transfer and the development of metacognitive skills. Language development and the effect of language on cognitive development will also be addressed. The last part of this chapter will focus on how early cognitive stimulation and the lack thereof can affect the cognitive development of a child.

2.2 PRENATAL AND POSTNATAL STAGE

Many prenatal and postnatal conditions have been found to affect the child's development in general. Some specifically may lead to the lowering of intellectual functioning to subnormal levels (Pyle 1979: 54).

Mwamwenda (1989:16) said that African people know intuitively that the prenatal period is a sensitive one, and that everything possible should be done to protect the life of human foetus. These conditions will now be discussed.
2.2.1 The age of the mother

The years between 20 and 35 remain the most favourable for childbearing. Teenage pregnancies are more likely to endanger the physical health of both mother and child than those of women in their twenties. Currently, babies of teenage mothers are more likely to have complications of pregnancy such as toxaemia and anaemia. According to Mussen et al. (1984:111), women over 35 have a lower fertility rate than those in their twenties and fertility continues to decline with age. They are also more likely than younger women to experience illness during pregnancy and longer and more difficult labour. Mothers over 40 run a greater risk of having a child with chromosomal abnormality, particularly Down's syndrome. For mothers less than twenty years old or over 35, the rate of infant mortality is higher and if their children live, they stand greater risks of being retarded. According to Clarke & Clarke (Pyle 1979:54), if all families were completed before mothers became thirty-eight, the incidence of mongolism will be reduced.

2.2.2 Maternal nutrition

What the mother eats, affects the health and development of her unborn child as well as that of her own. Though maternal and fetal blood circulations are separate, nutritive elements diffuse through the semi-permeable membranes that separate them. What diffuses through these membranes has some effect on fetal development (Landreth 1967:29).

The expectant mother should have an adequate diet if she is going to maintain her own good health during pregnancy and deliver a healthy infant. Women with nutritionally sound diets remain in better general health throughout pregnancy than those with inadequate diets. They also encounter fewer complications such as anaemia, toxaemia, threatened and actual miscarriages, premature births, prolonged labour and stillbirths. Knoblock and Pasamanic (Mussen et al. 1984:61) found that babies born to mothers with nutritionally deficient diets are more likely to have low birth weights, to suffer from impaired brain development with abnormal brain waves, to be less resistant to illness and to have a higher mortality rate in the first year of life. Low birth weight may lead to physical weakness or immaturity. Physical weakness leads to poor coordination or lack
of endurance, which is likely to affect a child’s learning. For example, if the child tires easily it is likely to affect his attention span or level of concentration (Mwamwenda 1989:33).

Mussen et al. (1984:61) present a well-controlled study conducted in Guatemala. The residents of two villages received nourishing supplemental diets for several years, while the residents of two similar (control) villages received soda pop supplements instead. Not only did the infant mortality and morbidity go down and birth weight up in the nourished villages, but children from these villages scored somewhat better on mental tests, especially vocabulary scores at the end of seven years. These results indicated that severe maternal malnutrition may impair the child’s intellectual development, in addition to having adverse effects on physical development.

Dobbing, Smart and Lewin (Pyle 1979:54) contest that the brain follows a spurt of growth in the three months before birth up to about 18 months or so after birth and during this time some very crucial "building work" is going on in the central nervous system and brain. If this spurt is simply slowed down, it will do irreparable damage to the brain as a poor diet will certainly do.

Burke (Landreth 1967:26) compared the diets of mothers during pregnancy with the condition of their offspring at birth. Burke specifically compared diet ratings and protein intake of pregnant women with the pediatric rating, length and weight of the infants at birth. It was found that the adequacy of a mother's diet, in particular the adequacy of her protein intake, is related to the condition of her infant at birth and to the infant's health during the first six months of life. The adequacy of the mother's diet is also related to the state of her health during pregnancy and to her ability to carry term and to breast-feed her baby.

2.2.3 The influence of drugs

2.2.3.1 Alcohol

High alcohol consumption by a pregnant woman can produce what is known as fetal alcohol syndrome. Research by Mussen et al. (1984:64) suggests that the fetal alcohol
syndrome may result from maternal consumption of three ounces of absolute alcohol per day. The symptoms of this syndrome include retarded prenatal and postnatal growth, premature birth, mental retardation, physical malformations, sleep disturbances and congenital heart disease.

2.2.3.2 Nicotine

Smoking by pregnant women retards physical growth and lowers the newborn's birth weight and resistance to illness. It also increases the chances of spontaneous abortion and premature birth and may possibly affect long-term physical and intellectual development (Mussen et al. 1984:65).

2.2.3.3 Drugs used during labour and delivery

Drugs taken just prior to delivery of a baby to ease a mother's distress or pain such as Pentobarbital or Meperidine may make the infant less attentive, at least temporarily (Mussen et al. 1984:66). Although such effects were greatest in the first few days of life, long-term effects on cognitive functioning and gross motor abilities, particularly of heavy drug dosages, have been found at one year of age.

2.2.4 Maternal diseases and disorders during pregnancy

Viral diseases in the mother such as cytomegalo-viral disease, rubella, chicken pox and hepatitis are particularly dangerous during the embryonic and early fetal periods. One of the most serious viral diseases during the first three months is rubella, which may produce heart malformation, deafness, blindness or mental retardation (Mussen et al. 1984:67).

According to Landreth (1967:30), syphilis can be transmitted from a mother to her unborn child and congenital syphilis may result in stillbirth, premature birth, blindness or other abnormalities. Rubella occurring in the early stages of pregnancy may lead to widespread damage of the embryo or fetus. Landreth conducted a follow-up study on the infants of all mothers who were known to have had rubella during the first two or
three months pregnancy and his study revealed congenital abnormalities in approximately 90 percent of the infants.

2.2.5 Maternal emotional states and stress

The mother's emotional state can influence fetal reaction and development. Emotions such as rage, fear and anxiety bring the mother's autonomic nervous system into action liberating certain chemicals into the bloodstream. Prolonged maternal emotional stress during pregnancy may have enduring consequences for the child. Infants born to upset, unhappy mothers are more likely to be premature or have low birth weight, to be hyperactive, irritable, squirming and to manifest difficulties such as irregular eating, excessive bowel movement, gas pains, sleep disturbances and unusual needs to be held (Mwamwenda 1989:16).

2.2.6 Birth

The ease or difficulty with which a baby is born and how quickly the newborn starts breathing can affect the infant's well-being. One major danger associated with birth is haemorrhaging, caused when very strong pressure on the head of the fetus breaks blood vessels in the brain. Another danger is failure to start breathing soon after being separated from the maternal source of oxygen. Both haemorrhaging and failure to breathe affect the supply of oxygen to the nerve cells of the brain and produce a state called anoxia. The neurons of the central nervous system require oxygen. If they are deprived of oxygen, some cells may die which may cause later physical and psychological defects. If too many neurons die, the infant may suffer serious brain damage or in extreme cases, death. When cells of the brain stem are damaged, motor defects are likely to occur. The child may also have difficulty in learning to speak.

2.2.7 Prematurity

Infants born earlier than the 38th week of gestation and weighing less than 2,5 kilograms are called premature. The long-term effects of prematurity on development depend on how early the infant is born, birth weight, the type of postnatal care provided, and the quality of the child's environment during early and middle childhood. Many of
the neurological problems that can occur in low birth weight children may not be apparent in the first months of life.

Some disabilities such as cerebral palsy, major defects in vision or hearing or significant mental retardation, may be discerned in the first year, but others including below average IQ, perceptual disorders, learning problems and behavioural symptoms may not become apparent until after school entrance (Mussen et al. 1984:72)

A comparative study by Knoblock (Landreth 1969:26) of 500 premature and 492 full-term infants matched in terms of social and economic circumstances, age and parity of the mother, revealed that the premature infants at 40 weeks of age were half to one inch shorter and 500 to 1000 grams lighter than full-term infants, had two to three times as many physical defects, 50 percent more illnesses and a significantly greater number of neurological impairments. Twenty-five percent of the premature infants weighing 1.5 kilograms or less were diagnosed as having cerebral palsy or an overt neurological abnormality. In another report by Friedman (Landreth 1967:26), nearly one third of all children with cerebral palsy were found to have been born prematurely. Various factors which may have a negative influence on the infant’s development, especially brain and cognitive development, have been highlighted. The important relationship between brain development and cognitive processing will now be discussed.

2.3 THE RELATIONSHIP BETWEEN BRAIN DEVELOPMENT AND COGNITIVE PROCESSING

According to Vazquez, Romero and Kalesnik (1992:10), the brain grows especially rapidly during the early years. By age two the brain is already about 75% of its adult size and by age six about 90%. Much of the brain increase results from myelinisation, the growth of insulating covers around nerve fibres which allow them to conduct impulses more efficiently.

The nerve fibres that connect the higher and the lower cortex are not completely myelinated until age four or later. These are the fibres that assist the fine motor skills of drawing and writing necessary for school. In addition to myelinisation, changes take
place in the organisation and size of nerve cells. They extend their interconnections and acquire more nutrition-bearing capillaries nearby.

Another major structural change in the brain is the beginning of hemisphere lateralisation, the tendency for the two halves of the brain to perform different functions. The left side comes to deal increasingly with information in a sequential or linear way. The right side identifies patterns of relationships holistically. As the brain matures, it allows for better control and coordination of movement with sensory information. The results for the child are major strides in large and fine motor skills. These improvements take place gradually, however, because they also require learning and opportunities for practice or training.

Structurally, the brain can be conceptualised in terms of three axes, namely up-down, back-front and left-right (Zelniker & Globerson 1989:12).

The up-down axis refers to the distinction between cortical and subcortical structures. The cerebral cortex is a mantle that surrounds and sits atop the deeper subcortical structures. The cortical structures are associated primarily with cognitive functioning while the subcortical structures subserve motivation, affect, endocrine regulation and vegetative functions as well as relaying peripheral sensory and motor information to the cortex. The subcortical structures, such as the basal ganglia and thalamus are intimately involved in cognitive processing. Lesions in these areas result in specific cognitive deficits (Zelniker & Globerson 1989:12).

The back-front dimension refers to the distinction between posterior structures whose function is primarily sensory, and anterior structures, whose function is primarily motor. This arrangement of sensory and motor structures characterises the entire nervous system extending from the spinal cord up through the cerebral cortex.

The left-right dimension refers to the lateral axis of the nervous system. The structures of greatest interest in terms of cognitive style are those comprising the cerebral cortex, namely the frontal, temporal, parietal and occipital lobes. The frontal lobe, comprising about one third of the cerebral surface, extends forward from the central sulcus and upward from the lateral sulcus hemisphere. The parietal lobe is bounded anteriorly by the central sulcus and posteriorly by the parieto-occipital sulcus (Zelniker & Globerson
The function of the various brain structures will be briefly explained. The effects of damage to these structures will also be highlighted.

2.3.1 The temporal lobes

The temporal lobes subserve primarily auditory perception and visual and auditory memory processes. The temporal lobes are essential for language comprehension, semantic knowledge and memory. These lobes also have a share in controlling human emotions and memory. The largest part of the temporal lobe is classified as an association area (Kapp 1991:221). Damage to the temporal lobe can result in severe memory impairment either in terms of retrieval from long-term memory or acquisition of new information in short-term memory. According to Bryan and Bryan (Kapp 1991:221), defective functioning of this lobe can give rise to numerous problems such as faulty reception, comprehension and interpretation of auditory stimuli and problems with especially short-term memory.

2.3.2 The parietal lobes

The parietal lobes are responsible for all the somatosensory or somaesthetic functions. This part of the brain receives all the tactile, kinesthetic, proprioceptive and other physical-sensory impulses sent to it from special receptor organs throughout the body. The parietal lobes interpret sensory messages and integrate sensory information across modalities. General damage to the parietal lobes results in a more dramatic and obvious impairment of functioning typically involving the content of cognition. Deviations in this lobe give rise to problems with spatial orientation, tactile discrimination, body consciousness, visual perception and visual memory. Disorders such as visual agnosia, dyscalculia, agnosia and left-hand/right-hand confusion may in part be associated with deviation in this lobe (Bryan & Bryan in Kapp 1991:220).

The distinction between anterior and posterior function is best illustrated by contrasting the consequences of damage to the interior and posterior language areas. In Broca's aphasia, comprehension is relatively intact, but speech is dysfluent and grammatically incorrect. In contrast in Wernicke's aphasia, comprehension is severely impaired, speech is fluent and grammatically correct but contaminated by semantic substitutions. The
anterior language centre controls organisation and output and the posterior language centre controls content and knowledge.

Lesions to parietal association cortex can result in visual constructional defects, leading to highly disordered representations, either by drawing or other modalities (Waber in Zelniker & Globerson 1989:14).

2.3.3 Occipital lobes

Occipital lobes are the smallest of all the cortical lobes. Their main function is to ensure that visual impulses relayed to these areas are analysed and interpreted by the cortex.

In this lobe the visual motor area is also found. Deviations in this lobe affect visual perception as well as reading (Bryan & Bryan in Kapp 1991:221).

2.3.4 Frontal lobes

Apart from planning and controlling all the body's muscle activity, these lobes also play a role in the higher mental functions of planning and abstract thinking. This lobe is especially associated with the initiation of movement, with expressive language and with behaviour (Kapp 1991:218). It is in the frontal lobes that information about the external environment (that is from vision, auditory, and somatic sensation) and the internal environment converge. Thus the frontal lobes are essential to regulations involving the coordination of internal and external states. Secondly, the frontal lobes are thought to be the major neocortical and therefore cognitive representation of the limbic system which subserves motivation and affect.

Damage to the frontal lobes presents clinically with a diversity of behavioural symptoms. Among those reported in the clinical literature are lack of planfulness, lack of inhibition and distractibility, poorly modulated affect, perseveration or rigidity of perception and cognition stimulus boundedness as well as lack of initiative. Both perceptual and cognitive functioning can be affected by lesions to the frontal lobes. The perceptual functions that are more sensitive to damage are those that entail conflict between inputs while the most sensitive cognitive functions entail maintaining intentions over time and
sustaining temporal sequences. Lesions to the frontal region impair attentional processes resulting in such symptoms as perseveration, stimulus boundedness and impulsivity. Damage to the frontal lobes can present with a variety of symptoms involving affect, emotionality and motivation (Zelniker & Globerson 1989:18).

2.4 PIAGET'S THEORY OF COGNITIVE DEVELOPMENT

Piaget's background, both as a student of biology and as a research assistant to Alfred Binet, gave him his particular line of attack in studying children's minds. Piaget (1977) views intelligence as a way an individual adapts to the environment and although emphasis is given to experience in contributing to development, he argues that this is firmly based biologically in the maturation processes which are programmed into the brain. Thus Piaget argues that intellectual development follows a universal path, and this path takes us through a progressive series of cognitive structures as systems which lead to a series of stages of development namely sensori-motor, pre-operational, operational and formal operational stages. Piaget postulates that these stages are based on two types of activity, namely the action and operations. An action carried out by the hand or eye is the basic way of finding out what the world is like. You have to touch, push, feel, smell, see, etcetera, using all senses and responding with movements. A sequence of co-ordinated actions is called schema and the elaboration of these schemas forms the bases of intellectual development (Pyle 1979:75).

Piaget further view intelligence as an adaptive process to the environment. He said that such adaptation has two aspects, namely assimilation and accommodation. The individual has a set of schemas, concepts and so on. As a new experience comes along, he applies this system to enhance understanding. Existing methods of working can be applied to the new situations and these are absorbed and integrated into the old, they are assimilated, for example, a child learning to tell the time assimilates all types of conventional clock faces into that particular aspect of telling time. What happens when the child is confronted with a digital clock or wristwatch? His old methods of problem solving will not do. His developing system is thrown out of equilibrium. He has to find a new method to solve the problem or give up all together. In other words, he cannot assimilate now but has to accommodate the new knowledge, that is, change the method or modify existing schemas (Pyle 1979:80).
Piaget is concerned with the qualitative changes which take place in a person's mental make-up between birth and maturity. He maintains, firstly, that the human organism, like all other entities, has a characteristic internal organisation, secondly, that this internal organisation is responsible for the organism's unique mode of functioning, which is invariant, that it is always present and does not change over time, so that both the infant and the adult share the same mode of cognitive functioning, thirdly, he maintains that as a result of contact between the organism and environment, by means of the invariant functions the organism adapts its cognitive structures. Interaction between organism and environment are fundamental to Piaget's position (Turner 1975:13). As has been stated, Piaget argues that intellectual development occurs through certain distinctive stages. These stages will be examined briefly.

2.4.1 Piaget's developmental stages

Piaget distinguishes four main stages, namely sensori-motor stage from birth to two years, the pre-operational stage which is from two years to four years, the concrete operational stage which is from four years to eleven years and the formal operational stage from eleven to adulthood. Each stage presents a different way of dealing with a particular aspect of the environment and hence one would expect that most of the child's thinking would be characteristic of the stage he has reached (Turner 1975:16).

2.4.1.1 The sensori-motor stage

This stage starts from birth until approximately two years of age. During the sensori-motor period the child's functioning changes from reflex level to a level at which he can execute coherent practical actions applicable to his immediate environment (Louw 1991:77). Piaget proposed that the sensory-motor period is differentiated into six developmental stages. Major changes occur across these six stages with the infant gradually progressing from a newborn who executes a set of automatic reflexes to a two year-old who invents new ways to solve problems.

MODIFICATION OF REFLEXES This stage is seen in the automatic inborn reflexes of infants, including their ability to suck, cry, move
their arms and legs tracking a moving object and orienting itself to a sound.

THE PRIMARY CIRCULAR
(one to four months)

During this time, if the infant's random movements leads, by chance, to an interesting event, the infant will attempt to repeat the behaviour. An example is derived from thumb sucking. Primary circular reaction is based on the child's own body.

SECONDARY CIRCULAR
(four to ten months)

Infants thus try to preserve or maintain interesting experiences which seem to be oriented toward an external goal. These reactions are extended to objects outside the child's body such as playing with a noise-making object.

TERTIARY CIRCULAR
REACTION

After approximately the first birthday the child may engage in a variety of behaviours for experimental purposes. These tertiary circular reactions resemble "miniature experiments conducted by the child" (Seifert 1983:32).

BEGINNING OF REPRESENTATIONAL THOUGHT

In the last stage children invent a new kind of exploration in which they imagine certain events and outcome. For Piaget the most significant feature of this is the development of a form of imagery that can be used to solve problems or attain a goal for which the child has no habitual available actions (Mussen et al. 1984:111).

2.4.1.2 The pre-operational stage

This stage starts at about two to seven years of age. The distinguishing characteristic of this stage is the development of "symbolic functioning". Symbolic functioning is the ability to make one thing represent a different thing which is not present. The degree of
correspondence between the two can vary from highly concrete to highly abstract. Symbolic functions have been inferred from four types of activities of the preoperational child: search for hidden objects, delayed imitation, symbolic play and language. The child would only search if he perceived the object, the perception of the object could be said to guide his search. By delayed imitation it is postulated that as the child observes the model, he forms an internal representation of the behaviour.

In symbolic play the child treats an object as if it were something else. This is readily seen in the child’s use of a broomstick as a plane, a doll as a friend, fingers as gun, etcetera. In this stage, language begins to be used symbolically, as the child describes activities of the past and understands some references to the future (Ault 1977:49).

The pre-operational stage can be thought of as a period in which children use thinking faultily, a situation which will be improved through the development of operations (Turner 1975:18). According to Piaget, it is a period which is characteristically egocentric, therefore the pre-operational child has difficulty imagining how things look from another person’s perspective (Mussen et al. 1984:228).

2.4.1.3 Concrete-operational stage

The concrete-operational stage starts from seven to approximately eleven years of age. During the concrete period the child’s thought becomes less egocentric, more fluid and more reversible so that he is now able to take several aspects of a situation into account. He begins to develop coherent cognitive schemes which are initially sequences of actions. The most important aspect of this stage is that the child’s thought is reversible and that the child now, because his thinking is more systematic, is not as easily misled as he was in the pre-operational phase (Turner 1975:22).

Piaget (Ault 1977:63) suggests that the concrete-operational child has acquired three mental processes, called operations, which guide his thinking. One operation is negation. Compressing a row of checkers can be negated by its opposite - spreading them out again. The concrete-operational child can attend to the process and thus learns that one action negates or reverses the other.
The second operation is reciprocation. The child sees that one row has increased in length but decreased in density compared with the other row. Since length and density are reciprocal features, a change in length compensates for a change in density, resulting in no net change to the object. In using reciprocation, the child attends to the multiple features of the end state, both length and density, and recognises the reciprocal relationship between them.

The third mental operation, called identity, can also be used by the concrete-operational child to conserve numbers. When the child realises that nothing has been added or removed, he knows that the number remains the same. The concrete-operational child having mastered conservation of number, must also master conservation of other dimensions such as liquid quantity, mass, and length.

2.4.1.4 Formal-operational stage

It begins at about age eleven and extends through to adulthood. Formal operations extend concrete systems to include ideas of combination and possibility due to the child’s becoming aware of interdependence of variables such as weight, speed and time which had previously been considered in isolation. The child having formed discrete, separate, distinct concrete structures once he has realised their interdependence, begins to unite them in various ways, and it is the integrated structure of formal thought which makes it unique. The child is now able to distinguish and order all the possible combinations of units of data so that if he has four variables he can generate sixteen possible combinations of them. The formally operational person can also consider possible worlds as well as the actual world before him and hence think hypothetically (Turner 1975:24). Parents can play an important role in enriching a child’s intellect by teaching their children thinking skills. The development of thinking skills will now be discussed.

2.5 THE DEVELOPMENT OF THINKING SKILLS

According to Burger (1992:44), many children (and adults) find it difficult to learn, to think logically and to solve everyday problems systematically, not because they do not have the ability, but because they do not know how to use that ability. The answer to
this dilemma is simple: learn how to use it. This implies that thinking can be improved by acquiring thinking skills and that, although a person can be taught to think more effectively, improved thought processing does not occur spontaneously - it must be taught. This is the critical role of educators (parents and teachers).

Parents, as the child’s primary educators, can and should teach their children thinking skills before they go to school. The teaching of thinking is not solely the task of the school. The child should be taught to observe accurately, and to think correctly (Burger 1992:51). Three ways in which pre-school children’s thinking can be enhanced are: mediated learning, transfer and the development of metacognitive skills.

2.5.1 Mediated learning

2.5.1.1 The role of mediation

Children need as much sensory stimulation as possible for their intellectual growth. Children’s minds develop through processing their interactions with the world (Fisher 1990:133).

Clarke and Clarke (Schwebel & Maher 1986:51) say that an optimal age at which the child learns is that of early childhood, since the earlier youngsters benefit from mediated learning experience interactions, the earlier they will be able to confront the world of stimuli to which they are exposed to with the prerequisite functions that equip them for active productive representational thinking that leads to higher mental processes.

A mediator is any knowledgeable person, usually an adult, who shapes the way the child perceives the world. Parents and significant others in the child’s life, grandparents, siblings, caretakers and teachers are not simply sources of stimulation for the child. They control stimuli the child receives and in so doing, help to structure the child’s universe in patterns similar to their own. They transmit a culture which determines the child’s attitude, perceptions and behaviour (Fisher 1990:133).

The first most common way a human being learns about his environment is by direct exposure to stimuli. Successful cognitive development depends, however, not just upon
exposure to environmental stimuli, but also on the quantity and quality of mediation by
an adult. Feuerstein (Nickerson, Smith & Perkins 1985:151) distinguishes two forms of
interaction between an individual and his environment that contribute to the development
of the cognitive structure, namely, direct exposure to stimuli from the environment and
learning experiences mediated by an agent.

The mediating agent in a mediated learning experience, often a parent or teacher, is one
who mediates the world to the child by transforming the stimuli; selecting stimuli,
scheduling them, framing and locating them in time and space, grouping certain stimuli
or segregating others, providing certain stimuli with specific meanings as compared with
others; providing opportunities for recurrent appearances; bridging together objects and
events that are separate and discrete in terms of temporal and special dimension; re-
evoking events and reinforcing the appearance of some stimuli.

There are two types of mediated learning experiences. Firstly, those experiences that
involve the transmission of information, values and attitudes, information that represents
the accumulated knowledge of the species and that could not be obtained except from
other human beings. Secondly, experiences that are aimed at making the individual
better able to learn from the direct exposure to stimuli. The mediator in the latter case
plays the role of one who manipulates stimuli in such a way that the child will learn
things about them that will transcend his immediate needs and generalise to other
contexts (Nickerson et al. 1985:151).

According to Schwebel and Maher (1986:50), mediated learning experience is not
contingent upon either content or language. Despite a total pre-verbal communication,
the mother of a neonate mediates efficiently to the infant. She does everything possible
to draw the baby’s attention to herself. She opens her eyes, she makes sounds, she
changes her facial expressions, she does many things that are clearly guided by her
intentions to make the child relate to her, focus on her, attend to her, and to re-focus
when the contact is lost.

In a mediated learning experience, the adult caregiver interposes herself/himself between
the child and the environment. The adult mediator intentionally filters and focuses the
stimuli, ordering and organising them, regulating their intensity, frequency and sequence.
Temporal, spatial and causal relationships are created among them so as to link them to other stimuli that has preceded or will follow them. The mediator thus creates for and with the child relationships among stimuli that evoke the past and anticipate the future. Stimuli that were previously perceived by the child in an incidental way because of their randomised appearance, will be perceived very differently once the mediator has organised them, selected and emphasised their meaning. Once the child has experienced mediated learning interactions and learned to focus, observe and differentiate, he or she will spontaneously continue to interact with things actively rather than passively (Schwebel & Maher 1986:50).

2.5.1.2 Mediated learning experiences

In a mediated learning experience the adult intervenes between the child and the environment. The mediator transforms, reorders, organises, groups and frames the stimuli in the direction of some specifically intended goal or purpose. When parents say, for example, that objects and actions are good or bad, right or wrong, important or unimportant, they are transmitting cultural values to the child. These meanings can be imbued with powerful emotional and moral significance. They can be deeply motivating (Fisher 1990:133).

Virtually any experience can be a mediated learning experience if someone intervenes to make the sensory experience transcend itself. Parents and teachers are the child's makers of meaning. Only through a given framework of meaning can a child construct, adapt and develop his own meaningful responses to the world. The culture that is passed on provides vitality and relevance to learning. Feuerstein (Fisher 1990:143) argues that one of the greatest causes of failure at school is the attempt by many teachers to remain neutral towards the material they are conferring on the children.

For a stimulus to be a learning experience, it should carry significance and meaning which relates to the wider context of the child's culture. A given culture can be challenged or rejected at a later stage. What the child needs is a starting point of offered meanings to give him his first bearings in an unfamiliar world. The way a parent offered meaning to a child is different to the way meanings are given in a dictionary. A human interaction conveys more than any teaching machine or artefact can do. There is a difference
between a static toy and the one moved along by a parent. When the parent pushes the
toy or explains an event, it is an intentional act and this alters the nature of stimulus.
An intentional act, according to Feuerstein (Fisher 1990:134), intensifies its significance.
It produces a state of vigilance and focuses attention. A mediated learning experience
conveys meaning and purpose, where both mediator and child become more attentive
and responsive.

Another characteristic of effective mediation is that it transcends the immediate
experience. Successful teaching lies in pointing to general values or principles over and
above the individual task. For example, letting the child play with the keys of a
typewriter can help teach the transcending principle of cause and effect. A family or
class outing can provide opportunities for adults to give more than the child asks for.
According to Feuerstein (Fisher 1990:154), poor thinking skills often result from having
too few mediated learning experiences.

These cognitive deficiencies in turn reduces the individual child’s ability to benefit from
everyday opportunities for learning. What underlies these deficiencies is the child’s
passive approach to the environment. The retarded performer views himself as a passive
receiver of information, not someone who is a user and generator of information.

Successful living needs planning, it also requires the self-regulation of behaviour. The
impulsiveness of under-achieving children can be regulated in two ways: firstly, by
teachers and parents modelling controlled and considered responses to stimuli, and,
secondly, by offering opportunities, what Feuerstein (1980:8) calls instruments for
reflective thinking. These are the situations where children must assess for themselves
the information they need, check for errors or missing data and evaluate the outcome.
Feuerstein (1980:8) aims to encourage the idea that children can achieve things they
once thought impossible. A failure of some teaching methods is that children are given
little idea of the progress they are making, they are not taught how to review and
evaluate their performance.

Inadequate mediated learning experiences produce specific cognitive impairments that
affect the input, elaboration and output levels of cognitive functioning (Feuerstein, Rand,
Impairments at the input level lead to:

- blurred and sweeping perception,
- unplanned, impulsive and unsystematic exploratory behaviour,
- lack of, or impaired receptive verbal tools that affect discrimination, for example, a circle is called "a round thing",
- lack of, or impaired spatial orientation - in terms of back/front, left/right, oval, round, etcetera,
- lack of or impaired temporal concepts - time has little or no meaning, and
- lack of or deficient need for precision and accuracy in data gathering.

Impairment at the elaboration level lead to:

- inadequacy in the perception of the existence and definition of an actual problem,
- inability to select relevant from nonrelevant cues in defining a problem,
- narrowness of the cognitive field,
- episodic grasp of reality,
- lack of, or impaired inferential-hypothetical thinking, and
- lack of, or impaired planning behaviour.

Impairments at the output level lead to:

- egocentric communicational modalities - communicating ideas and solutions to others in language that is not generally understood,
- blocking (anxiety-induced inability to respond),
- trial and error responses,
- lack of, or impaired verbal tools for communicating elaborated responses adequately, and
- impulsive, acting-out behaviour affecting the nature of the communication process.

It is clear that without mediated learning, the child's cognition is inadequately formed, which leaves him ill-equipped to relate and organise events in his environment in such a way as to learn effectively from them (Nickerson, Smith & Perkins 1985:150).
2.5.2 Transfer

Transfer (also called bridging) refers to the transfer of knowledge and insight from one context to another. It is a skill which can determine the child's success in school, as well as a skill that can be developed at the pre-school level (Burger 1992:52). According to Maxcy (Burger 1992:52), it can be assumed that transfer has occurred when the child is able to apply a concept that he has learned in a specific situation to other situations. An example of the transfer of knowledge would be when the child has learnt about different colours and be able to recognise different colours from objects from different objects. In this way, the child can make a connection between new and existing knowledge and apply the knowledge in a different situation.

Parents and teachers should find ways to provide children with concentration training. People who became highly proficient at something that requires a lot of practice, such as violin playing, chess or performing ballet, have had to learn to concentrate in order to develop their special skills. Once concentration has developed, the ability to concentrate can be transferred from one subject to the other. This ability is especially potent if an individual begins developing it at an early age and continues developing it through adolescence. Long-term concentration aimed at skill development in a single area or a few select areas also allows the child, and later the adult, to feel confident enough to undertake difficult activities (Fisher 1990:136). Forman and Kuschner (Burger 1992:52) are of the opinion that transfer can be facilitated by providing the child with general learning procedures. These authors base their opinion on the hypothesis that children's learning experiences will be enriched when they have learned how to explore new situations. Thus, a child who has learned how to explore and seek information, has learnt to learn. Another very important aspect of thinking skills, is metacognition.

2.5.3 Metacognition as a dimension of thinking

2.5.3.1 Definitional studies in metacognition

Metacognition is defined by Flavell (Vaughan 1983:2) as one's knowledge concerning one's own cognitive processes and products or anything related to them. Metacognition refers among other things, to the active monitoring and consequent regulation and
orchestration of these processes in relation to the cognitive objects on which they bear, usually in the service of some concrete goal or objective. A student's academic success may be in part determined by his/her ability to perform operations that have been labelled metacognitive.

According to Flavell (Vaughan 1983:8), metacognitive competencies can be viewed as comprising of four major components: person, task, strategy variables and the interaction of those variables in any given task. These competencies may not develop simultaneously, yet in the production of successful expository text all may be required. Metacognition is a mirror on one's knowledge and thinking, and the reflection can come from within the individual or from other people (Jones & Idol 1990:21).

Metacognitive knowledge is knowledge about knowledge and knowing, including knowledge about the capabilities and limitations of human thought processes and about the characteristics of specific people - and especially oneself - as knowing and thinking individuals. Metacognitive skills may be thought of as cognitive skills that are necessary, or helpful, to the acquisition, use and control of knowledge and other cognitive skills. They include the ability to plan and regulate the effective use of one's own cognitive resources (Brown, Scardamalia & Bereiter in Nickerson, Smith & Perkins 1985:101).

Some examples of metacognitive skills that have been identified by Brown (Nickerson, Smith & Perkins 1985:104) include planning, predicting, checking, reality testing, monitoring and control of one's own deliberate attempts to perform intellectually demanding tasks. The training of such skills, if done effectively, should have a considerable payoff. In particular, in as much as these skills are very general, a successful effort to improve them should beneficially affect performance on a wide range of tasks.

2.5.3.2 Virtues of metacognition

According to Jones and Idol (1990:18), metacognition as a psychological construct and a dimension of thinking has several virtues:
Firstly, it focuses our attention on the role of awareness and executive management of our own thinking. Metacognition helps learners become active participants of their own performance rather than the passive recipients of instruction and imposed experience. It is consistent with constructivist accounts of learning and development.

Secondly, because metacognition emphasises personal appraisal and management, it is oriented to analysis of individual differences in cognitive development and learning.

Thirdly, metacognition is obviously embedded in cognitive development and represents the kind of knowledge and executive abilities that develop with experience and schooling. It is both a product and a producer of cognitive development.

A fourth general virtue of metacognition is that the constructive personal strategic thinking that is involved in metacognition is amenable to classroom instruction.

A fifth virtue is that self-appraisal and self-management invite both cognition and motivational explanations because skill and will are interwoven in reflections and anticipations about learning.

2.5.3.3 Metacognition and the self-system

A review of existing research suggests that the self-system, which include constructs such as self-efficacy, self-esteem, locus of control, achievement motivation and attributional beliefs, is a complex interdependent system that supports both metacognitive functions and academic performance. Self-esteem and other self-system constructs in turn predict achievement (Jones & Idol 1990:59). The self-system is important because it appears to underlie the development of the metacognitive system and helps to determine the quality of academic achievement. Parents influence their preschool child’s self-esteem, self-confidence and motivation for success explicitly through home-based learning experiences.
In a cross-cultural study by Kurtz, Schneider, Carr, Borkowski and Turner (Jones & Idol 1990:59) 184 West German and 161 American elementary school children were assessed on measures of attributional beliefs, metacognitive knowledge and memory tasks. Parents were asked to complete a questionnaire about the attributional beliefs they ascribe to their children and the type of strategy training they provide in the home. Americans were likely to emphasise the need for effort and Germans were equally likely to subscribe to the importance of effort and ability in determining success. Furthermore, parental attributional beliefs paralleled children's attributional beliefs.

More important, the attributional beliefs of parents in both countries correlated with their children's metacognitive knowledge, suggesting that attributional beliefs of parents are tied to the development of metacognitive knowledge in children, despite cultural differences. Furthermore, children's self-perceptions, combined with parental instruction of learning strategies and metacognitive knowledge, accounted for some of the differences in learning performance between and within the two countries.

2.5.3.4 Self-determination through self-worth

Dweck (Jones & Idol 1990:69) found that some children believe that their intellectual competence consists of a repertoire of skills that can be expanded through their own efforts. These children are called incremental theorists because they persist in achievement attempts, in part to enhance cognitive development. They believe that the outcome of effortful-strategic behaviour increases intelligence. On the other hand, children who attribute performance outcomes to ability, are called entity theorists. Entity theorists view intelligence as a global and stable trait that cannot be increased through effort. These children view the exertion of effort as being a sign of lower intelligence. They do not pursue alternative strategies when faced with the possibility of failure nor do they welcome challenging tasks as opportunities to expand cognitive skills or to enrich metacognitive knowledge.

Lovington and Dweck's (Jones & Idol 1990:60) models suggest that appropriate attributions of Lovington's effort-related attributions about success and Dweck's entity "theorist", facilitate achievement by fostering feelings of positive self-worth. Similarly, inappropriate attributional beliefs may interfere with cognitive development by blocking
the development of positive self-worth. Hence children are likely to achieve self-determination when they feel personally responsible for a successful outcome and understand that their success is due, in part, to the acquisition and application of appropriate metacognitive knowledge.

2.5.3.5 Integrating metacognitive and motivational constructs

Jones and Idol (1990:64) say that the self-system is instrumental for academic achievement, and that metacognition seems to be one construct for explaining its influence via skilled learning. From the perspective of the metacognitive model by Pressley Borkowski (Jones & Idol 1990:64), children who feel good about themselves and their ability, those who are intrinsically motivated to learn and who have effort-related attributions, are more likely to believe in strategic behaviour and to develop complex, mature strategy knowledge.

Emotional responses to success and failure may also influence metacognitive development. Children who have a sense of pride in their work and who seek success as a function of their effort, are likely to acquire and use metacognitive knowledge. These children will seek challenging experiences, in part, to increase feelings of pride and self-fulfilment. It follows that children must first be capable of experiencing positive effective feelings as a result of early successful strategic actions that lead to positive attributional patterns. Children who feel good about themselves as learners are likely to continue to be strategic and to increase their metacognitive knowledge because these processes have paid off in the past, elevating performance and enhancing self-esteem. Although the self-system provides the necessary motivation and effective states to foster children's progress toward self-determination, it is the metacognitive system that provide the means to reach that goal. In order for the metacognitive system to work, children must have adequate information about both general and specific strategy knowledge.

2.5.3.6 Metacognition and giftedness

In the case of gifted and talented children, an integrated pattern of motivational and metacognitive development generally leads to academic achievements. According to Ketchan and Snyder (Jones & Idol 1990:66), for the gifted child consistent success,
together with the encouragement of their families and teachers, set the stage for the emergence of a positive self-system and superior metacognitive development.

2.5.3.7 Metacognition and learning disability

Brown's work with colleagues (Vaughan 1983:8) has shown that what learning-disabled children lack is an ability to monitor their own progress, to know when they are correct or incorrect. When that competency develops, this group of children make strong improvements which have been shown to be transitional. Jacobsen, Lowery and Ducette (Jones & Idol 1990:67) interviewed learning disabled and non-learning disabled children and found that the learning disabled have self-systems that are unlikely to promote achievement behaviours. Instead of attributing success to effort and failure to external causes learning disabled children tended to attribute success to external factors and failure to effort, an attributional pattern that, according to Lovington's theory (Jones & Idol 1990:67), would result in poor self-worth and dysfunctional metacognitive and self-systems. The dysfunctional metacognitive and motivational components of learning disabled children in turn increases the likelihood of failure and reinforces negative self-evaluations, thus perpetuating the failure cycle.

2.5.3.8 A metacognitive view of children's conceptions of learning

According to Flavell (Pramling 1983:145), children do not reflect spontaneously about their thinking, but when asked to do so, a significant number could. In the question about learning a phone number, one had to utilize one's thinking processes as well as using the strategy of repeating the phone number in order to learn it. Brown (Pramling 1983:45) distinguishes between knowledge and understanding of that knowledge. In his study it was seen how children have knowledge which they can express far earlier and that they can understand that this knowledge is a result of learning. On the other hand, the child has reached a metacognitive level when he knows that he knows, and also when he can differentiate between different concepts and reflect about his own action, knowledge or understanding.

Cauley and Murray (Pramling 1983:145) state that children's beliefs about success or failure in school are more related to "training harder" than "knowing more". It is an
important step in a child's life when he realises his own role in learning, when he understands that he can learn to do by practice. It is of equal importance also when the child realises his own role with regard to learning to know and learning to understand. Children's conceptions of finding out by thinking seem to be a good indicator of their awareness of their own active role in using their minds. When children realise that they think in a different way than when they were younger, or when they can relate thinking to their own understanding, they have acquired a valuable skill in metacognitive terms.

Language has been found to influence the cognitive development of a child. Two theories of language development will be presented. The relationship between language and cognition will also be discussed.

2.6 THE EFFECT OF LANGUAGE ON COGNITIVE DEVELOPMENT

2.6.1 Theories of language development

2.6.1.1 Piaget's theory of children's language development

Piaget concentrated on the distinctive characteristics of the child's thought, on what the child has rather than on what the child lacks. According to Piaget (Vygotsky 1962:11), the bond uniting all the specific characteristics of the child's logic is the egocentrism of the child's thinking. To this core trait he relates all the other traits he found, such as intellectual realism, syncretism, and difficulty in understanding relations. Piaget describes egocentrism as occupying an intermediate position, genetically, structurally, and functionally between autistic and directed thought.

Piaget (Vygotsky 1962:12) says that directed thought is conscious, it pursues aims that are present in the mind of the thinker. It is intelligent; it is adapted to reality and strives to influence it. It is susceptible to truth and to error and it is communicated through language. Autistic thought is subconscious, for example, the goal it pursues and the problem itself are not present in the consciousness. It is not adapted to external reality, but creates for itself a reality of imagination or dreams.
It tends not to establish truths, but to gratify wishes and remains strictly individual and incommunicable as such by means of language, since it operates primarily in images and must, in order to be communicated, resort to round about methods evoking, by means of symbols and myths, the feeling that guide it (Vygotsky 1962:17).

The factual basis of Piaget's belief is provided by his investigation of the child's use of language. His systematic observations led him to conclude that all conversations of children fall into two groups, the egocentric and the socialised. The differences between them lie mainly in their functions. In egocentric speech, the child talks only about himself, take no interest in his interlocutor, does not try to communicate, expects no answers, and often does not even care whether anyone listens to him. It is similar to a monologue in a play. The child is thinking aloud, keeping up a running accompaniment as it were, to whatever he may be doing. In socialised speech he does attempt an exchange with others - he begs, commands, threatens, conveys information and ask questions (Vygotsky 1962:18).

According to Vygotsky (1962:19), the primary function of speech in both children and adults, is communication, thus social contact. The earliest speech of the child is therefore essentially social. At first it is global and multi-functional, later its functions become differentiated. At a certain age the social speech of the child is quite sharply divided into egocentric and communicative speech. Egocentric speech as a separate linguistic form is the highly important genetic link in the transition from vocal to inner speech, an intermediate stage between the differentiation of the functions of vocal speech and the final transformation of one part of vocal speech that lends it such great theoretical interest.

2.6.1.2 Stern's theory of language development

Stern (Vygotsky 1962:26) distinguishes three roots of speech: the expressive tendency, the social and the intentional. Stern defines intentionality in this sense as a directedness toward a certain content, or meaning. Stern says that at a certain stage of his psychic development man acquires the ability to mean something when uttering sounds to refer to something objective. In substance, such intentional acts are already acts of thought. Their appearance denotes intellectualisation and objectification of speech.
Stern stresses the importance of the logical factor in the development of language. Stern (Vygotsky 1962:27) believes that a child in the second year of his life can become aware of symbols and of the need for them. According to Stern, the intentional tendency is basic, primordial, it springs up spontaneously once and for all. This is a propensity enabling the child to discover the function of speech by way of purely logical operations. Stern takes care not to disregard the part that imitation plays in speech development, or the role of the child’s spontaneous activity, by applying to this issue his “covergence”. The child’s conquest of speech occurs through a constant interaction of inner dispositions that is his speech and external conditions, which is the speech of people around him, which provide both stimulation and material for the realisation of these dispositions.

2.6.2 The genetic roots of thought and speech

The relationship of thought and speech undergoes many changes. Progress in thought and progress in speech are not parallel, their two growth curves cross and recross.

These curves may straighten out and run side by side, even merge for a time, but they always diverge again. According to Vygotsky (1962:43), the most important discovery is that at a certain moment, at about the age of two, the curves of development of thought and speech, till then separate, meet and join to initiate a new form of behaviour. When speech begins to serve intellect and thoughts begin to be spoken, this is indicated by two unmistakable objective symptoms, that is the child’s sudden, active curiosity about words, his question about every new thing and the resulting rapid saccadic increases in his vocabulary. Before the child’s thought and speech meet and join each other, the child does recognise a small number of words as substitute for objects, persons, actions, states or desires. Previously the child knows only the words supplied to him by other people. Now the situation changes. The child feels the need for words and, through his questions, actively tries to learn the signs attached to objects. He seems to have discovered the symbolic function of words. Speech which in the earlier stage was affective-conative, now enters the intellectual phase. The lines of speech and thought development have met.
Inner speech is very important in all our thinking. According to Vygotsky (1962:45), speech is internalised psychologically before it is internalised physically. Egocentric speech is inner speech in its functions, that is, speech on its way inward, intimately tied up with the ordering of the child’s behaviour, already partly comprehensible to others, yet still overt in form and showing no tendency to change into whispering or any other sort of half-soulless speech. The speech turns inward because its function changes. Its development world still have three stages, external speech, egocentric speech and inner speech.

The fourth stage Vygotsky (1962:47) calls the ingrowth stage. The external operation turns inward and undergoes a profound change in the process. The child, for example, begins to count in his mind to use logical memory, that is to operate with inherent relationships and inner signs. In speech development, this is the final stage of inner signs and soundless speech. Schematically we may imagine thought and speech as two intersecting circles. In their overlapping parts, thought and speech coincide to produce what is called verbal thought. Verbal thought, however, does not by any means include all forms of thought or all forms of speech. Vygotsky concluded that fusion of speech and thought in adults as well as in children, is a phenomenon limited to a circumscribed area. Non-verbal thought and non-intellectual speech do not participate in this fusion and are affected only indirectly by the process of verbal thought.

2.6.3 Language and cognitive development

According to Harrap (Lewis 1963:1), the child utters sound from birth and responds to the human voice, his mother responds to his sounds and speaks to him. If any of the above-mentioned conditions are impaired, the child’s linguistic growth may suffer. The effects of the child’s failure to receive the care that normally a mother is able to give, when, for instance, due to a mother’s illness or her child spending his early weeks in a hospital or other institution, the frequency and the variety of his early sounds may be notably below the average.

Human language enables us to communicate with others and it also provides a learner with an efficient means of internalising his own mental processes (Howe 1975:108). Language serves to assist memory and facilitate thought to communicate meaning and when necessary, to disguise it, to state intentions or merely to intimate their nature, to influence or control the actions of others, and sometimes to provide substitute
satisfactions for those that would normally follow upon exercise of bodily activity (Watts 1944:17).

Of all the areas to which a parent give attention to during the preschool years, language development is of utmost importance. Spoken language is the beginning because it is the precursor to reading and writing. Language is the basis for higher thinking and for reading that is needed to unlock the mysteries of all subjects that are studied in school. Absence of spoken language penalises a child in acquiring what is needed for success in school. Conversation helps children develop a readiness for school. During the first few years of life, children are like computers that are being programmed. A child needs the same sort of input and the parent is the one most likely to be in the position to provide it. Helping the child to learn how to learn is one of the most valuable contributions a parent can make to a child's eventual success in school (Maeroff 1989:36).

According to Fraser (1973:4), the child who is well-equipped verbally is able to score highly on an intelligent test, not merely because of his superior performance on verbally-loaded items, nor because he is better able to understand the instructions, but also because his verbal facility enables him to be more flexible in the thinking-out of solutions for problems even of an apparently non-verbal kind. He has the necessary equipment for thinking and reasoning. The verbally deprived child on the other hand is handicapped in the manipulation of ideas because thoughts and ideas without the words to express them, rarely reach a high level of complexity.

In this regard Barber (1988:375) found that children from urban areas performed better than those from the rural areas. The difference was also made by the frequency with which parents used verbal explanations for teaching. Parents of poor performers were more likely to show their child what to do than parents of good performers. Parental teaching style was related to children's achievement. Parents who were classified as using verbal means for teaching a new skill to their child rather than demonstrating or showing the skill, had children who scored an average of five points higher on each achievement test than did parents who used the demonstration method. Parents who use verbal explanations may foster better verbal and mathematical skills, and higher achieving children may be easier to communicate with verbally.
2.6.3.1 Verbal stimulation by parents

Babies can "talk" to their mothers and fathers even before they learn words by cooing and babbling to their loved ones. The more parents talk lovingly to their babies, the more loved they feel and the more they want to talk back. Most babies will smile and laugh when a special adult smiles and talks to them. Talking early to a child helps the child learn about language. How one talks with one's child makes a difference in how well he/she uses language, even years later. Most children who use language well and do well in school have mothers and fathers who talked a lot to them when they were babies (Honig 1996:19).

As parents are a young child's major speech pattern source, and as they largely determine the kind of stimulation he receives in understanding the meaning of words, it is reasonable to suppose that there is some relationship between children's speech and their parents' speech characteristics (Landreth 1967:192).

In comparison, children of parents in professional groups are superior in their rate of acquiring the sounds characteristic of adult speech, in the extent of their vocabularies, in the length, completeness and complexity of sentences they use, and in the number of informative statements they make and questions they ask. A comparative study by Young (Landreth 1967:192) of six hours language records obtained from 37 children in a university nursery school and 37 in a relief nursery, indicated that the university group surpassed the relief group in all aspects of language studied.

Bernstein (Landreth 1967:192) points out that working class families use words mainly as referents to denote objects and action. Middle-class families use them more often to indicate relationships. In consequence, lower-class syntax is simple, stereotyped and predictable whereas that of middle-class is flexible and unpredictable. Such differences in speech patterns and experience affect children's thinking processes. Children from lower-class families lack linguistic tools that make reasoning possible because they do not relate happenings in time and space, they also have difficulty in foregoing immediate transient pleasure for future, more enduring gains. A middle-class teacher confronts such children with a different language, a different way of thinking and a different way of directing their activity, all of which is at odds with what they have learned so far. Little
wonder these children are school failures from kindergarten and early dropouts. They are unable to take advantage of a school programme that assumes the experiences they lack.

Adults interacting with children provide a language environment, which is different from and superior in many ways to the language environment provided by peers. Imitation of babbling, playing with sound along with the infant, invites later games and gives the child a chance to hear phonemes at frequency levels different from her own. Naming the important things in the child's environment helps to isolate words and establishes meanings in an unambiguous context. Vocabulary building occurs casually in some homes where parents use the words that describe a situation best and involve the children in these conversations without talking down to them (Robeck 1978:342).

According to Slobin (Landreth 1967:207), language stimulation is not entirely a matter of naming. Slobin noted that 30 percent of a mother's speech, when her infant was present, consisted of repetition and expansion of the infant. Under these circumstances 15 percent of the infant's speech was an imitation of his mother's expansions. Such imitation and expansions may help children to expand their telegraphic statements to include articles, demonstratives, prepositions, conjunctions and auxiliaries and to learn grammatical rules.

2.6.3.2 The importance of encouraging verbal ability

The child should be encouraged to participate in discussions. The parent or adult should talk to him or her about ideas, about how things work, about what things mean, about anything you can talk about in a low-pressure friendly situation. A child learns by listening to the speaker but also by teaching his or her own ideas to you. The parent or adult should listen carefully, if the child's explanations are not entirely correct, help the child reformulate them but do it gently. Ease the child into a revision of his or her understanding of the particular function, definition or process. Parents should not criticise or reprimand a child for his or her incorrect information (Lee & Gupta 1995:60).

From birth the brain is poised to learn speech. The left hemisphere of the brain is naturally sensitive to the structured forms of speech sounds. The ability to use sounds
to convey a point of view and to convince others into a course of action begins at the baby stage. It is an ability which will influence happiness and success throughout a child's life. It needs to be nurtured from the earliest years. There is only one condition for a normal child to learn speech, she must have lengthy lessons from a competent speaker, usually the mother. The characteristic of mothers and of good teachers of the very young, is to repeat the same phrases, songs and rhymes for the child to learn the model and to develop. The child look for meaning in his or her interaction with the mother or teacher and similarly the mother and the teacher will look for meaning in the cues and signals given by the child (Fisher 1990:15).

Jone and Moss (Yarrow 1975:83) found a positive relationship between the amount of infant vocalisation and the frequency with which the mother's speech was contingent on the infant's vocalisation. Lewis and Goldber (Yarrow 1975:85) suggested that the infant's awareness of a contingent relationship with his caregiver promote his cognitive development and his expectation that he can have an effect on his environment.

2.6.3.3 Families versus institutions with regard to language development

Irwin (Landreth 1969: 101) found that infants in families vocalised more, had more vowel and consonant sounds in their repertoire at six month of age than did those in institutions. A comparison of care taking acts received by babies in good homes and a good orphanage indicates that one characteristic of most institutions is less interpersonal contact and more persons taking part in what contact there is. Thus infants in orphanages make slower progress in acquiring adult speech sounds, regardless of genetic factors involved (Rhengeld in Landreth 1967:127).

Roberts (1993:147) concluded that the frequency of maternal verbalisation and positive physical contact were most predictive of later cognitive language competence at every age. His longitudinal studies indicate that the degree of both verbal and physical stimulation supplied by the mother during the first years of life is predictive of the child's later cognitive language competence.

The findings by Bank (Howe 1975:117) suggest that language play a significant functional role before the child makes obvious use of it. As the child learns to speak,
language initially exerts a somewhat coarse guidance over behaviour, but later the control becomes increasingly precise. For instance, the findings of Luria (Howe 1975:117) suggest that as children become older there are changes in the extent to which motor activities are under the control of verbal signals.

According to Landreth (1967:209), young children living in impoverished circumstances and crowded housing are generally compelled to be quiet and inactive. For them silence is a virtue. They need first to be encouraged to communicate with others in whatever ways they are capable of, be it gesture, caress, a smile, a word, drawing, painting, building with blocks, abandoning themselves in the freedom of all kinds of large-muscle activity and responding to the rhythm of music. Thus those activities may form part of a speech programme for them. In encouraging all these activities, as well as in speaking with them, adults can foster children's wishes to communicate.

Verbal ability can be achieved by encouraging listening. The response a child's speech gets depends on it being understood. His articulation as well as his understanding of words deserve encouragement. No matter how good a speech model he has, a child's articulation won't improve if he doesn't listen. Poor articulators can be helped indirectly by such listening games as "What is that sound?" "Can you make a sound like a cat?". The sound and rhythm of what is said also encourage listening (Landreth 1967:211).

Moulton and Robinson (1981:49) made an investigation into the mother's use of emphasis to see if this could assist the identification of referential words. The observation indicated that referential names had a high probability of being the loudest word in an utterance and that the emphasis of names was especially likely to occur at the beginning of verbal episodes. This relationship between words and acoustic amplitude should help the child to relate the name of a toy or object on which his or her attention is focused. Robinson's findings suggest that non-linguistic behaviour could have an important role to play in assisting the child's comprehension of speech.

In the early stages of language development a child combines only the essential nouns and verbs. In giving directions or suggestions, adults can thus ensure understanding and give a working pattern for making his wants known by adapting their communications to the child's level of syntax. Adults can further help children by being exact in their use
of words. Adults can also help children by referring to the colour, size, shape, number and position of objects and by inventing activities that make it necessary for the children to distinguish between and name these characteristics (Landreth 1967:212).

Bring (Medinnus 1967:222) found that high-verbal mothers gave their children more verbal stimulation during infancy and early childhood, remembered a greater number of their children's early accomplishments, let their children participate more in conversations, punished them less for poor speech, bought more story books for them and criticised them more for poor academic achievement. The high-verbal group mothers were found to be higher than low-verbal mothers in helping behaviour, in pressure for improvement, in giving help after a request by the child, in asking the observer more questions, in giving more physical help, and in giving such help sooner. High-verbal mothers were also higher on withholding help and disapproval than low-verbal mothers. The findings led to the general conclusion that discrepant verbal ability is fostered by a close relationship with a demanding and somewhat intrusive mother, while discrepant nonverbal abilities are enhanced by allowing the child a considerable degree of freedom to experiment on his own.

Martinez (Roberts 1993:134) found in a study of Spanish mothers and children that parents provided a far more complex dialogue structure for children than peers did. Vocabulary growth in children may be related to verbal interactions with adults because children are highly dependent on adults to carry on sustained conversations. Eventually those conversations may turn into informal teaching-learning situations that encourage the development of emergent literacy in the three to five year-old child. Bus and Izendoorn (Roberts 1993:135) compared preschool peer and adult interactions and their relationship to later performance. They found that time spent with adults in preschool was significantly related to better grades and achievement in elementary school.

According to Landreth (1967:189), analyses of children's speech with adults and speech with other children reveal that they use more socialised speech and longer sentences with adults than with peers. Conversations with adults stimulate a child's development of the speech forms in adult usage. In contrast, constant association with children of his own age is associated with poorer speech development.
Clarke-Stewart (1973:98) studied pairs of mothers and infants from working class to upper-middle-class backgrounds. The subjects were observed three times at home when the infants were six months old. Inventories of their home environment were taken, and the infants were given the Bayley Scale of Infant Mental Development. When the infants were 13 and 24 months old, the mothers and infants were retested. By the time the infants were 24 months old, their IQ score were significantly related to how frequently their mothers talked to them. Mothers who talked to their children and who did relatively little restricting or punishing, tended to have the most advanced two year-olds. These were the mothers, many from the upper middle-class, who earlier had kept in close physical contact with their infants and had been both emotionally and verbally responsive.

2.6.3.4 Relationship between language and thought

According to Watts (1944:21), we must give our thoughts words to make them known. We find out what we think by expressing it. Plato (Watts 1944:18) said that thinking is the conversation which the soul holds with herself. During infancy a child's primitive speech and his rudimentary command of the mother tongue may, together with non-linguistic symbolisation, be relatively adequate for his needs in communication with others, in his own thinking, in his perceptual and conceptual development, the growth of his powers of reasoning and the enlargement of his knowledge. As he passes from infancy to childhood, the possibility of his further development depends more and more upon his mastery of language as a more sensitive, more refined and more finely-adjusted instrument of communication and thought (Lewis 1963:110). Educators (parents and teachers) should encourage, incite and train the child to verbalise his experiences, to use words, to supplement and supersede physical acts.

The centre of the school education is the fuller development of ability to manipulate verbal symbols. Therefore the child's cognitive development is fostered through language.
2.7 EARLY STIMULATION AND COGNITIVE DEVELOPMENT OF THE CHILD

It is difficult to feed dreams of the future to undeveloped minds. Parents and educators must begin empowering children's minds at a very young age. The first years of life are thus the years in which the young mind is most receptive to stimuli and to learning (Gray, Miller & Noates 1994:209).

2.7.1 Caregiving and cognitive development

Yarrow, Rubenstein and Pedersen (1975:75) talked of kinesthetic stimulation which includes picking up the infant, carrying him, rocking or jiggling him, and moving his entire body. In African cultures infants are given a great deal of kinesthetic stimulation because they are carried about almost constantly during the early months of life. In the process they are treated to a variety of sights and sounds as the mother moves about the village and works in the fields. When not being carried, the infants are in almost constant proximity to their mothers who respond rapidly to their crying. Much stimulation is also given by other adults and children.

Experimental studies with institutionalised infants by Brossarol and Decarie (Yarrow 1975:75) found that compensatory kinesthetic stimulation effectively increases infants social responsiveness and alertness to the external environment and helps the infant to define the boundaries of his own body. This, in turn, facilitates his awareness of objects existing independently of him.

In their studies, Belsky, Lerner and Spanier (Luster 1986:3) found that maternal behaviours that are being linked to favourable cognitive outcomes include: providing attentive affectionate and responsive care, allowing the child floor freedom, that is, freedom to explore the home environment, providing verbal stimulation for the infant, judicious use of verbal and physical prohibitions, and arranging the physical environment so that it is safe and stimulating, this includes providing toys that are suited to the infant's developmental stage.

Luster (1986:10) found that mothers in his study clearly had different beliefs about what parenting practices were best for their children. The child-rearing beliefs most strongly
related to the quality of care they provided for their infants were beliefs regarding spoiling
the child and beliefs regarding verbal stimulation. Mothers who were concerned that
being responsive to their infants' cries and being too affectionate would lead to a spoiled
child, apparently acted in accordance with these beliefs and appeared to be less involved
with their infants. Although nearly all the mothers in this study thought it was important
to talk to their babies from the earliest days, the mothers differed in how much they
emphasised the importance of providing their infants with verbal stimulation and these
differences in their beliefs were reflected in their parenting styles.

2.7.2 Social interaction and the cognitive development of a child

Children learn language in natural social settings. Thought and language are closely
interrelated, with thought developing first, then language following. From the time of
birth parents provide the social context in which children learn to communicate. Thinking
develops as children actively participate in and interact with people and things in the
world. This is how children come to know or gain knowledge (Chapey 1986:16).

Beckwith and Cohen (Honig 1990:31) made a study of social interaction with the parent
during infancy and later intellectual competence in children. To test the relationship
between responsive caregiving and cognitive development, the sample was divided at
the median into more and less responsive caregiving on the basis of the caregiving scores
obtained during the home visits. Those caregivers who had a responsive caregiving
summary score above the median on two or three of the home observations, were
considered more responsive and those whose responsive caregiving score was below the
median on two or three of the home visits, were considered less responsive. The
cognitive development of the children was then examined at two, five and eight years
by a univariate test. At each age period through the age of eight years, the children of
caregivers who were socially responsive in the child's infancy, did significantly better
than did children whose caregivers were less socially responsive in their child's infancy.

In interacting, either with adults or among themselves, children not only demonstrate
more advanced forms of cognitive organisation than those they are capable of alone prior
to interaction but also are able to produce by themselves these more advanced forms
after the interaction. It is these very abilities that then allow them to take part in more
complex interaction and in this way to progress up the spiralling developmental path
which characterises the interacting effects of social activity and cognitive development.
It is these abilities too that later enable children to solve cognitive problems
independently (Doise & Mugny 1984:27). According to Luster (1986:10), the availability
of social support is related to the quality of care the mothers provided for their infants.
Mothers with more extensive support networks provided their infants with a more
intellectually supportive environment than mothers who had less extensive support
networks.

Pedersen, Yarrow and Beckwith (Honig 1979:9) undertook research on the effect of
positive parenting practices in the maternal home rearing situation. They observed
adoptive mothers with infants and found that high frequency of maternal physical and
verbal contacts and low restrictiveness for an infant's explorations were associated with
significantly higher IQ scores. This was supported by extensive observation by Watts,
Barnett and Halfer (Honig 1979:11) of the interactions of families of varying social
backgrounds with their babies in the natural course of development over several years.
Children who developed well intellectually were termed "A Children" and others who did
not, were termed "C Children" and they differed strikingly. Mothers, fathers, babysitters
and other people who are in contact with these "A Children" spend more time interacting
with them in the context of intellectually stimulating activities and spend more time
directly participating in these activities than interactors with "C Children".

2.7.3 The effect of deprivation on cognitive development

Hebb (Weil 1991:7) defined deprivation as a function of psychologically restricted
sensory environment, an isolation from sensory stimulation. Langmeier and Matejcek
(Weil 1991:7) summarised this concept as "a quantitative impoverishment which would
be understood as a deficit of certain elements in the environment, a deficit of stimuli as
such or stimuli of a specific kind, or a deficit of certain structuring of stimuli necessary
for normal development and for the maintenance of psychological functioning".
Langmeier and Matejcek (Weil 1991:8) observed children raised in an institution versus
children raised in devoted homes. They concluded that institutionalised infants do not
receive the close physical contacts with the caretaker's body as would infants nursing
at the mother's breast. Infants raised in institutions are rarely provided with an
opportunity to play with their nurses, they usually share a nurse's attention with eight to ten other infants with the result that there is less time available for the nurses to give them physical contact and stimulate each infant.

Dennis, Goldferb, Spitz and Wolf (Clarke-Stewart 1973:63) have observed infants who are deprived of certain kinds of experience. These researchers have observed infants raised in institutions. In some of these institutions, although the infants were kept clean, dry and well fed, they received no continuous care from a single caregiver of whom they might grow fond. They received no educational stimulation. Toys were scarce, the infants rarely moved about, and no one played with them or talk to them. Infants in such institutions developed less quickly and less fully than other children. These infants progressed normally for the first three months of life in the institution as long as their basic physical needs were met, but by three to six months of age, smiling, vocalising and motor development were delayed. By the time the infants were one year old, intellectual development was impaired by as much as 50 IQ points.

According to Zinler (Honig 1979:10), children who do not receive enough affection and attention from the significant adults in their lives suffer in later years from an atypically high need for such attention and affection. When faced with cognitive tasks, such children do not appear highly motivated to solve the intellectual problems confronting them but rather employ their interaction with adults to satisfy hunger for attention. These children who were socially deprived in the first few years of life present problems to their teachers. Instead of attending to a curriculum task and solving it, the child may whine and ask the teacher to solve the task for him. The teacher who is tuned in only to the cognitive aspects of the situation may conclude that the child is unintelligent. On the other hand, the teacher who realises how depriving experiences spell themselves out in the motivational structure of the child may, more correctly conclude that what is interfering with the child's performance in his need for a positive interaction with an adult. If the parents appreciate the child's emotional needs and attempt to satisfy them, the child will be able to perform better scholastically.

Studies by Casler and Yarrow (Yarrow et al. 1975:69) have shown that severe stimulus deprivation in early life is associated with developmental retardation and personality distortions. These studies have shown that these deficiencies can be prevented or
ameliorated by enriching the experiences of infants and young children or by specific experimental manipulation of some aspect of the infant’s experience.

2.7.4 Socio-economic level and caregiving

Studies by Clifton and Goldberg (Clarke-Stewart 1973:60) have shown that the mother's educational responsiveness and stimulation of their infants are related to how their infants develop. Mothers with more education talk more to their babies. They respond to their babies' babbling by talking. They provide more interesting toys for them and they are more effective teachers. When parents act in these stimulating and responsive ways with their infants, the infants do better on tests of cognitive development. These parents are providing their infants with interesting information about the world and presumably teaching them that the world is a place of predictable actions and reactions, a place worth exploring and learning about. A series of t-test were done by Beckwith and Cohen (Honig 1990:31) to examine the differences between caregivers. It was found that the mothers who were responsive were more educated than were mothers who were less responsive and the more responsive mothers were also from a higher social class.

2.8 THE EFFECT OF PLAY ON THE CHILD’S COGNITIVE DEVELOPMENT

Play is the work of children, in the course of playing, children work hard at mastering new sensory and motor skills. Play expands children's awareness of self and of the world and gives them a sense of mastery over their environment. Through play the child begins to gain knowledge, to increase his facility with language, to socialize and to stretch his imagination. The variety and accessibility of objects which a child can use over time to explore, experiment with, watch, taste, smell, touch, manipulate, discover, set in motion, have a major impact on his cognitive development (Chapey 1986:48).

According to Yawkey and Pellegrini (1984:14), play leads to more complex and sophisticated cognitive behaviour, which in turn affects the content of play in a continuous upward spiral. In the cognitive domain, play functions in four ways. It provides access to more avenues of information; it serves to consolidate mastery of skills and concepts; through the use of cognitive operations, it promotes and maintains the
effective functioning of the intellectual apparatus; and finally it promotes creativity through the playful use of skills and concepts.

There is extraordinary learning power in play and in an enriched environment of playthings. Children do not play in a mental vacuum; they use and test all their ideas as they play. Young children are highly self-motivated to determine the how and why of things in their play. They are almost continuously involved in the process of concept formation and in clarifying and extending their understanding of the world (Caplan & Caplan 1973:89).

Play evokes thought, language, and activity; it permits the child to deal with his intellectual processes in a way which makes these processes acceptable, and accessible to him. When it is not forced, rigid, restricted, or circumscribed, it allows him to structure his world, using language, gestures, body movements and the objects in his environment. No other activity motivates, nor permits a child to find out about himself as well as play. It influences the intellect, the emotions and the body of the child (Weininger & Daniel 1992:69).

Normal cognitive development requires infants to have practice in manipulating different objects. In a study by Yarrow, Rubenstein and Pedersen (Clarke-Stewart 1973:88), five-months-old black infants from various socio-economic groups were observed at home. It was found that the variety of objects available to the infants was related to their scores on tests of intelligence, problem solving, concept of object permanence and exploration. Young children's mental abilities are stimulated when they can play with a variety of interesting things, when they are allowed to explore their surroundings and when their parents encourage them to engage in such activities.

According to Maeroff (1989:29), parents are the first teachers and the home is the first school. When preschool children are encouraged to play games with numbers and words and to solve problems, they will be more likely to be receptive to the learning tasks that await them in school. Children who already have a sense of order in their lives and follow routines will probably adjust more easily to the routines they must follow to be successful in school. Chances are that the same children who are better prepared for
school are going to score higher on IQ tests and other kinds of standardised tests than children who are less ready.

The games people play with children teach the child to solve problems at the sensorimotor level that will be encountered later at an abstract level of thinking. By planning games for their infants parents are encouraged to think about what they want the child to be able to do. Pister (Robeck 1978:460) proposed that the attention span of infants and toddlers could be increased by designing toys which appealed to many senses and could be manipulated. Family games that are chosen appropriately, are fascinating to children if the rules can be adjusted to their span of interest and their discrimination ability (Robeck 1978:460).

For most infants, toys and other play objects are part of the stimulation provided by parents. These objects may be especially important if parents play with the infant. Smith, Adamson and Bateman (Clarke-Stewart 1973:224) have studied the relation between infants' cognitive development and parents' stimulating play with or without toys. In one observational study by Crokenber (Clarke-Stewart 1973:224), 25 pairs of mothers and infants were observed for three-and-a-half-hours when the infants were three months old. They were tested on the Bayley Scale of Infant Mental Development. The test results were clear-cut. Infants who scored high on the test had mothers who were more educated and more responsive to the infants' needs.

Mussen, Conger and Huston (1984:157) showed that children who have no toys and little opportunity to play with other children are cognitively lagging behind their peer group. Additionally, children from economically disadvantaged families appear to engage in less pretend play at nursery schools than middle-class children do. Thus it was believed that one reason many lower-class children have learning problems after they enter school is that play experiences have been less frequent, less complex and less varied than those of most middle-class children.

According to Yarrow (1975:98), as the infant matures, increasingly complex objects evoke longer periods of attention. Greenberg (Yarrow 1975:99) suggested that exposure to increasing levels of stimulus complexity in the home promotes the child's subsequent preference for complexity. One of the most important indices of an enriched inanimate
environment is the degree to which a variety of play and household objects are made available to the young child to look at and manipulate.

**Play and language development**

Social play propels the child into situations that necessitate the use of language in order to communicate intent or desire. Fantasy-play also incorporates aspects of adult speech, thereby perfecting phonemic and syntactic patterns. Similarly, the extended world of the preschooler enlarges his vocabulary and provides labels for the finer discrimination of that which he is learning. Through play, children acquire the terminology to express semantic relationships that reflect their increased understanding of the physical and social environment (Yawkey & Pellegrini 1984:18).

Most toys evoke a verbal response, but it takes a sensitive parent to help her offspring expand his vocabulary by subtly intervening with new ways to use playthings and posing fresh problem-solving situations. These are the kinds of mediated learning experiences discussed in section 2.5.1.2. As the child plays with his toys, he establishes inner speech and imagery, he needs reflective thinking and the mobilisation of his memories. Parental intermediation with appropriate toys and activities for verbal interaction can be an influential contribution to advancing a child's IQ (Caplan & Caplan 1973:116).

Research done in Washington, Miami and Philadelphia (Caplan & Caplan 1973:116) set out to explore whether the IQ of disadvantaged children could be raised by fostering verbal interaction with toys and books. Sixteen families with two-year-old children, living in a low-income housing development, were separated into experimental and control groups. Each child in the experimental group received 16 toys and seven books, while the control group received no material of any kind. The results of four months of intensive study, including before and after tests of children and parents, revealed that there was a rise in IQ of children in the experimental group of 13.7 IQ points as compared with a fractional loss of 0.4 IQ points for the children in the control group. It was found that play with selective toys provided during the optimal eighteenth to twenty-eighth-month period has a profound positive effect on verbal intelligence.
Language opens a way to a wider range of play by helping the child to learn new games. Even children of four learning a game may be helped by verbal instructions. Language and the greater diversity of play have one consequence of particular importance in the growth of thinking: the emergence of real problems. To Isaacs (Lewis 1963:127) who observed the children at the Malting House school, no influence seems so potent in the growth of reasoning as the challenge of problems felt to be real problems. Here adults play a special part: the parents or teachers with skill and discretion may heighten the child's awareness of a problem in the cause of his play.

According to Caplan and Caplan (1973:114), play is a self-discovery activity that teaches as it builds ego and creativity. The parent or teacher must be an active participant as interpreter, labeller and programmer in setting up physical or mental programs to be tackled by the child while the activity is in progress.

Young children are dominated by their sensory perceptions and respond most actively to what attracts their immediate attention. Matching pictures, objects, and signs entails encoding and labelling procedures that, in due course, lead to reading readiness.

2.9 ENCOURAGING FREEDOM OF THOUGHT

According to Gray, Miller and Noates (1994:204), freedom is one of the greatest and yet most elusive qualities of life that parents can pass on to children. Freedom of thought is the key to freedom. Parents sometimes shy away from this endeavour because they fear it encourages rebellion. Parents should seek to raise independent thinkers. They should let their children know that it is acceptable to think differently from the crowd, to choose different clothes, books, movies and political points of view. It should also be made known to children that it is also acceptable to move at one's own pace through the learning process of life.

2.10 EDUCATIONAL MATERIAL AVAILABLE AT HOME AND COGNITIVE DEVELOPMENT

Parents should demonstrate commitment to education by establishing a home in which learning is emphasised. Books, magazines, and other reading materials should surround
the child during the early years (Bell 1976:2). The child brought up in a home in which he is exposed to the stimulus provided by intelligent parents, in which he is given adequate play facilities and contact with books, words and ideas, has an increased opportunity for learning. The child from a culturally poor home, on the other hand, is less likely to develop in the same direction. He too learns from his environment but the values are different and verbal responses are not encouraged to the same extent. He has no tools with which to handle new situations and problems adequately and economically (Fraser 1973:5). According to Maeroff (1989:44), a good parent should not hesitate to be nature's assistant, providing settings that support the kind of intellectual, social and emotional growth that will ensure success once a child reaches school. The child who has been more widely exposed and more extensively stimulated mentally is apt to score higher on an intelligence test. Judith (Maeroff 1989:45) said that children who become good readers are those who have had many experiences with print during their early years. They probably have seen their parents reading for pleasure or to obtain information. Reading becomes a part of their lives long before elementary school, while children who encounter books for the first time when they arrive in school conclude that books and the printed word generally are not particularly valued.

What is recommended at any age is reading aloud to a child. Jim (Maeroff 1989:52) recommends that parents may start reading to their infant almost as soon as they are brought home from hospital. The choice of books changes as children get older, but what is most important is that parents should try to read to their children every single day. The purpose of reading to children is more than just entertaining them, on the most outward level it is to build an appreciation of books.

Children from impoverished homes do not have access to the kind of material, such as pencils, crayons, blocks, books and counting frames, used in kindergarten and the early grades. They are therefore not ready to take advantage of these aids to intellectual development when they enter school.

Covington (Landreth 1967:270) demonstrated that kindergarten children's matching of forms could be improved by simply having them look at the forms for a few minutes on 13 consecutive days. This suggests that younger children are helped by rather free preparatory experience with educational materials.
According to Ellinger (1967:127), children who scored high on tests of creative thinking were most often those who were surrounded with books, magazines and had parents who valued learning. The high-creative group consistently averaged a higher response than did the low-creative groups in all questions related to intellectual stimulation. Parents of high-creative girls and boys read to their children more often than did parents of low-creative girls and boys. When asked what magazines were purchased regularly and what other instructional material were available in the home, there were wide variations in the answers. The high-creative boys and high-creative girls consistently averaged a higher response for magazines and instructional materials than did the low-creative girls and boys. The high-creative boys and girls were those whose homes were most often liberally supplied with magazines, encyclopaedias, dictionaries, reference books and frequently a small personal library of fiction.

A study by Irwin (Landreth 1967:207) gave evidence of the effectiveness of directing children's attention to the sounds and meanings of words. In a study in the United States of America, each mother of a group of mothers from a lower socio-economic class gave her infant during the 13 to 30-month age span, fifteen minutes a day of specified picture books, made stories about them, read stories from other specified picture children's books and talked to the children while caring for them. At 30 months of age these children were more advanced in phoneme development than a matched group who did not have this specified experience.

2.11 ENCOURAGING INTELLECTUAL ACTIVITIES AT HOME

Children should be aided in learning to read and study early in their lifetime. Since a good beginning counts in great measure toward ultimate success, parents should organise their home and family routine into a learning environment where hunger and thirst for knowledge is as important as for food and drink. Thus the child will accept as a natural part of life the need to study in order to add to the knowledge already gained. If parents will provide both the proper atmosphere and daily routine, reading, studying and learning should be a natural part of the home routine. The child should grow up feeling that learning is a way of life and a normal part of living (Bell 1976:5). Conversations in the home should also be oriented towards education. Awareness of the aesthetic delights of life comes naturally to a child who, even as an infant, hears the parents discuss
events described in newspapers, or raise questions about issues or editorials in magazines. As children grow older parents should include them in these serious conversations (Bell 1976:4).

One of the most important tasks that the parent has, is to instill a positive feeling about education in their young child prior to the first day of school. Schools should not be viewed as mandatory evil. Education should be a very high priority in the home. Rewards for positive school participation must be part of the family pattern of living. The more positive the child feels about the school experience the better his performance will be. Parents must also prepare their children for the authority which they will be facing in school (Kappelman & Ackerman 1977:275).

Ellinger's study (1967:120) investigated whether parents of children rated as high-creative involve their children in family activities measurably more than do parents of children rated as low-creative. The correlation between the measure of activity as a family and total creativity score was positively significant. Children who scored high on the creative thinking tests were those whose parents involved them in a greater number of family activities. Illustrative of these activities among families of high-creative children were taking trips to see places the children had studied in school, making scrapbooks, playing monopoly, checkers and table games, have picnics, birthday and holiday celebrations, and a variety of family recreation outside the home. Less diverse and more limited were the activities noted among families of low-creative children. When asked the kinds of activities that the mother enjoyed in her own free time, the mother of the high-creative child would more often cite activities which included children than did the mothers of low-creative children. It was also reported that the fathers of high-creative children chose activities which included children more often than did the fathers of low-creative children.

Children who typically perform better in school are the children of parents who read to them when they are young, who supervise their homework by making sure they have a quiet place to study, who talk with them about school and everyday events and express an interest in their progress, who take them to parks, museums, ball games, libraries, zoos and other stimulating places, and who establish a definite, routine bedtime.
2.12 CONCLUSION

In this chapter the critical importance of cognitive stimulation even before the child is born, has been highlighted. The connection between the brain and cognitive development was looked into, and it became evident that damage to different parts of the brain affect cognitive development, and eventually the cognitive functioning of a child. Piaget's cognitive theory distinguished different cognitive stages. It is important for parents and teachers to know that a child learns differently at each developmental stage. Parents should teach their children to think. According to Burger (1992:76), children find it difficult to learn, to think logically, and to solve everyday problems systematically, not because they do not have the ability, but because they do not know how to use the ability. Three ways in which children's thinking can be enhanced, were discussed.

The relationship between language and cognitive development was discussed. This was seen in the effect of the child's failure to receive care that normally a mother is able to give. According to Fraser (1973:4), the child who is well-equipped verbally is able to score highly on intelligent tests because his verbal facility enables him to be more flexible in generating solutions for problems. Parents can play a very important role in stimulating their children cognitively by, for example, giving adequate care, playing with the child, buying toys, books and other material and encourage intellectual activities at home.

Chapter 3 will deal with the relationship between home background, parental involvement and the child's academic performance.
Chapter 3

The role of parental involvement and home background in relation to the child's academic performance

3.1 INTRODUCTION

In the preliminary literature study certain factors relating to poor academic achievement have been identified. Research (Mulliken 1966; Clark 1983; Scheinfeld 1983; Portes & Dunham 1988; Berg 1990) has shown that parents play a major role in the cognitive development and by implication the academic performance of their children. One of the major factors, namely parental involvement or lack thereof, can make profound differences in the child's academic performance. Research (Craft 1970; Marjoribanks 1986; Asbury 1973; Fraser 1973; Bell 1976; Chetty 1985; Wadkar 1989) has revealed the importance of the role played by home background in the academic performance of a child. Factors relating to parental involvement which include parenting style of interaction, support and encouragement, parental praise and control, parental expectations as well as factors relating to home background such as structure of the family, family size, emotional aspects of the family, educational level of parents and socio-economic status of the family will be discussed in this chapter.

3.2 THE ROLE OF PARENTAL INVOLVEMENT IN THE CHILD'S ACADEMIC PERFORMANCE

3.2.1 Parenting style of interaction

The extent to which environmental processes influence children's learning abilities and performance has been examined across several studies (Gopaulsingh 1960; Mulliken
These studies point to adult-child interaction as a basic mechanism through which environmental factors may influence children's cognitive development. Different interaction styles will be discussed with specific reference to its influence on the child's cognitive development.

3.2.1.1 The authoritative parent

Authoritative parents set clear guidelines for their children, but they also allow their children considerable freedom within reasonable limits. Although they make demands and exercise control, they are also warm, sensitive and patient. They encourage their children to contribute to the family discussions on decisions that have to be made. They thus follow a democratic approach in which the rights of both the parents and the children are recognised and respected. The influence exerted by authoritative parents is most positive. Children who have grown up in such families have a high self-esteem, they are better able to internalise moral standards and perform better academically (Dornbusch in Louw 1991: 352).

Baumrind's (Wentzel 1994:268) typology of parenting styles identifies a type of parenting style in which authoritative parenting reflects a high level of responsiveness and firm control. Authoritative parenting styles are believed to promote cognitive development by encouraging independent problem solving and critical thinking. Authoritative communication and teaching styles have been positively related to the development of memory skills. According to Price (Wentzel 1994:270), children with authoritative parents typically earn higher grades and have more positive attitudes toward school. Shaw and Dutton (Miller 1971:52) found that middle-class children, who usually do better in school than working class children, felt more accepted, had freer discussions with parents and felt that they could confide more in them and shared more interests with them.

Children who gain most from educational opportunity tend strongly to come from homes where independent thinking and freedom of discussion among all members is the rule; there are values conducive to intellectual effort and enterprise, and the children's curiosity and academic aspirations are supported and encouraged by parents. The
parents do not overindulge them; the children themselves are confident in their intellectual skills and they perceive harmony between the values of their home and those of the school (Miller 1971:109).

Baumrind (Ginsburg & Bronstein 1993:1462) said that authoritative parents who exert firm control in enforcing rules and responding to misbehaviour, encourage their children’s individuality and open communication, and were warm and nurturant. Her research, which focused on preschool children, suggested that children with authoritative parents, as compared with other parenting styles, were more sociable and self-motivated in the nursery school setting.

Croninick and Kyan (Ginsburg & Bronstein 1993:1462) found that parental support of children’s autonomy was positively related to children’s self-initiated regulation in the classroom, perceived competence and academic achievement. This is in agreement with Clark (1983:11) who found that parents of high-achieving children taught their children pragmatic morals. These parents first state their expectations and labelled activities as "good" or "bad" and then worked with their children through manageable incremental responsibilities and tasks that the parents considered important. Thus the parents helped their children to perceive that they too had a positive effect on the running of the home and were genuinely making a contribution to their own development and to the well-being of the family. Portes & Dunham (1988:79) studied mothers’ style of interaction with their children in relation to academic achievement. He found that parents who communicate with their children, who are interested in the children’s activities and encourage them in their good tasks contribute positively to the children’s cognitive performance.

3.2.1.2 The authoritarian parent

Parents who apply the authoritarian style place such a high premium on conformity and obedience that they may even reject their child if he does not comply with their wishes. There is little communication between parent and child. The parents expect their child to be always unconditionally obedient under all circumstances. If the child does not behave as expected, he is severely punished. Children who have grown up in authoritarian homes usually have a lower self-esteem and they are also less skilled in
their social relationships. These children tend to perform less well in school than children of authoritative parents (Louw 1991:352).

According to Hess and McDevitt (Wentzel 1994:270), an authoritarian parenting style reflects firm control but lower levels of responsiveness. Authoritarian styles are believed to detract from learning by discouraging active exploration and problem solving and encouraging dependence on adult control and guidance. Children from families with a more authoritarian atmosphere tended to be rated by teachers as showing less persistence, motivation and satisfaction with their schoolwork (Ginsburg & Bronstein 1993:1472). These findings are in line with research done by Bronstein, Dornbush, Steinberg, Elmen and Mounts (Ginsburg & Bronstein 1993:1473) which show that children from both permissive and authoritarian homes are less independent, less socially responsive and perform more poorly in school than children whose parents are more democratic. Hattwick and Stowel (Miller 1971:53) found that under-achievers' parents tended to be over restrictive and demanding, or to "baby" their children and expect too little of them. Such domination by overprotection may have the effect of retarding the children's ego involvement, aspirations and educational achievement.

Miller (1971:109) found that children who gain the least from educational opportunity tend strongly to come from homes where their thinking is dominated by their parents and the children themselves accept this as reasonable. There is a climate of general deprivation, with elements of social, cultural, intellectual and emotional deprivation. Parents are punitive and autocratic, and make their children feel inferior to other children. They also tend to overprotect them, yet the children do not feel that their parents are as accessible as they would like them to be. The children also tend to have uneasy peer relationships.

Baldwin (Mulliken 1966:25) found that a rejecting parent is low on warmth, democracy and indulgence and high in restrictiveness and severity. The authoritarian parenting style does not encourage the child to work independently and to think critically. The child tend to depend on his or her parents and this will lead to low academic performance because the child is not stimulated cognitively. According to Clark (1983:191), for authoritarian parents the emphasis is on good character and morality but not on achievement and school performance. When the child fails at school parents tend to blame the child and
it influences his self-esteem negatively with a resulting negative effect on the child's cognitive performance.

3.2.1.3 The permissive parent

Permissive parents create a climate in which the child himself is responsible for regulating his own behaviour. Although the child is well-cared for by his parents, they exercise little or no control over him. Consequently the child does as he likes. Berk (Louw 1991:352) indicated that children with permissive parents are usually disobedient and irascible when they are asked to do something that conflict with their own desires. They do not easily accept responsibility and tend to do less well at school. A study by Clark (1983:191) indicated that in an under-achiever's home there are no limits set for the child. Parents have given up. In these instances the child has been left to determine his or her own direction under the influence of peers and unique life events.

According to Ginsburg and Bronstein (1993:1462), permissive parents make few demands on children, they do not confront misbehaviour or enforce rules. In their study to explore familial influences on children's motivational orientation and academic performance, Ginsburg and Bronstein (1993:1462) found that parental behaviour and family styles which control children's independent thinking and behaviour, critical or punitive or uninvolved, were associated with a more extrinsic motivational orientation and poorer academic performance. On the other hand, it was found that parental behaviour and family styles which support and encourage children's autonomous expression and individual development, was related to a more intrinsic motivational orientation and better academic performance. Patterson and Bank (Wentzel 1994:270) have documented a significant relationship between parenting style and school success in early adolescent boys. Their results suggest that inconsistent and harsh discipline is associated with the lowest level of academic achievement.

3.2.1.4 The uninvolved parent

Uninvolved parents make no demands. They are indifferent to their children and may even reject them. They do the minimum that is expected from them as caregivers of their child. They do, however, respond to certain short-term demands of their children,
for example food and clothes but they failed to set long-term guidelines and goals for them. There could be many reasons for the parents' uninvolved. They may have little or no interest in children in general or they could have overwhelming personal problems with the result that they have little time or energy to devote to their children. Children of uninvolved parents show disturbances in their relationships with other people. They are also less achievement-oriented in school (Louw 1991:353).

Block and Pulkin (Louw 1991:353) as well as Clark (1983:114) revealed that parents of low-achievers found themselves unable to sustain their performance of routine child management functions because of their own psychological-emotional turbulence. These parents held no expectations that the child would regularly engage in home academic activities and they had provided almost no standards or guidance directed towards deliberate literacy learning at home. They appeared to use their overburdened psychic energies to perform their parenting roles as best they could. Some parents do not care about their children's schooling, not because of a lack of love for their children, but because they fail to see education as an important factor in their or their children's lives. To these parents, success in school carries no meaning.

Ginsburg and Bronstein (1993:1462) examined the relationship between parenting behaviours and the children's academic performance. They found that children who reported that their parents remained uninvolved to the grades they received at school, expended less effort in school and had lower grade point averages. On the other hand, parents' encouragement in response to grades was positively correlated to the child's academic effort and performance.

Leung and Kwan (1998:3) said that if authoritarian parents impose strict controls and high demands, their children will feel strong pressure to perform, not for the sake of knowledge acquisition, but for parental approval. The experience of external demands and control is conducive to the development of extrinsic motivation. In contrast, although authoritative parents also make demands, they accord their children a high degree of autonomy and responsibility, and encourage them to set their own goals and work schedule. This support of autonomy provide the ideal context for intrinsic motivation to unfold so that the children perform for the sake of task achievement itself rather than under external pressure. Finally, because uninvolved parents neither control,
demand nor encourage, their children will feel little impetus to perform and become motivated.

3.2.2 The role of parental praise and control

Praise is a human form of positive reinforcement and is regarded as a conditioner of behaviour throughout life. A study by Jubber (1988:292) revealed that some parents praise in order to encourage particular behaviour while some do it to reward such behaviour and others balance soliciting and rewarding. The data further revealed a tendency for achievers to be praised more frequently than under-achievers. This view is endorsed by McTintye (Berg 1990:9) where parents of achievers have been found to give their children more praise and approval, they show more interest and understanding and are closer to their children whereas parents of under-achievers are more domineering, over-restrictive and use more severe and frequent punishment. These parents try to force their children into a pattern of dependency and non-aggression.

According to Mulliken (1966:29), an under-achieving child has an immature dependent relationship with his parents. His parents pay no attention to him except in a crisis and then noting only his failures while ignoring his successes. This child may learn to see himself as a failure. Achievement on the part of the child will solicit praise from parents and this in turn will reinforce such achievement behaviour. Jubber (1988:294) found that the frequency of parental praise correlate positively with school achievement.

Morrow and Wilson (Miller 1971:51) found a positive relationship with emotionally supportive home conditions which applies alike to elementary school learners, high school and university students. Parents of high-achievers have been found to give their children more praise and approval, to show more interest and understanding, to be closer to their children, to make their children feel more family belongingness and identification with their parents. Under-achievers' parents have been found to be more domineering, to use more severe and frequent punishment, to baby them or push excessively or hardly at all.
3.2.3 Parental support and encouragement

Academic guidance provided by parents can be an important contributor to the cognitive development of a child. Academic guidance include parental effort to help the child with homework and to provide educational counselling (Henderson 1981:13). Children whose mothers encourage them to develop new skills showed an increase in mental test performance whereas parents of children whose scores declined, do a less adequate job of helping their children to organise and give meaning to their environment. Watson, Brown and Swick (1983:179) cited that if a child have supportive parents he or she scored much higher than a child without supportive parents. This encouragement plus intellectual stimulation, especially in the preschool years, are of utmost importance.

Douglas (Cullen 1969:19) found that parental encouragement seems to be of considerable importance in determining the educational ability of children. When parents take interest in their children’s school work, children between eight and eleven years improve their scores in tests of mental ability and scholastic performance. When parents take little interest children lose ground in the tests and gain rather fewer places in the selection examinations than would be expected from their measured ability.

Power and authority relations in the home affect academic performance as well. When parents have authority over the child and if they exercise their authority in the home and attempt to make it reasonable, the child may feel more compelled to follow parental wishes. In homes where parental power is too high or too low, the child will have limited respect for authority and he is not likely to comply with parental wishes (Clark 1983:205).

Parental supervision and assistance during the years that the child learns to read, is one of the indicators of parental involvement in their child’s education. It was found that the intensity of reading, help and supervision by parents correlated positively with academic performance. Clark (1983:114) undertook research with high-achievers and low-achievers. He found that parents of high-achievers encourage and maintain some cohesion-building family rituals that involved group singing, conversation and reading aloud within an affective authoritative relationship characterised by firm but warm supervision and support whereas parents of low-achievers held no expectations that their
child would regularly engage in home academic related activities. They provided almost no standards or guidance directed toward deliberate literacy learning at home.

If a child lives in a place where encouragement and support for study are provided and where people in the home participate in and support learning, then the child is in a better position to raise his level of academic achievement. Even though a child may not like school, the realisation of both answerability to the family that is supporting the education and the long-term objective of gaining education so as to gain better employment and hence a better salary to support the family, would turn to override negative attitudes toward school at least to some extent (Johnstone & Jiyono 1983:294).

Parents who made it explicit that they expected their children to learn to read and rewarded that achievement through praise and reading-related activities, had children with higher achievement scores and more positive attitudes toward reading than children of parents who did not expect this learning to read. In contrast, however, children whose parents exerted excessive pressure for reading achievement and who punish them for not reading well exhibited significantly less positive attitudes and lower achievement scores than children whose parents did not engage in these practices (Silvern 1985:48).

A study by Watson et al. (1983:180) on home academic support was measured by adding the values of parental reaction to questions dealing with parental emphasis on academic skills and parental involvement in listening and reading to the child. This study showed a significant relationship between the amount of academic support given to the child by the home and achievement of that child in the first grade. If the child attended preschool and have supportive parents, he scored much higher than the child without supportive parents. It was also found that the children of parents who scored as active academic supporters did better on the cognitive skills assessment battery than children of passive academic supporters. These latter findings substantiate that lack of academic supportive parents affect school performance negatively. The implication of these findings is that parents must not only encourage children to achieve, they must become actively engaged in the learning process with their children.
3.2.4 The role of parental involvement

According to Wentzel (1994:271), parents can play a more direct role in fostering their children’s cognitive development and academic achievement by becoming involved in their children’s educational activities. Parents who participate directly in their young children’s education by helping them with homework, reading to them and playing educational games, tend to have children who excel at academically relevant tasks. Steinberg, Lamborn, Dornbusch and Darling (Wentzel 1994:71) in their longitudinal study found that parents who helped their children with homework, attended school programmes and extracurricular activities, also had children who earned high grades, spent a significant amount of time on homework, had high expectations for their own achievement, and had positive academic self-concepts.

Family culture and processes, for example participation in school, achievement-centred rules and norms are key factors in children’s learning experiences. The messages parents communicate directly and indirectly to their children regarding school achievement, and children’s perceptions or interpretations of those messages, influence children’s subsequent academic achievement (Ford 1993:60). Research by Cherian (1993:735) found that children who strongly agreed that their parents consider school and gifted programmes important were more optimistic and more supportive of achievement ideology.

Baurin (Clark 1983:197) concluded that high parental support results in academic achievement. He found that when parents and their children are mutually involved in leisure activities requiring the use of intellectual functioning capacities, these children are more likely to become acquainted with concepts useful in the classroom situation. These findings were supported by Johnstone and Jiyono (1983:280) who in their research found that home activities, especially with respect to study, reading and listening as well as parental encouragement and support, appear to have positive effects on academic performance. Ginsburg and Bronstein (1993:1472) also concluded that children who are more academically motivated and successful elicit more encouraging and appreciative behaviours from their parents. He said that parental encouragement appears to foster both children’s mastery behaviours and cognitive-related processes.
Home background of statutory school leavers were characterised by lack of parental interest in school work, unwillingness to help with homework, low involvement in the child's activities and disapproval of homework together with a poor view of the child's own efforts (Marjorie & Batten 1974:105). According to Clark (1983:129), high-achieving students have a daily routine and weekly schedule which included certain before-school activities, after-school activities, evening activities and weekend activities. The parents played a major role in structuring a child's time. These parents carefully set defined rules which were based on their own perception of the quality of the environment and their perception of the child's level of development. In contrast with low-achieving children, there were no parental attempts to supervise or check the child's progress. Ultimately the child simply tends to lose interest in the study activity, perceiving it as being unimportant to survival.

The results of a study by Fehrmann, Keith and Reimers (1987:333) revealed that parents might well help their children to achieve better academically through monitoring their children's daily activities and by keeping close track of how they are doing in school, as well as by working closely with the child concerning school work. Parents of high-achievers perceive it as their responsibility for helping children gain a general fund of knowledge and particularly for assisting in developing the special literacy skills needed for classroom tasks. These parents believe that educational training in the home is a normal function of their parental role. These parents see themselves as wiser than children and therefore feel justified in insisting upon this pedagogic role. Parents of low-achievers have been found to place a large amount of responsibility for their children's education squarely on the child and the school. There is little child-adult communication and agreement on matters having to do with schooling and education (Clark 1983:193).

Hess and Shipman (Day 1973:24) indicated that when parents become involved in the educational process, they may come to acquire certain skills of teaching which can then be applied in the home situation. This is endorsed by Clark's view (1983:195) that parents of low-achievers almost never visit the school except in response to the school's request, usually resulting from the child's misconduct or poor work. These parents are likely to say that they do not have time because of other demands on them, that they don't know what is going on at school and leave everything to teachers. Thus the positive reinforcing pattern of school-home encouragement for scholastic achievement
is missing. On the other hand, parents of high-achievers are likely to visit the school regularly to check on the child’s progress. These parents are in a better position to support and encourage their children with their school work.

3.2.5 Effects of television on the child’s academic performance

According to Keith, Reimers, Fehrmann, Pottebaum and Aubey (1986:377), parents may increase the amount of time their children spend on homework and indirectly their achievement by becoming more involved in their educational and social lives. These authors also indicated that low socio-economic status and low-ability children watch more television, on the average, than do their more advantaged and more able peers. Increased parental involvement leads to small increases in television viewing.

Milne, Myers, Rosenthal and Ginsburg (1986:135) found that children whose mothers work full-time spend less time on homework and reading and more time watching television than children whose mothers do not work. It was concluded that parents, either working or not working, should encourage their children to spend more time reading and doing homework and less time watching television.

Henggeler, Cohen, Edwards, Summerville and Ray (1991:6) suggested that high rates of television viewing are linked with family contexts that might be problematic. They said that an attempt to modify children’s viewing habits may need to address aspects of their family context that are difficult to ameliorate. Rodick and Henggeler (1980:130) demonstrated that changes in television viewing and study time required the active participation and cooperation of all family members, and as such it may be difficult to attain this cooperation in stressful family contexts.

According to Schneider and Coleman (1993:20), parents of high-achievers were found to set forth a rule restricting the amount of television the child is allowed to watch on weekdays with explicit motivation that this restriction will influence the amount of television the child watches. These parents also think that this will encourage the child to do more homework and thus achieve higher grades in school.
3.2.6 Parents’ attitude towards the school

According to Wadkar (1989:24), the attitude of parents towards education is generally measured in terms of behaviour in relation to education and opinions expressed about education. Wadkar also remarked that what parents think of school and its worth to the child is largely determined by the child's interest in education and his attitude towards it. Interest and attitude in turn determine achievement. The child acquires parental attitudes about teachers as a group and towards teaching as a profession. Even before the child starts school, he often acquires attitudes towards it, depending upon what he hears about school and how he interprets the information. Wadkar (1989:25) concluded that parental interest contributes to educational success when it involves support for school and teachers.

A study by Kahl (Cullen 1969:28) of high school students in Boston showed that occupational aspiration of highly intelligent boys are greatly influenced by parental attitudes and pressures. Whereas some parents clearly encouraged their sons to strive for a better life, others were satisfied with their own lot in life and did not attempt to push their sons up the status ladder. Fathers who encouraged high aspirations saw an occupational world stratified according to the basic principle of education, and education was something you got when you were young. Having accepted the middle-class values of getting ahead, they tended to feel inadequate because they have failed to do so. While they could rationalise that it was not their fault that their education was poor, they saw that their sons were not blocked and consequently encouraged them to take school seriously and to aim for college. Such parents started to apply pressure from the beginning of the child’s school career, stressing the necessity for good performance. Their boys tended to work harder than boys who followed their parents in believing in getting by rather than getting ahead. Parents with frustrated ambition value the education system for its role in social climbing. These parents believe that ability and hard work will not in themselves bring occupational success whereas educational qualification will. Hence their children become aware of the need for education and are motivated to achieve academically (Cullen 1969:29).
3.2.7 Parental expectations

Parental ambition for the child is in itself related to academic achievement. If parents think school performance has little relevance to adult aspirations, then their children will leave school at the earliest possible moment. There would be little positive planning about this event and early leaving age would be preferred and further educational ambitions would be at a minimum (Marjorie & Batten 1974:84).

Marjorie and Batten (1974:89) also found that parents of high-achieving children formulated their educational ambitions very early in the child's school career. This view is supported by Boocork (Seginer 1986:60) who states that high-achieving children tend to come from families who have high expectations for them.

Wentzel (1994:271) found a significant relationship between parents' aspirations and expectations for their children's educational attainments, children's achievement motivation and school performance. Work by Eccles (Wentzel 1994:271) indicates that parental belief can influence children's motivation to achieve and their self-perceptions of their ability to learn. In the area of mathematics parents' perceptions of their children's abilities and their expectations for their children's success have been linked to children's own beliefs about their mathematical ability.

A study by Barber (1988:374) of children from different demographic areas found that parents from rural areas expected their children to have a job in future. They expected their children to follow their own occupations and become farmers for example. In contrast, parents from urban areas help their children to become qualified for better positions than their own. According to Singh, Bickley, Keith, Keith, Trivette and Anderson (1995:309), parents with higher aspirations engage in more verbal communication about school with their children. It is possible that higher parental aspirations are transmitted to children through positive verbal exchanges about school.

Schonell (Miller 1971:16) cited the UNESCO Conference on school failure held at Hamburg and stated that there was more school failure among children from families where there was disintegration and discord. This was related to the low expectations of parents in regard to the child's achievement and progress. Bloomquist (Miller
1971:17) compared a group of eighty-six secondary school learners who had to repeat classes, with a similar group who were regularly promoted. He found statistically significant differences in favour of promoted learners in that they more often came from homes where parents had clear-cut plans for their further education, held positive attitudes towards the school and higher cultural standards. Maas (Miller 1971:21) found further evidence where fathers of fourteen and fifteen year-old boys were interviewed, middle-class fathers were found to be more concerned than working-class fathers about social status and had higher educational and vocational aspirations for their children.

Parental expectations have an influence on the academic achievement of the child. However, too high expectations which are not in proportion with the child's potentialities may frustrate the child (Wadkar 1989:25). Rose and Roy (Wadkar 1989:25) reported that mothers of boys with a high need to achieve expected higher achievement and provided impetus towards attainment by stronger employment of sanctions. Their sons demonstrated greater interest in achieving and showed evidence of accomplishment. These mothers stressed achievement rather than independence. Stevenson and Baker (Kaiser 1994:92) found that children whose parents had high expectations of them and were more involved in their academic activities exhibited higher achievement than children whose parents were less involved.

Hill (Ford 1993:50) revealed that most black college graduates have parents who have not received a college education, yet black parents generally expect their children to take advantage of opportunities that they were denied and to surpass them in achieving the comforts of life. Nobles, Hilliard, Massey, Scott and Dornbush (Ford 1993:50) maintain that blacks place a high priority on academic achievement. They contend that black parents even urge their children to exceed white children's behaviour and performance in school because falling short of this goal is viewed as reflecting negatively upon the black community.

A study by Mulliken (1966:28) indicates that when parents of achieving children were asked specific questions about their children, parents of achieving children listed definite vocational goals, interests, plans and specified areas of academic interest. In contrast, parents of under-achievers saw their sons as having no vocational goals. If occupational plans were listed, they listed ones requiring no real academic training.
Merton (Marjoribanks 1982:654) found that parents' educational and occupational aspirations for their children reflect a set of family educational goals such as wishing their children to do professional work. Procedures adopted by parents to support their children's aspirations were categorised as being either instrumental or affective. Parent-child interaction that were associated with the teaching-learning situation were defined as being instrumental while orientations reflecting parents' attempt to create a learning environment, characterised by individualism and independence rather than collectivism and family-dependence, were classified as affective. Seginer (1986:9) confirms this by saying that the process by which parents incorporate their own aspirations into the expectations they have for their children, no doubt also pertains to the educational domain.

Entwiste, Elliot, Katz and St John (Seginer 1986:22) described a discrepancy between parental expectations and children's school performance. Lower-class blacks develop high educational expectations because they view educational achievement as a safe avenue of escape from low social status. Unfortunately many of them do not support their expectations with means required for adequate school performance. The result is a discrepancy between expectations and the child's first school report augmented by the fact that the same conditions that bring about this discrepancy also hinder the child's school achievement. Expectations remain high and school performance low.

An interesting finding by Clark (1983:194) suggests that parents of low-achieving girls generally express the hope that their daughters will have an early marriage while parents of boys hope that their son will get a job and do something useful with themselves. These parents feel that their children's real talents and interests are not in the educational sphere but either in marriage or in a job whereas parents of high-achievers have expectations that the child will participate in some form of secondary and even tertiary educational training. These parents readily use themselves as reference points emphasising that the child should do better than he himself did in education and occupational attainment. Owing to parents teaching activities and attitudes towards schooling, high-achievers have developed school-success and self-improvement orientations.
Parents who view education as a means of upward social mobility may have educational expectations for their child that are higher than their own attainment. It may be that parents who think of education as a ticket to upward mobility, are also more likely to invest in the education of their children. Depending upon the resources available to them, parents might choose different forms of investment, paying for a private school, participating in a parent-teacher organisation to improve school conditions, spending time tutoring their child or simply talking about the importance of school with their child (Schneider & Coleman 1993:15).

From a study by Clark (1983:194), results indicate that achievement and high ambition were likely when parents held high aspirations, encouraged self-reliance at an early age, allowed autonomy and freedom and rewarded independent efforts whereas when parents were not actively involved in the child’s school work, ambitions will be low which may result in poor academic performance and ultimately early school-dropout (Clark 1983:194).

3.3 THE ROLE OF HOME BACKGROUND IN THE CHILD’S ACADEMIC PERFORMANCE

Factors in a child’s home background play a major role in the acquisition of educational attainment and in the child’s total view of education up to the time of leaving school and beyond.

3.3.1 Single-parent family versus dual-parent family

Milan, Myers, Rosenthal and Ginsburg (Kaiser 1994:91), who examined national databases of elementary and high school children, concluded that children of single-parent families could have lower achievements but the net effect varied from child to child depending on their home environments. Massey (Kaiser 1994:91) also studied home environments of single and two-parent families and discovered qualitative differences in adult-child interaction mainly because single-parent families live under more stressful conditions than two-parent families. Roy and Fuqua (Kaiser 1994:92) reported that high-achieving children of single parents generally come from families that have significantly higher levels of support. The home environment of single-parent families are characterised by constant stress, undesirable role changes, social pressure, and continued absence of one
parent. These conditions are very detrimental to the emotional well-being of children and are likely to hinder their academic performance.

One interpretation of the detrimental impact of single parenthood focuses on lack of economic resources of most children in single-parent families, who are generally poorer than are those in two-parent families (Mclanahan 1985:896). The poverty rate for female-headed families with children is 44 percent, five times the poverty rate for male-headed families with children. The income differences between single-parent and two-parent families can account for up to half the gap between these groups in children's test scores, grades, college enrolment and college graduation (Mclanahan & Sandefur 1994:137).

Results of a study done by Heather, Michael and David (Mclanahan & Sandefur 1994:138) indicate that children of single-parent families are at a small but statistically significant increased risk of psychiatric disorders, in comparison with their two-parent counterparts. In addition, single-parent children are at a small but significant increased risk for poor school performance. The results also indicate that children of single-parent families experience significant socio-economic hardships. They are more likely to live in poverty than are children of two-parent families.

A distinct explanation of the detrimental effects of single parenthood on children's schooling emphasises the dearth of income in single-parents families. Coleman (1988:108) contended that the number of parents residing in the home is itself an indicator of the capital available in a family. Because single parents are less able to spend time with their children than do those in two-parent families, their children have a less supportive learning environment. Astone and Mclanahan (1991:314) found that single parents spend less time on general supervision and the day-to-day monitoring of their children's schoolwork and they have lower educational aspirations and expectations for their children. These aspects of single parenthood are responsible for their children's negative educational outcomes.

Results from Mulkey, Crain and Harrington (1992:48) show that children from one-parent households have significantly lower grades and test scores than do those from two-parent households. Students from one-parent households have test scores that are about
.30 standard deviations lower, which may be ascribed to them having more behavioural problems. A parent’s absence may have a negative effect on children’s socialisation. The absence of one parent alters the family’s method of making decisions and weakens parental control over the behaviour of the children. Entwistle (Mulkey et al. 1992:50) indicated that the absence of a parent lowers the scores on verbal and quantitative achievement tests of black children in contrast to the scores of white children.

Shreeve, Goetter, Bunn, Norby, Stueckle, Midgley and De Michele (1986:182) found that school achievement was significantly lower for children of average intellectual ability who were living in single-parent homes. Their findings showed that children from two-parent families consistently outperformed their peers from single-parent homes in both class standings and grade point average. Wallerstein (Shreeve et al. 1986:184) states that children from single-parent homes may be overburdened because their caregivers treat them like adults and allow them too much responsibility. Allowing children too much power impacts on school achievement because these children become less inclined to accept limits on their actions, resulting in behaviour problems in the school setting.

Jubber’s (1988:294) findings were that the two-parent family has an edge over other family arrangements as far as school achievement is concerned. On the basis of his data, he concluded that the single-parent family affect school achievement more negatively than do the two-parent families as judged by the percentage of children from these two family categories who are ranked as under-achievers. Rumberger (Reyes & Jason 1992:60) found that children from single-parent homes leave school at twice the rate of children living with both parents. The absence of one parent in the household can result in inadequate parental supervision, increased family demands, or both. Without the needed support, children from single-parent homes are less likely to obtain the encouragement to stay at school.

Schneider and Coleman’s study (1993:24) showed that children from single parent families spend more time alone after school without being supervised and this lead to poor performance. The reason for this being that in single-parent families there is no alternative wage earner so the mother may be forced to work without having adequate supervision for the child. In two-parent families there is an alternative wage earner where a mother may decide to leave the labour force and give adequate supervision to
her children after school. These authors stated that the intervening variables of the family functioning, that is, lack of parental involvement, lower family income, and students' individual psychological well-being, are expected to impact their educational outcomes negatively.

Finn and Owings (1994:177) reported less parental monitoring in children from single-parent families than children in two-parent families, and children in single-parent families reported less supervision in general. On average, children from two-parent families had higher reading and mathematics scores than those from single-parent families. In contrast, children of single parents reported spending more time spent talking with their parents than children in two-parent families. These authors concluded that single parents may develop particularly intense relationships with their children. In two-parent families the extent of verbal interaction with children may be diminished.

Franklin (Ford 1993:59) stresses that single-parenthood does not necessarily make a family dysfunctional. He notes that many single black parents, the majority of whom are female, function well as parents and their children grow up well to be capable adults.

3.3.2 The influence of father-absence on the child's academic achievement

Vandamme and Schwartz (1985:205) studied the relationship between father-absent homes and academic achievement in children. Boys and girls from father-present homes were found to score higher on standardised reading tests than children from father-absent homes, regardless of the child's age when the father became absent. Girls from father-absent homes missed more school and scored lower on tests of masculinity than girls raised in father-present homes.

Living in a father-absent family decreases the likelihood of completing high school by about five percent for white children and 13 percent for black children. This is explained in part by the early incidence of intercourse, marriage and pregnancy among these children along with difficulties in relationships with opposite sex (Fursteberg, Morgan, Moore & Peterson in Mulkey et al. 1992:50). The lack of supervision during early dating, which is common in father-absent families is an important determinant of early pregnancy (Hogan & Kitagawa in Mulkey et al. 1992:50). Herzog and Sudia (Mulkey et al. 1992:51)
concluded that the disadvantage of being raised in a father-absent household is that one is likely to be poor.

3.3.3 Family size

Increasing family size impacts progressively negatively on school achievement. This is partly due to the necessary reduction that such increases imply, for instance, in the attention that the children receive from their parents and the reduction in living standards, living space, learning resources and privacy that is generally associated with increasing family size (Jubber 1988:295). Jubber's data indicated that the children of larger families had a much larger percentage of their number ranked as under-achieving at school in comparison to only children and those with one sibling.

Cherian (1993:734) undertook a study to determine whether there is a relationship between family size and academic achievement of children from broken and intact families among the Xhosa speaking families in the then called Transkei. The result showed that academic achievement of both boys and girls decreased as their family size increased. Similarly, the academic achievement of boys and girls whose parents have divorced or separated showed a decreasing academic performance as their family size increased. Children in small families outperformed those in large families. These results indicate a significant positive relationship between family size and academic achievement regardless of whether the family was broken or intact. This view is supported by Craft (1970:77) who established that children from small families at all social levels tend on average to perform better both in intelligence tests and at school. He suggested that the child of a large family learns the verbal skills so decisive both in intelligent tests and in school performance, less effectively from his peers than does a child of small family, from adults.

Douglas (Miller 1971:50) discovered that eldest children with one or two siblings do better in secondary selection examinations than would be expected from their measured ability, and later-born children do worse than their measured ability would indicate. He suggested that the explanation for this might lie in the stimulus a first born child receives from the presence of a younger sibling. However, only children in his study obtained just the number of places that would be predicted from their ability scores. Scarter (Miller
1971:51) found that a very high proportion of geniuses and famous people are first born or only children. It is the researcher's contention that these children received extensive attention and intellectual stimulation from their parents, especially in the children's early years of development.

Scott (Craft 1970:77) stated that when one examines the home background of delinquents or children who are "lagging behind" at school, one cannot help remarking how frequently they are members of large families. Scott said that not only is a large family more likely to live near the poverty line, and therefore being unable to pay for facilities such as books but also interruption by other children in the family may contribute substantially towards the deterioration of the children's verbal and academic skills. Parents cannot give as much attention to any one of the five or six children as they could to an only child.

Marjoribanks, Walberg and Burgen (Marjoribanks 1986:22) examined relations between sibling size and measure of verbal, number and of spatial reasoning. They found that single children in families may score higher on cognitive tests because they receive all available parental stimulation. In contrast, children with four siblings may have lower performance scores because they receive no more than, say, one fifth of the available stimulation. It was reasoned that since children share adult resources of intellectual stimulation in the home, the amount of parental attention which the child receives, decreases as the number of children in the family increases in such a way that with each additional child the successive decrements in shared attention becomes smaller.

3.3.4 Emotional problems related to the family

Situations which produce emotional problems in the child, such as misguided discipline, discrimination between siblings and particularly parental discord, arise in homes of all socio-economic and cultural levels. Emotional stress, insecurity and anxiety are factors which certainly affect the child's schoolwork. They are a drain on the child's energy, they reduce concentration and prevent him from applying to the full his intellectual powers. Thus a child from a well-to-do home with a good cultural background may have a high innate ability and a high intelligent test score but because of an unsettling home environment, may perform relatively poorly at school (Fraser 1973:6).
According to Moos (Frazer & Walberg 1991:33), a supportive family climate tend to foster cognitive development. The major influence of family climate on mental development can occur because better family relationships increase the level and the quality of stimulation provided for the child. The family can also affect school performance by influencing childhood temperament and personality. This means that the child will be able to control his emotions and have a good relationship with teachers and other children and develop an interest in his schoolwork.

Emotional stress, insecurity and anxiety can affect a child’s school progress. Emotional difficulties more often than not affect educational achievement. In a polygynous household, the rivalry and jealousy between competing wives could result in serious emotional problems for the children. The father in a polygynous household usually is unable to give enough individual attention to all the children and the emotional satisfaction and psychological security that result from close contact between father and mother tend to be reduced in polygynous families. When children’s emotional needs are not satisfied, there is fertile ground for the development of learning problems (Cherian 1993:735).

Wadkar (1989:20) found that unfavourable home conditions in the child’s early life result in maladjustment and personality problems. These problems ultimately affect academic achievement. The entire atmosphere of the home is determined by the parents’ mutual relations. According to Tiwari (Wadkar 1989:20), mutual love, possession, trust and cooperation are important dimensions of the husband-wife relationship. The affectional climate is most influential for the child’s development. The relation between marital tension and maladjustment of the child is revealed by a study done by Kals and Cobbs (Wadkar 1989:21) which showed that parental incongruence is often responsible for a child’s personality and adjustment problems. Tension and quarrels between parents affect the child’s sense of security and ultimately his academic achievement.

3.3.5 Parental work environment

According to Piotrkowski (Frazer & Walberg 1991:451), work and family settings compete for scarce personal resources. As work stressors increase, families often have fewer interpersonal resources available to buffer them. More specifically this author
found that a boring, nonproductive job with little opportunity for personal control generates a pattern of tense family interaction. In contrast, children of mothers who enjoy their work, report that their mothers are more supportive and affectionate. Thus parental work environment can influence the family climate and indirectly affect the child's academic achievement through their impact on parents and family life. In their case study Daniel and Moos (Frazer & Walberg 1991:48) found that parents who are deeply involved in satisfying but highly demanding professional careers can have less energy for family pursuits and thus contribute to their child's lack of well-being and school related problems.

3.3.6 Interaction between siblings

Interaction between siblings plays a crucial role in parent-child interaction which in turn affect academic achievement. Parental differences in demands and rewards between siblings create an imbalance in the child's mind. Sibling rivalry also affect a child's home adjustment. Wadkar (1989:67) compared passers and failures as regard to sibling relation and found that failures as compared to the passers, experienced inferior sibling relations. Favouritism may also influence sibling relationships according to a recent study (Botha 1995:45). Favouritism of one child in a family influence the favourite child as well as the other children's personality development and academic performance.

Wentzel (1994:273) revealed that there is ample evidence that children's emotional distress might partly mediate the link between parenting and academic achievement. With respect to parenting, children's emotional adjustment in the form of low self-esteem, depression and low emotional well-being has been related to parents' use of harsh and inconsistent discipline. According to Papini, Roggman and Wentzel (Wentzel 1994:273), lack of emotional attachment to parents also has been related to a child's feeling of depression and anxiety. A child's affective functioning also tends to generate motivational orientation that can interfere with academic achievement (Wentzel 1994:273). Students with high levels of distress are at risk for academic failure due to a general withdrawal from schoolwork and classroom activities.
3.3.7 Disharmony in the home

Psychological turmoil is produced in some children by disharmony in the home. Disharmony in the home include indisputable records of serious discord in the families. Craft (1970:84) made a study of children whose performance deteriorated at school and found that a boy whose performance deteriorated had a father who was physically vicious, especially when drunk. The parents of a girl whose performance deteriorated were unmarried and the father was morally unstable and often drunk. He also found that the illness of a father was the cause of the unfortunate relationship at another boy's home. Further evidence of the same kind is provided by one child who was brilliant up to the sixth form and then had a serious psychological upset on account of a difficult relationship with one of the parents and also between the parents themselves. This child's performance also deteriorated. Metcalfe (Craft 1970:84) reported similar findings. She found that emotional disturbance is detrimental to school progress. She suggested that the uncooperative parent not only make no effort to provide conditions and materials for home study or for physical well-being, but by his indifference or even opposition to the demands made by the school, subjects the child to conflict and frustration and so upsets their emotional state.

De Haan and Havighurst (Miller 1971:46) point out the importance of the emotional inadequacies of under-achievers' environments. Their studies suggest consistently that, for the under-achiever, something is lacking in the quality of interaction he experiences with his significant adults; while for the high-achiever, there is freedom, acceptance, security, ease and confidence in an atmosphere in which sharing of interests and emotional experiences promote clarity and freedom of thought and in which the preconditions for successful assimilation of stimuli into elaborating inner schemata are met.

3.3.8 The relationship between a mother's emotional state and the child's cognitive development

According to Meadows (1996:98), depressed mothers may become very withdrawn and despairing, which will make responsive and positive interactions with the child much less likely. Alternatively, they may become highly irritable, intrusive and controlling, showing
a great deal of anger and hostility towards the child. There will be less overt positive enjoyment of interaction with the child, less joint play and less imaginative cooperation. The mother becomes more likely to report that the child has misbehaviour problems and there may be a shift from the mother taking care of the child towards the child taking a care-taking responsibility towards the distressed mother. Furthermore, although there was no decrease in physical warmth and cuddles, some of this was not contingent on the child’s desire, and seemed to be the mother using the child as a comfort object. In her follow-up of these children, those who had depressed mothers and behavioural problems at two years of age were in a comparatively poor state in their first year of school three to four years later. They were conspicuously less good at concentrating on school tasks and in developing their activity beyond a very simple repetitive level. Their teachers rated them as significantly poorer on social and academic functioning, with many more problems being reported; they had much more difficulty with formal tests of intelligence and attention. Their verbal IQs were lower and their concentration span were reduced.

3.3.9 Educational level of parents

Frazer and Walberg (1991:42) found that parents who are better educated are more likely to mirror the academic style of school classrooms at home by praising and interacting with their children, modelling appropriate behaviour and promoting initiative and independence. Children of well-educated parents learn in their homes to master teaching and learning processes that are similar to those that occur in school. Laosa (Frazer & Walberg 1991:42) found that academic under-achieving and high dropout rates of children from illiterate families could be ascribed to an abrupt discontinuity or mismatch between their home and school environment.

Parental occupation is found to be associated with learner’s academic achievement. High status occupation of the father facilitates academic achievement of the child. Parents’ occupation in which there is value and use of education have favourable effects on the educational performance of their children (Wadkar 1989:16). A study by Barber (1988:374) found that children from Lima performed better in mathematics and reading than children from Lamas because fathers in Lima had attended school for more years and were more likely to be literate than were fathers in Lamas. While mothers in both
locations had very little education, the mothers in Lima, like the fathers, had more schooling. It appears that children with literate parents obtained higher scores on academic matters.

Parents who are themselves intelligent and well-educated and who provide a child with a favourable environment are also likely to encourage the child to develop an interest similar to their own and to motivate him to do well in school. They are likely to take an interest in the child's schoolwork and help him with it. Success is likely to be rewarded by approval. In contrast, parents who are less educated are likely to set a lower premium on academic pursuits and success, thus their children are likely to be less motivated to do well at school (Fraser 1973:6).

Baker and Stevenson (1986:165) found that educated mothers who had children with low academic performance were more likely than other mothers to try to prepare their children academically for high school. Better-educated mothers seem to be better managers of their children's school careers; they are more likely to monitor their child's progress and to choose a high school curriculum that leads their child towards college admission.

Marjoribanks (Frazer & Walberg 1991:42) found that boys who had the support of an academically-oriented family and who saw their high school environment as more intellectual and permissive had a better academic self-concept and showed more enthusiasm for school. As parental demand for achievement rose, boys' commitment to school increased.

One measure of the quality of a mother as a cognition-enhancing agent is the level and amount of formal education she herself has received. Not only is much of the content of her potentiality useful to the child, but the knowledge and experience she possesses of formal learning and schooling is of value to the child. Jubber (1988:29) found that the children of formally better educated mothers are more likely to be over-achievers than are the children of formally poorly educated mothers. This view is supported by Gorman and Pollitt (1993:84) whose study revealed that the higher the maternal education and the quality of the home, the more likely children were to pass a grade and obtain a higher maximum grade. They also found that compared to non-schooled-subjects, schooled-
subjects had mothers with more formal education, fathers with higher occupational status and houses of better quality.

A mother's education is viewed as important for her children's advancement at school, not only through direct influences, such as helping with homework, but also through indirect influences, such as having books and other intellectual materials around the house. The mother's education has often been and still often is seen in terms of being good for their children rather than for themselves (Edwards 1993: 184). According to Smith and Griffiths' study (Edwards 1993: 190), mothers saw themselves as passing on their education to their children in several ways including direct discussion and acting as a role model. They could in this way incorporate their education into their child-rearing practices.

Dorothy (Edwards 1993: 191) said that the discussion of social issues was broadly seen by parents as educating their children and their degree studies were felt to have been important in this perception, for example, several women mentioned that when they watch television with their children they would often choose to watch an informative type of program so that they could discuss it with their children. The women felt that their children had become much better informed because of this type of discussion and mentioned that it might also have some effects upon their children's current and/or future education. Ribben (Edwards 1993: 196) suggests that mothers who are most confident about their own definitions of their children's educational needs are those with higher levels of education. Less educated mothers may turn to perceive education as something that is defined by and contained within the educational setting.

Jubber (1994: 138) suggested that the influence of the mother's level of education on the child's academic performance increases as learners progress through school. This might be explained in terms of the kind of help and experience which highly qualified mothers are able to impart to their children. As a child progresses through school, more highly educated parents are able to offer the appropriate kind of help while the less educated parent has to rely progressively more on the school for the appropriate educational inputs whereas the child with university or college educated parents has complementary and equally qualified sources of stimulation in the home and the school.
While some learners only have teachers at school, the more fortunate have them at home as well.

According to Hushak (1977:115), highly qualified parents have more cognitive abilities which they transmit to their children. Conversely, parents with low educational qualifications possess fewer cognitive abilities to transmit to their children. It follows that the lower the educational level of parents, the higher the child’s dependency on the teacher as a source of information. Children of parents with a high educational level have, relative to less privileged children, the advantage in that certain abilities can be learned at home, whereas the less privileged child is exposed to a similar learning experience only at a much later stage at school. The possibility exists that the latter group of children may be hampered in their development, resulting in a handicap which often stays with them for their entire school career.

3.3.10 Factors related to the socio-economic status of the family

Social class has an effect on academic aptitude of children because of differences in amount and kind of mental stimulation that is provided by different social environments: A middle-class social environment prepares children to use abstract concepts while lower-class social environments place more emphasis on descriptive language forms. The learner rarely makes abstract comparisons or uses complex language to describe the everyday world in which he engages. Middle-class homes help the child to learn to deal with experiences whereas lower-class homes do not offer this assistance to the child (Hayes 1966:10).

Baker and Stevenson (1986:164) found that mothers with higher socio-economic status were more likely to have accurate knowledge of their child’s schooling and to have had contact with the school. If their child was performing poorly or had a school-related problem, they were more likely to know about the problem and to know the school personnel to contact. Such knowledge could have important effects on the school career of the child. Also, high socio-economic status mothers differed from low socio-economic status mothers in the way they handle their child’s transition to high school. Mothers with at least an education were more likely to select college preparatory courses for their child. Regardless of their education, mothers of children with low academic performance
tended to deny the child privileges because of school problems, and mothers of children with high academic performance tended to take specific punitive sanctions for low grades.

Davis (Birnbaum 1966:48) stated that in school the child from the low economic levels is likely to lack confidence in his abilities and future. His parents usually do not encourage him to compete in school, he usually lacks the drive for achievement which is the prime incentive that middle-class parents seek to instill in their children. The lower-class child experiences downgrading in his first year in school. These children have damaging experiences with tests and texts and with the curriculum as a whole. It seems that the background of lower-class children is so poor that they are doomed to fail. Fraser (1973:3) aligns himself with this view and said that the child who is brought up in a home in which he is exposed to adequate play facilities and contact with books, words and ideas, has an increased opportunity for learning. The child from a culturally poor home, on the other hand, is less likely to develop in the same direction.

Wealth affords many educationally relevant advantages. It permits parents and learners the luxury of choosing the school to attend and allows them, if they want to, to choose schools with good educational reputations, personnel and facilities. Wealth enables families to provide the books and other resources necessary for successful study as well as the means to give a child the privacy, quiet and comfort that facilitates serious study. Wealth enables families and learners to seek assistance when schooling does not proceed smoothly. It can pay for extra tuition that can give a child the edge. In his study Jubber (1994:136) indicated that there is a positive and statistically significant correlation between economic status and standard ten examination results. Forty percent of students who achieved A or B aggregates came from the wealthiest families, 20% came from the least wealthy. Conversely, while only 2.8% of the children who had an aggregate of 39% or less came from the wealthiest families, 44.4% of them came from the least wealthy.

Lam (1997:52) presented the Grade Point Average of children from different socio-economic status groups. It was found that children from different socio-economic status had significantly different Grade Point Averages. The results indicated that children from the high socio-economic status group had higher Grade Point Averages than did children...
from medium and low socio-economic groups. The children from the medium socio-economic group also had higher Grade Point Averages than did children from the low socio-economic group.

According to the "culture of poverty" thesis, parental involvement varies because parents of different social classes have different values: Working class parents place less emphasis on the importance of schooling and maintain a greater separation between their roles and those of school staff than do middle-class parents (Lareau 1987:345). He also said that children who are raised in middle-class environments have a form of cultural capital that enables them to adapt more readily to and to benefit from school life. Similarly, middle-class parents are more likely to feel comfortable relating to teachers and being involved in school activities.

Marjoribanks (1982:655) found that on average, parents in lower social-status groups were found to marry earlier than parents from other social-status groups, bear children more quickly after marriage and continue to conceive children to a later age. Because of such differential reproductive rates, national intelligence levels might be declining by as much as two to three points per generation. High-economic status parents with affluent homes, better nutrition, better health and care leads to higher economic status and children scoring comparatively better on average in IQ tests than lower economic status children (Jubber 1988:287).

Lesser, Fife and Clark (Honig 1979:9) have also reported that ethnic background and socio-economic status have different effects on the academic achievement of children. Differences of two socio-economic status groups within a given ethnic group were found: the groups showed pronounced differences between children from low and middle socio-economic status, with middle socio-economic status, first grade children being significantly superior to lower socio-economic class children in verbal, spatial, numerical and reasoning tests.

Barber (1988:372) studied children in two age groups, a six to eight year-old and a nine to 12-year-old group. Half of the children in both groups had been to school and the others had not and there was an equal number of boys and girls. The children were tested on mathematics and reading performance. Children who came from urban areas
performed better than those from rural areas. Even those who had not been to school performed better because more resources were available in the urban than the rural homes. Homes in the urban area had an average of eight items, such as television, books, toys, and so on, while those in rural homes had an average of three to two items respectively. Correlations between home quality and mathematics and reading achievement scores indicated that the more enriched the environment, the higher the test score.

Bhana and Cronje's (1987:293) research with coloured people (30 from high socio-economic status and 30 from low socio-economic status), indicated that in terms of the mother's perception of her rearing practices, the high socio-economic status mothers reported that they display significantly higher involvement in the areas of physical caretaking and interaction as opposed to the lower socio-economic status mothers. In terms of educational achievement, high socio-economic status parents attained higher points in child-rearing practices than low socio-economic status parents. Low and Clement (1982:106) supported this view and in their study of 109 fourth-grade boys found that lower socio-economic status children scored significantly below middle and upper socio-economic children on reading. Upper socio-economic children scored significantly higher than their lower and middle socio-economic counterparts on mathematics.

Marjoribanks' (1984:695) investigation on the impact of family environment and individual characteristics of eleven-year-old Greek and Southern Italian children from lower social status revealed the following: Greek children were found to have the highest parental aspirations and parental support for learning, and they expressed the strongest aspirations. In contrast, Southern Italian children had parents who expressed more moderate early aspirations, they perceived lower parental support for learning and they indicated lower aspirations.

In examining school leaving behaviour, Steinberg (Reyes & Jason 1992:58) has indicated that children from lower socio-economic status groups are more likely to drop out of school than their more economically advantaged peers. This effect might be attributed to the richer cognitive environment in more economically privileged families and the greater help parents provide to their children. In addition, more affluent parents are more likely to communicate with school personnel, and therefore monitor their children's
academic progress and school needs more effectively. Cervantes (Reyes & Jason 1992:59) found that the lowest dropout rate of two percent corresponded with the highest socio-economic status. Steadily increasing rates of dropping out were found at the intermediate levels and a steep 50% dropout figure was found in the groups with the lowest socio-economic status.

Ginsburg and Bronstein (1993:1473) revealed that children from more economically disadvantaged environments perform academically poor, are rated by teachers as less intrinsically motivated, and are more dependent on external sources to guide and evaluate their academic behaviour. Gorman and Pollitt (1993:88) indicate that socio-economic differences predict intellectual differences which in turn predict school performance which in turn predicts subsequent socio-economic differences. Wang (1993:89) aligns himself with this view and found that children from higher socio-economic status families, regardless of ethnicity, had higher overall metacognitive scores than children from lower socio-economic status families.

Studies by Kaiser (1994:92) indicated that preschoolers from low income families scored lower than children from higher income families on cognitive measures, physical competence and motivation ratings. Family income was also found to be a better predictor of academic achievement. Socio-economic status was one of the predictors of mastery scores for kindergarten and first grade children. Lower socio-economic children had lower IQ and pre-academic achievement scores than their higher socio-economic counterparts and were more likely to be retained in kindergarten.

Wentzel (1994:271) indicates that another way in which parents can promote their children's intellectual growth and academic success is by providing them with educational opportunities and resources. Such opportunities can range from those afforded by high socio-economic status families such as the school and extracurricular activities that children attend, trips to libraries, educational television and a quiet place for doing homework. High socio-economic status has been related to educational accomplishment and attainment in young children. Entwistle (Wentzel 1994:272) associated economic stress indirectly with low levels of school performance.
3.3.10.1 The role of parental motivation in children's academic achievement

Bernstein (Day 1973:21) found that achievement striving due to parental demands for success was a more central factor in middle-class motivation than in lower-class motivation. Socially disadvantaged children have been reported to be less highly motivated and to have lower aspirations for academic and vocational achievement than do middle and upper class children. Day (1973:23) revealed that discontinuity between the culture of the home and the school makes it difficult to develop in the child from a low socio-economic status the desire for competence in the school environment. These children entered school without the skills on which the curriculum is based and furthermore, they find it difficult to see the point in making an effort.

Hollingshead (Birnbaum 1966:51) made a study of children from Elmtows. He found that trained boys and girls from a socially upper-class responded positively to competitive situations such as that presented by examinations and intelligence tests. When these children take a test, whether it is arithmetic or intelligence, they normally try to do their best on it, for their ego is on trial and they must perform well and they generally do. In contrast, children from a socially lower-class have been subjected to a family and class culture in which failure, worry and frustration are common. They have not being trained or motivated at home to do their best in school. Their parents have not ingrained in them the idea that they must obtain good grades if they are to be successful in life. The child from a socially lower-class is at a tremendous disadvantage even before he enters school in the primary grades. From then on, it is a losing struggle due to his poor preparation to compete with children from middle-class homes in the competitive situation presented by a modern school.

3.3.10.2 Nursery school and the socio-economic level

Chazan (Honig 1990:8) undertook a longitudinal study of children attending nursery school. The sample comprised 52 children from homes judged to be disadvantaged and a comparison group of 52 children from more advantaged backgrounds. From the onset of the study, the disadvantaged group did poorly on a wide range of linguistic and scholastic measures and were judged by their teachers to be socially and emotionally less well-adjusted to school and to show poorer concentration in school activities. Toward
the end of their school career the disadvantaged children were significantly more retarded in reading and spelling than the advantaged group peers. It was concluded that poor educational home conditions adversely affected children's development in school, particularly in the basic scholastic skills of reading, spelling and certain oral language skills. The findings from this study support the conclusion that disadvantageous home conditions can have a long-term detrimental influence upon children's academic progress and attainment and a correspondingly adverse effect upon their social and emotional adjustment and attitude to school and subsequent career prospects (Honig 1990:14).

In his comparative study of scholastic achievement of the socially disadvantaged and socially non-disadvantaged learners who were at terminal level of secondary school education with regard to their academic adjustment, Ushasree (1990:22) found that the socially disadvantaged children perform poorly at the commencement as well as the terminal stage of the academic year with regard to scholastic achievement in comparison to the socially non-disadvantaged children. It was also found that the two groups of children significantly differed with regard to their academic adjustment scores. Socially disadvantaged children tended to score lower as compared to socially non-disadvantaged children on academic adjustment. The socially disadvantaged are not handicapped by genetic deficiency but by socio-economic circumstances. The socio-economic disadvantages perhaps prevent them from developing their basic and natural potentialities. The socially disadvantaged children have been commonly found to under-achieve and are less keenly interested in academic achievement.

3.3.10.3 Parent-child interaction in relation to academic performance

Parents can manipulate the environment to raise the IQ of a child. IQ scores of children as well as their scores in standardised achievement tests tend to parallel the social, economic and educational backgrounds of parents. Children from the families of greatest advantage usually attain the highest scores. This is because such families are most likely to provide their children with experiences that enable them to do well on tests. Parent-child exchanges tend to point to differences in the abilities of parents to teach their own children effectively. More middle-socio-economic class mothers, in teaching their children not only provide more detailed introduction to the learning task, but provide more verbal variety and more explanations or reasons for their corrections of the child's
responses. In contrast, low socio-economic class mothers predominantly used controls such as threat or physical restraints when children were corrected and this in turn affected children’s performance negatively (Honig 1979:8).

Families are very powerful institutions and their influence over their children registers in every part of their lives including schooling. Colonel, Asherden, Kessler and Dowsett (Frazer & Walberg 1991:86) studied 50 children from lower socio-economic status and 50 children from higher socio-economic status and found that though the educational values of the two groups of parents did not differ, the way in which they promoted educational success did. In the working class families, parents turned over the responsibility for education to the teachers. They depended on the teacher to educate their children. In the middle-class families, however, parents saw education as a shared enterprise and scrutinised, monitored and supplemented the school experience of their children.

Davie (Wadkar 1989:14) has explained the indirect effects of socio-economic status on academic achievement. He pointed out that socio-cultural factors influence academic performance primarily through the orientations and attitudes that children bring to school. According to Davie (Wadkar 1989:14), parents who are dissatisfied with their own social status, and who recognise education as a means of upward social mobility, urge their children to stay at school. This is particularly true of middle-class parents who as a group has a strong drive to get ahead. Davie (Wadkar 1989:13) pointed out that very few working class parents subscribe to the view that education is valuable for its own sake. For lower-class parents earning rather than learning is more important. Schooling has little relevance to them.

3.4 CONCLUSION

From the above, it can be concluded that there are quite a number of factors which influence children’s academic achievement. Parenting style of interaction is associated with cognitive performance. The researcher aligns herself with a parenting style that is characterised by warmth and freedom within reasonable limits, where parents set clear guidelines for their children, exercise control and make demands. This authoritative style of interaction may result in high academic performance whereas other parental styles
such as authoritarian, permissive and being uninvolved may result in poor academic performance. There appears to be a significant relationship between parental support and encouragement and the child's academic performance. Parents' supervision, assistance and encouragement may result in high academic achievement whereas parents who are less involved in the child's school work may show poor academic performance. This is the same for parental expectations. Parents who expect their children to reach high goals will become actively involved in their children's education to attain those goals. Children whose parents do not have expectations for them could become passive in their school work and this may lead to poor academic performance.

The following specific factors in the home have been found to be related to the child's academic performance:

- **Structure of the family.** Two-parent families have been found to produce more over-achievers than other types of families (refer to sec 3.3).

- **Family size.** Children from larger families had a much larger percentage of their number ranked as under-achievers at school compared to only children and a child with two siblings.

- **Emotional aspects of the family.** A supportive family climate tend to foster cognitive development whereas emotional difficulties in the family affect the child's academic performance negatively.

- **Parents' own educational level.** Parents who are well educated are likely to encourage the child to do well at school. In contrast, less educated parents' children are likely to be less motivated to do well at school.

- **Socio-economic status.** Children from high socio-economic status groups perform better at school because they are exposed to intellectual material like books, toys and so on, whereas children from low socio-economic status groups under-achieve academically because of lack of intellectual material at home.

In the next chapter the empirical design will be presented.
Chapter 4

The empirical design

4.1 INTRODUCTION

In Chapters two and three a literature study has been undertaken to investigate several factors that can and do influence a child’s academic performance. The empirical research will be based on those findings.

In Chapter two early cognitive stimulation by parents (or the primary caregiver) was discussed. It became evident that children who receive early cognitive stimulation perform better at school. The reverse is also true, children who did not receive early cognitive stimulation from parents or caregivers perform poorly at school.

In Chapter three the role of parental involvement in the education of a child was discussed. It was found that parents who participate actively in the education of their children tend to have children who excel academically. Lack of parental involvement in the child’s education affect the child’s academic performance negatively. Various factors relating to a family’s socio-economic background were also found to have a distinct influence on children’s academic achievement.

4.2 THE EMPIRICAL STUDY

4.2.1 The aim of the empirical study

The purpose of the present study is to explore how home factors influence the academic performance of a child.

The aims of the empirical study are:
To verify what is found in the literature study by means of an empirical investigation.

To investigate whether there is a significant difference in the home background of achievers and under-achievers.

To investigate the extent and nature of parental involvement in the child’s academic performance.

To investigate the role of early cognitive stimulation by parents in the child’s later academic performance.

4.2.2 Research methodology

The method that will be used, is the ideographic method of research which signifies a formal, accurate, systematic and intensive scientific analysis of an individual child to obtain an accurate description of him or her (Petrick 1986:13). The results will be interpreted qualitatively.

4.2.3 The selection of the research subjects

The headmasters of the schools were approached for permission to select subjects and to gain access to their academic reports. Different dates were set to conduct the Senior South African Individual Scale (SSAIS) to 30 learners and select those with an average IQ. Learners with average IQ’s were divided into five achievers and five under-achievers according to their academic progress reports. Since this research is concerned with home factors that may influence the academic performance of the child, the parents of these children were also included in the study.

The children were in Grade 4 and their ages varied between nine and twelve years. The research group consisted of five boys and five girls.
4.2.4 Media used

The following media will be used in the investigation:

(1) A personal interview

In this investigation the researcher uses personal contact to gather data. The contact is made on a face-to-face basis. According to Drew and Hardman (1985:111), the interaction involves at least two individuals: the respondent and the interviewer. During the interview questions asked are not followed by any kind of specified choice. The respondent can express his/her thoughts freely, spontaneous, and in his/her own language. The respondents' answers are recorded in full (Nachmias & Nachmias 1987:257).

(2) A questionnaire

A questionnaire has been designed for use in this research to give direction and structure to the personal interview. This is comparable to the personal interview because the researcher asks questions of which the subjects answer verbally and the researcher does not follow the questionnaire word by word. This contributes to flexibility. The questionnaire consists of open questions to give subjects freedom to answer from their own frame of reference.

According to Mahlangu (1987:79), open questions do not suggest answers. They call for the respondent's free response in his own words. No clues are provided and provision is made for a greater depth of response. The respondent reveals his frame of reference and the reason for his responses. Van Dalen and Meyer (1966:303) also agreed that this method of collecting data gives the subjects an opportunity to reveal their motives or attitudes and to specify the background or provisional conditions upon which their answers are based.
4.2.5 Procedure

After reaching an agreement with the principals about the research procedure, letters were written to parents to request them and their children to participate in the research.

After the consent of parents, the researcher visited the parents at their homes. The aim of the research was firstly explained to those parents. A date and suitable time for an interview were set.

The questionnaire consists of two sections, one for the parents and the other one for the child. The researcher decided to start with the children to avoid parents preparing the child beforehand how to answer. The interviews with the ten children were done at school. The first few minutes of the interview were used to build rapport and establish a working relationship. The use of a tape recorder was also mentioned and permission to use it was received from learners. Parents were interviewed at their different homes by the researcher herself. Permission was also asked from parents to use the tape recorder and confidentiality was promised.

During the interview subjects were able to ask questions if they did not understand and they were encouraged and able to give information freely. The recording of the interview was later used to complete the questionnaire.

4.3 THE QUESTIONNAIRE

As has been mentioned, the questionnaire is divided into two sections, one section for the parents and one section for the child. Each section consists of components which are made up of a number of questions.

The questionnaire is outlined in the following manner:
4.3.1 Section A: For parents

1. Biographical data
2. Prenatal and postnatal factors
3. Language development
4. Early stimulation and cognitive development
5. Educational material available at home
6. Parenting style of interaction
7. Parental involvement in the child's school work
8. Home atmosphere and academic performance

4.3.2 Section B: For the learner

1. Parenting style of interaction
2. Home atmosphere
3. Material available at home

4.4 Conclusion

In this chapter, the aims of the empirical investigation were set out, the research method, selection of subjects, media used and the procedure to be followed were presented.

Chapter 5 will discuss the results of the empirical investigation.
Chapter 5

Results of the empirical investigation

5.1 INTRODUCTION

After conducting the empirical investigation as set out in Chapter four, the results will now be analysed and interpreted.

5.2 ANALYSIS OF DATA

The data obtained through the questionnaires will be analysed as follows: five achievers will be compared to five under-achievers with regard to eight components. Relevant findings from the literature study will be presented in relation to every component.

Component 1: Biographical data
Component 2: Prenatal and postnatal factors
Component 3: Language development
Component 4: Early stimulation and cognitive development of the child
Component 5: Educational material available at home
Component 6: Parenting style of interaction
Component 7: Parental involvement in the child’s school work
Component 8: Home atmosphere and academic performance

5.2.1 Component 1: Biographical data

The biographical data is presented in a table form. For confidentiality purposes, subjects will be given numbers. Under-achievers’ numbers are 1-5 while achievers’ numbers are 6-10.
5.2.1.1 Table 1: Biographical data for under-achievers

<table>
<thead>
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<th>Pupil</th>
<th>S-P</th>
<th>E-F</th>
<th>E-M</th>
<th>M-S</th>
<th>S-E</th>
<th>O-M</th>
<th>O-F</th>
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5.2.1.2 Table 2: Biographical data for achievers

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### 5.2.2 Explanation of the table - biographical data

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<td>Female</td>
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<td>M</td>
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5.2.2.1 Educational level of parents

- Three of the under-achievers' mothers have only primary education, one has Standard 8 and the last one has Standard 10. One of the subject's father is deceased. Two of the fathers have primary education and two of them have Standard 8. Educational level seem to be related to parent's occupation: for the under-achievers' mothers two are unemployed, one is doing domestic work, one administrative and one is doing professional work. Two of the fathers of the under-achievers are unemployed and the other two are doing administrative work.

- Four of the achievers' mothers have obtained university degrees and one have Standard 10. Two of the three achievers' fathers have obtained university degrees and one has Standard 10. Four of the achievers' mothers are professionals and the other one is doing administrative work. Two of the achievers' fathers are professionals while one is doing a clerical job.

Research by Frazer and Walberg (1991:42) found that parents who are themselves intelligent and well-educated and who provide a child with a favourable environment, are also likely to encourage the child to develop an interest similar to their own and to motivate him to do well at school. They are likely to take an interest in the child's school work and help him with it. Success on the child's part is likely to be rewarded by approval. In contrast, parents who are less educated are likely to set a lower premium on academic pursuits and success, thus their children are likely to be less motivated to do well at school (see ch. 3, sec. 3.3.9).

It has also been found that parental occupation is related to the pupil's academic achievement. High status occupation of the father facilitates academic achievement of the child. Parents with high status occupation give guidance and encouragement to their children in regard to school work and these may lead to better academic performance (see ch. 3, sec. 3.3.9).
5.2.2.2 Marital status

Four of the under-achievers come from dual families while only one is from a single-parent family where the father is deceased. Three of the achievers come from single-parent families while two come from dual families.

Research showed that school achievement was significantly lower for children of average intellectual ability who were living in single-parent homes. It was found that children from two-parent families consistently outranked their peers from single-parent homes in both class standing and grade point average. According to Franklin (see ch. 3, sec. 3.3.1), it is found that single-parenthood does not necessarily make a family dysfunctional. Franklin notes that many single black parents, the majority of whom are female, function well in their parental role and their children grow up to be capable adults.

5.2.2.3 Socio-economic status

Of the five families of the under-achievers three have a low socio-economic status and two have a middle socio-economic status. The two families from the low socio-economic status make a living by selling beer. No one is officially employed in those two families. The children, too, are involved in selling beer. In one family the mother is a sole breadwinner, doing domestic work, staying at her place of work, coming home twice a month. The children of this family mostly depend on the neighbours for food and care.

From the group of achievers four families have a middle socio-economic status while one family has a high socio-economic status.

It is reported that social class has an effect on academic achievement of children because of differences in amount and kind of mental stimulation that is provided by different social environments. The child from a low economic sphere is likely to lack confidence in his abilities and future. His parents usually do not encourage him to
compete in school, he usually lacks the drive for achievement. A middle-class social environment prepares children to use abstract concepts, help the child to learn to deal with experiences, expose the child to adequate play facilities and contact with books, words and ideas, and thus the children have increased opportunities for learning (see ch. 3, sec. 3.3.10).

5.2.2.4 Number of children in the family

The number of children of the four families in the under-achiever's group range from four to six in the family while only one family has one child. In the achievers' group, the children ranges from one child to three children.

Previous research (see ch. 3, sec. 3.3.3) found that single children in families may score higher on cognitive tests because they receive all available parental stimulation. In contrast, children with four siblings may have lower performance scores because they receive less stimulation from their parents.

5.2.2.5 Position of the child in the family

Two of the children from the underachieving group are the last born children. The other one is the last but one of the five children while the other one is the second born child and the other one is the only child. From the achieving group there is two first born children and three second born children.

Research by Douglas (see ch. 3, sec. 3.3.3) discovered that first born children with one or two siblings perform academically better than would be expected from their measured ability, and later born children do worse than their measured ability would indicate. The explanation for this might lie in the stimulus a first born child receives from the prime attention given to eldest children by parents.
5.2.3 Component 2: Prenatal and postnatal factors

5.2.3.1 Age of the mother when the child was born

- Three of the under-achievers' mothers gave birth to their children between the ages of 36 to 40 years while only two had children between the ages of 20 to 35 years. Only one mother of the group of achievers had a child between the ages of 36 to 40 years while four had children between the ages of 20 to 35 years.

It is stated (see sec. 2.2.1) that the years between 20 and 35 remain the most favourable for childbearing. For mothers less than 20 years old or over 35, the rate of infant mortality is higher and if children live, they are at greater risk of being intellectually disabled.

5.2.3.2 Pregnancy

- None of the mothers from both groups have followed a specific diet. Mothers were eating healthy except for two mothers from the underachieving group who were drinking beer during pregnancy.

Research (see ch. 2, sec. 2.2.2) indicated that what the mother eats affects the health and development of her unborn baby as well as her own. High alcohol consumption by pregnant women can produce what is known as fetal alcohol syndrome.

All the children were full term babies. All the children were welcomed. There were no incidents of traumatic experience or head injuries from both groups.
5.2.4 Component 3: Language development

- From the underachieving group, two of the children were looked after by their mothers, two by a helper and one by a sister who herself was still too young to look after the child on her own. This subject’s mother is the domestic worker who only comes home twice a month. The subject still struggles with language up to now.

The helpers who looked after the children were mainly concerned with keeping the house clean rather than caring for the child. This resulted in the parents being dissatisfied with them, firing them and hiring somebody else. The result is that these children did not receive continuous care from a single caregiver of whom they could grow fond.

- Three of the children from the achieving group were looked after by their grandmothers. One child was looked after by her grandmother as well as a helper while the other child was looked after by a helper until she went to preschool.

Children learn language in natural social settings. Thinking develops as children actively participate in and interact with people and things. The children of caregivers who were socially responsive in infancy did significantly better than children whose caregivers were less responsive in infancy (see ch. 2, sec. 2.7.2).

- From the group of under-achievers the two mothers who looked after their own children responded positively to their children and talked to them from birth. The other three children’s caregivers did not respond to their verbalisation, they were concerned with feeding and keeping them asleep.

- The grannies who were looking after the achieving children responded to their verbalisation by talking and smiling to them when they were babies. The helper was also talking to the child and played with her.
Research indicated that babies can "talk" to their mothers and fathers even before they learn words by cooing and babbling to their loves one. The more the child is talked to, the more he wants to converse. Talking early to a child helps the child learn about language and communication (see ch. 2, sec. 2.6.3.1).

- Three of the under-achievers' parents did not correct the child's verbal mistakes, one said the child will improve automatically as he grows. The other two parents said they were mostly concerned with the safety of their children, as long as they were not playing with dangerous things like fire they would basically, for example, leave them to themselves.

- From the achieving group parents often corrected the child's mistakes by repeating the correct words or sentences.

Literature (see ch. 2, sec. 2.6.3) underscores the notion that parents who use verbal explanations will enhance children's communication skills.

- Two of the under-achievers' parents involved their children in a discussion while the other two said a child must behave like a child and should not be involved in family discussions. This statement was confirmed by the two children who in their questionnaires said that their parents accused them of imitating adults when they tried to initiate discussion with them. One parent said that she does not have time to discuss matters with her children as she is sleeping away from home at her place of work.

Parents of achievers encouraged discussions for instance about television programmes, news events and so on.

The child should be encouraged to participate in a discussion. The parent or adult should talk to him or her about ideas, how things work and what things mean to encourage verbal ability and thinking skills (see ch. 2, sec. 2.6.3.2).
5.2.5 Component 4: Early stimulation and cognitive development of a child

- From the group of under-achievers the two mothers who looked after their children reported that they used to carry their children on their backs until they sleep to keep them safe from injuries. Parents who reported that caregivers looked after their children were more concerned with their safety and thus placed more restrictions on these children. The one being taken care of by her sister was playing everywhere and was free.

Grannies who looked after the achieving children allowed the children to explore and experiment but created a safe environment for that. The helper who looked after the child was told that priority should be given to the child and that the cleanliness of the house was of minor importance. Thus this child was not tied up on her back.

Maternal behaviour that leads to favourable cognitive outcomes include the following: providing attentive, affectionate and responsive care, allowing the child floor freedom to explore the home environment and arranging the home environment so that it is safe and stimulating (see ch. 2, sec. 2.7.1).

- All parents of under-achievers allowed their children to play with other children. Three of the parents said they had one or no toys and were surprised when asked if they had ever played with their children. Two of the parents said their children too played with other children but they had a number of toys.

- Children from achievers had toys and played with peers. These children played mostly with caregivers and parents played with them on weekends when they were not at work.

There is extraordinary learning power in play and in an enriched environment of toys. The games adults play with children teach the child to solve problems at the sensorimotor level that will be encountered later at abstract level of thinking. Children who
have no toys and little opportunity to play with other children are cognitively at a
disadvantage (see ch. 2, sec. 2.8).

5.2.6 Component 5: Educational material available at home

- All five families of under-achievers live in a location, three of them in four-roomed
  houses and two of them in a six-roomed houses. There is no quiet place for
  children to study in the four-roomed houses while children who lived in six-
  roomed houses have a quiet place to study.

- Families of achievers lived in a location but four of them have extended their
  houses from eight to 14-roomed houses. One family is living in a four-roomed
  house and the child has a conducive place for study because they are a family
  of only two.

- The group of under-achievers has no additional books that they can read at home
  except for one child who has encyclopaedias but does not use them. Achievers
  have additional books for their age at home ranging in number from ten to 25.

- Four of the under-achievers' parents do not supervise their children in study and
  they never bother themselves to read to them. Parents of achievers have made
  a timetable for the child to follow, for example there is a time for eating, playing
  and time for study and the parents check whether they followed the set
  timetable.

It was found that children who performed better academically are those who are
surrounded with books, magazines and have parents who value education. It was also
found that parents of achievers read to their children more often than did parents of
under-achievers (see sec. 2.10).

- Only two families of under-achievers undertook trips with their children, like
  going to the zoo and to picnics, but never engage in the activities at home with
their children. Only one parent is a member of a library. Three other families never undertook trips with their children nor engaged in the activities with their children.

All five families of achievers undertook trips with their children. All mothers from this group are members of a library. Every festive season they go on holiday with their children. During the year they take single trips like going to shows, theatres, and so on.

It was found that children who typically perform better in school are the children of parents who read to them when they were young, who made sure that they have a quiet place to study, who talk to them about school and everyday events and express an interest in their progress, who take them to parks museums, ball games, libraries, zoos, and other stimulating places, and who establish a definite, routine bedtime (see sec. 2.11).

5.2.7 Component 6: Parenting style of interaction

In families of under-achievers two of the families do not have structure in the family and children do as they wish. One family is overstrict in that children do not have a say but have to do as their parents say. These children live under fear because they are punished if they do not behave as expected. Two families have a structure that the children follow but one family does not allow the children to differ with them. Parents are always right. Not one family from the group of the under-achievers allows children to contribute to decisions of the family. They believe that children remain children in the family and decisions are for adults only.

For the group of achievers, parents set guidelines to be followed. Children are allowed to think differently from the family and their ideas are respected. Children contribute to the family’s decisions, for example, they are involved in the buying of groceries, to decide where to go for a holiday and so on. This joint decision making was also confirmed by the children’s questionnaires.
Children who perform better academically tend to come from homes where independent thinking and freedom of discussion among all members of the family are prevalent. Such values are conducive to intellectual effort and the child's curiosity and academic aspirations are encouraged and supported by parents (see sec. 2.2.1).

- Concerning the value of education, parents from both groups see education as a way to a brighter future. Three of the under-achievers' parents expect their children to pass Grade 12 and get jobs. Two parents expect their children to go as far as tertiary education and become professionals.

- Parents of achievers expect their children to have senior degrees like a doctorate degree. They wish their children to follow careers like engineer, medical practitioner, lawyer and so on.

Research indicate that high-achieving children tend to come from families who have high expectations for them, as well as parents who view education as a means of upward social mobility (see sec. 3.2.7).

5.2.8 Component 7: Parental involvement in the child's school work

- Four of the under-achievers do homework on their own without their parents' assistance. One parent told her child to do homework but she does not monitor her work at all. These parents do not know the subjects that their children are doing except the most obvious ones like Mathematics, English and Setswana. Neither of the parents knew the topics the child is doing in their subjects.

- Parents of achievers on the other hand, help their children with homework. Parents are so involved that when asked about the topics that the child is doing, could explain the topics in detail to the researcher.

- For the under-achievers, time for homework is taken up by television viewing. Under-achievers reported to spend most of their time viewing television. Only one subject said that he spends only two hours watching television then his parents
tell him to study. Two subjects reported that they watch television up to midnight when there are interesting films to watch.

- The achievers reported that they watch television for approximately two hours. Most of their time is spent on study. They reported that their parents do not allow them to watch films during the week. They reported that they have to follow their daily timetable and parents expect them to go to bed on time that they have agreed upon.

It was found that parents of high-achievers set forth a rule restricting the amount of time the child is allowed to watch television on weekdays with explicit motivation. It was also found that under-achievers watch more television on average than do achievers (see sec. 3.2.5).

- Four of the under-achievers' parents have never visited their children's school even if they were called. One parent went to the school when he heard that the school fees have increased. He was angry and he argued with the principal. None of these parents know their children's class teacher. Two of them did not even know the grade that the child was in. There was no particular part played by these five parents at school.

- From the group of achievers, five parents visited their children's school. They attended parents' meetings and three of the parents even visited the school on their own to check their children's progress. All five parents knew their children's class teachers. Three of them are members of the school council and are involved in the running of the school.

Parents should participate directly in the children's education by helping them with homework, keeping close track of how they are doing in school as well as by working closely with the child concerning school work, attending school programmes and extracurricular activities (see sec. 3.2.3, 3.2.4).
5.2.9 Component 8: Home atmosphere and academic performance

- Two children from the under-achievers reported to have a good relationship with their parents and siblings. One child reported to be unhappy because he is not staying with his mother because the mother resides at her place of work. Two children whose parents sell beer said that their parents ask them to help customers and they do not have time for themselves. There is poor communication between these parents and their children.

- The achievers reported to have a good relationship with their parents. Those who have siblings have a good relationship with them too. Children from single-parent families reported to have an intimate relationship with their mothers because they do many activities together.

Situations which produce emotional problems for the child such as misguided discipline, discrimination between siblings, parental discord, affect the child’s school work. They reduce the child’s concentration and prevent him from applying to the full his intellectual powers. A supportive family climate tends to foster cognitive development (see sec. 3.2.3).

In this chapter the results of the empirical investigation were outlined. Preliminary findings from the literature study were presented to substantiate some of the results.

In the next chapter a summary of the findings from the literature study and empirical findings as well as limitations of the study and recommendations will be presented.
Chapter 6

Findings, conclusions and recommendations

6.1 INTRODUCTION

The aim of the study was to examine home factors leading to poor academic performance in primary school children in the Brits district, specifically black pupils in Ga-Rankuwa township. The researcher investigated whether early cognitive stimulation by parents, family background and parental involvement are related to pupils' academic performance. To investigate this link, achievers were compared to under-achievers with regard to the above-mentioned variables.

In this chapter, the findings from the literature study and the findings from the empirical study, conclusions, limitations and recommendations will be done.

6.2 FINDINGS FROM THE LITERATURE STUDY

6.2.1 Early cognitive stimulation by parents and children's academic performance

6.2.1.1 Prenatal and postnatal stage

- Research showed that prenatal and postnatal conditions may affect the child's development and may lead to the lowering of intellectual functioning (see ch. 2, sec. 2.2).
• The recommended age for childbearing is between 20 and 35 years. Less than 20 and over 35, may lead to risk of affecting the child intellectually (see ch. 2, sec. 2.2.1).

• What the mother eats, affects the health and development of her unborn baby. Nutritionally sound diets are recommended. A high alcohol consumption by a pregnant woman, smoking, and the use of drugs during labour and delivery may affect the cognitive development of a child (see ch. 2, sec. 2.2.2).

• Maternal diseases during pregnancy specifically viral diseases like rubella, may lead to mental retardation. Prolonged maternal stress during pregnancy may also affect the child’s development (see ch. 2, sec. 2.2.4).

• The ease or difficulty with which a baby is born, dangers such as haemorrhaging or failure to begin to breathe soon, can affect the infant’s well-being. Premature children with a very low birth weight may show learning problems later on in school (see ch. 2, sec. 2.2.6 and 2.2.7).

6.2.1.2 Relationship between brain development and cognitive processing

It has been found that damage to certain brain areas affects cognitive development (see ch. 2, sec. 2.3). The effect of damage to these structures will be highlighted:

• Damage to the temporal lobe can result in severe memory impairment either in terms of retrieval from long-term memory or acquisition of new information in short-term memory (see ch. 2, sec. 2.3.1).

• Damage to the parietal lobe give rise to problems with spatial orientation, tactile discrimination, body consciousness, visual perception and visual memory (see ch. 2, sec. 2.3.2).
• Damage to the occipital lobe affect visual perception as well as reading (see ch. 2, sec. 2.3.2).

• Damage to the frontal lobes presents clinically with a diversity of behavioural symptoms. Among those reported are lack of planfullness, lack of inhibition and distractibility (see ch. 2, sec. 2.3.3).

6.2.1.3 The development of cognitive thinking

• Piaget viewed intelligence as the way an individual adapts to the environment. He argues that, although emphasis is given to experience in contributing to development, development is based on a maturational process which is biologically programmed in the brain (see ch. 2, sec. 2.4).

• Piaget distinguishes four main stages with each stage presenting a different way of dealing with a particular aspect of the environment. Most of the child’s thinking would be characteristic of the stage he has reached. For the child to adapt to his environment, he has to touch, push, feel, smell, see, etcetera (see ch. 2, sec. 2.4.1).

• In stark contrast to Piaget’s view, Feuerstein’s mediated learning experience theory compels an adult to intervene between the child and the environment. The mediator transforms, reorders, organises groups and frames the stimuli in the direction of some specifically intended goal or purpose. In this way children’s minds develop through processing their interaction with the world (see ch. 2, sec. 2.5.1.2).

• The literature indicated that successful cognitive development depends on the exposure to environmental stimuli, and on the quantity and quality of mediation by an adult. Parents and significant others in the child’s life control the stimuli a child receives and in so doing help to structure the child’s universe in patterns
similar to their own. They transmit a culture which determines the child's attitude, perceptions and behaviour (see ch. 2, sec. 2.5.1.1)

6.2.1.4 The effect of language on cognitive development

- From the literature study it was found that babies can "talk" (cooing and babbling) to their mothers and fathers even before they learn words. Talking early to a child helps the child learn about language. How one talks with a child makes a difference in how well he uses language. Children whose parents talked a lot to them when they were babies use language well and do well in school (see ch. 2, sec. 2.6.3.1).

- Absence of spoken language penalises a child in acquiring what is needed for success in school. Conversation helps children develop a verbal readiness for school. The child who is verbally well-equipped is able to score highly on intelligent test because his verbal ability enables him to be more flexible in thinking-out of solutions for problems even of an apparently non-verbal kind (see ch. 2, sec. 2.6.3).

- In order to encourage verbal ability, the child should be encouraged to participate in discussions. The parents should talk to the child about ideas, how things work, what things mean, in fact, anything they can talk about in a friendly situation (see ch. 2, sec. 2.6.3.2).

6.2.1.5 Early stimulation and cognitive development

- It was found that the first four to five years of life are years in which the child's mind is most receptive to stimuli and learning. It was also found that maternal behaviour that are being linked to favourable cognitive outcomes includes providing attentive affectionate and responsive care, allowing the child to explore the home environment and arranging the physical environment in such a way that it is safe and stimulating (see ch. 2, sec. 2.7.1).
There is extraordinary learning power in play and an enriched environment of toys. Play evokes thought, language, and activity; it permits the child to deal with his intellectual processes in a way which makes these processes acceptable, and accessible to her. When play is not forced, rigid, restricted, or circumscribed, it allows the child to structure his world (see ch. 2, sec. 2.8).

Toys and other play objects are part of the stimulation provided by parents and they become important if parents play with the infant. It was found that children who have no toys and little opportunity to play with other children are cognitively lagging behind their peer group (see sec. 2.8).

Parents should encourage freedom of thought. They should let their children know that it is acceptable to think differently from others, to choose different clothes, books, movies and political points of view. (see ch. 2, sec. 2.9).

Parents should demonstrate commitment to education by establishing a home in which learning is emphasised. Books, magazines and other reading materials should surround the child especially during the early years.

6.2.2 Parental interaction style in relation to academic achievement

6.2.2.1 Parenting style of interaction

An authoritative parenting style is found to promote cognitive development. Independent thinking and freedom of discussion among all members are encouraged. Parents advocate values conducive to intellectual effort and enterprise, and the children's curiosity and academic aspiration are encouraged (see ch. 3, sec. 3.2.1.1).

Parents of achievers were found to give their children more praise and approval, they show more interest and understanding and are closer to their children. The
frequency of parental praise was found to correlate positively with school achievement (see ch. 3, sec. 3.2.2).

6.2.2.2 Parental involvement

- Academic guidance provided by parents can be an important contributor to the cognitive development of a child. Parental supervision, encouragement, assistance and support for study correlated positively with academic performance (see ch. 3, sec. 3.2.3).

- Parents who participate directly in their children's education by helping them with homework, reading to them and playing educational games, tend to have children who excel in academical tasks (see ch. 3, sec. 3.2.4).

- When parents and their children are mutually involved in leisure activities requiring the use of intellectual functioning capacities, children are more likely to become acquainted with concepts useful in the classroom situation (see sec. 3.2.5).

- Parents should play a major role in structuring the child's time. It was found that high-achieving children have a daily routine and weekly schedule which included certain before-school activities, after-school activities, evening-activities and weekend-activities (see ch. 3, sec. 3.2.5).

- It was found that parents of achievers set forth a rule restricting the amount of television the child is allowed to watch on weekdays. This encourages the child to do more homework and thus achieve higher grades in school (see ch. 3, sec. 3.2.5).

- The attitude of parents towards education is generally measured in terms of behaviour in relation to education and opinions expressed about education. What parents think of school and its worth to the child largely determine the child's
interest in education and attitude towards it. Parental interest contributes to educational success when it involves support for school and teachers (see ch. 3, sec. 3.2.6).

- Parental ambition for the child in itself is related to academic achievement. Parental belief in the child's abilities can influence his/her motivation to achieve and positively influence their self-perception of their ability to learn. High-achieving children tend to come from families who have high expectations for them (see ch. 3, sec. 3.2.7).

- It was found that parents with high aspirations engage in more verbal communication about school with their children. In this way high parental aspirations were transmitted to the children through positive verbal exchanges about school (see ch. 3, sec. 3.2.7).

- Parents who view education as a means of upward social mobility may have educational expectations for their children that are higher than their own attainment. These parents are also more likely to invest in the education of their children (see sec. 3.2.7).

6.2.2.3 Structure of the family

- Research found that children from single-parent families have significantly lower grades and test scores than children from two-parent families. It is stated that the absence of one parent alters the family's method of decision making and weaken parental control over the behaviour of children (see ch. 3, sec. 3.3.1).

- In general, single-parent families seem to be poorer than two-parent families. It is this lack of economic resources that may have a detrimental impact on children, especially with regards to finances available for toys, outings and so on.
Research showed that children from single-parent families spend more time alone after school without being supervised and this may lead to poor performance. The reason being that in single-parent families there is no alternative wage-earner so the mother is forced to work without having adequate supervision for the child (see ch. 3, sec. 3.3.1).

It was also found that single-parenthood does not necessarily make a family dysfunctional. It was noted that many single black parents, the majority of whom are female, function well as parents and their children grow up to be capable adults (sec. 3.3.1).

Increasing family size impact progressively negatively on school achievement. It was indicated that children of larger families had a much larger percentage of their number ranked as underachieving at school in comparison to only children and those with one sibling. As the family increases, there is a reduction in the attention that the children receive from their parents, reduction in living standard, living space, learning resources and privacy that is generally associated with increasing family size (sec. 3.3.3).

Eldest children with one or two siblings were found to perform academically better than would be expected from their measured ability and later-born children do worse than their measured ability would indicate. This might be related to the stimulus a first born child receives from his parents. For example, parents may give more attention to their eldest child, by talking a lot to him, playing with him, undertaking trips with him and so on, unlike when parents have more children.

6.2.2.4 Emotional aspects related to the family

Unfavourable home conditions in the child's early life may result in maladjustment and personality problems. These problems ultimately affect academic performance negatively (see ch 3, sec. 3.3.4.).
Parents' work environment can influence the family climate and indirectly affect the child's academic achievement through their impact on parents and family life. As work stressors increase, families often have fewer interpersonal resources available to buffer them (see sec. 3.3.5).

Interaction between siblings plays a crucial role in parent-child interaction which in turn affect academic achievement. Parental differences in demands and rewards between siblings create an imbalance in the child's mind (see sec. 3.3.6).

Disharmony in the home produce psychological turmoil in some children. Disharmony in the home include indisputable records of serious discord in the families for example a father who was physically abusive especially when drunk, serious illness of a parent, a difficult relationship with one of the parents and also between the parents themselves, are found to be detrimental to academic achievement (see sec. 3.3.7).

6.2.2.5 Factors related to socio-economic status of the family

Social class has been found to have an effect on children's academic aptitude because of differences in amount and kind of mental stimulation that is provided by different social environments. It was found that mothers with a higher socio-economic status were more likely to have accurate knowledge of their child's schooling and have had contact with the school, and help the child to learn to deal with experiences whereas a child from a low-economic sphere is likely to lack confidence in his abilities and future. The child's parents do no encourage him to compete in school (see ch. 3, sec. 3.3.10).

It has been found that mothers from a middle-socio-economic class, in teaching their children, not only provide more detailed introduction to the learning task, but provide more verbal variety and more explanations or reasons for their correction of the child's responses. In contrast, low socio-economic class mothers predominantly used controls such as threat or physical restraints when children
are corrected and this in turn affects the children's cognitive development and academic performance negatively (see ch. 3, sec. 3.3.10.3).

- Parents from a low-socio-economic sphere tend to turn over the responsibility for education to the school. These parents depend on the teacher to educate their children whereas parents from middle-class spheres saw education as a shared enterprise and scrutinised, monitored and supplemented the school experience to their children (see ch. 3, sec. 3.3.10.2).

- Wealth enables families to provide books and other resources necessary for successful study as well as the means to give a child the privacy, quiet and comfort that facilitate serious study. Wealth also enables families and pupils to seek assistance when schooling does not proceed smoothly. The child from a low socio-economic sphere has little or no books, often no quiet place to study and parents do not offer assistance to the child (see ch. 3, sec. 3.3.10).

- Parents who are better educated are more likely to mirror the academic style of school classrooms at home by praising and interacting with their children, modelling appropriate behaviour and promoting initiative and independence whereas parents with low educational qualifications, posses fewer cognitive abilities to transmit to their children (see sec. 3.3.9).

- Parents' education is viewed as important for their children's advancement at school, not only through direct influence such as helping with homework, but also through indirect influences, such as having books and other intellectual material around the house (see sec. 3.3.9).
6.3 FINDINGS FROM THE EMPIRICAL STUDY

6.3.1 Findings from the biographical data

- A significant difference was found between parents of achievers and under-achievers with regard to the educational level of parents. Parents of achievers were found to have university qualifications while only one parent from the group of under-achievers passed Standard 10. This finding correlates with the literature finding that parents with high educational levels possess higher and more sophisticated cognitive skills which they then, in their interaction with their children, transfer to their children. In contrast to this, parents who have attained low educational levels, possess fewer cognitive skills to transfer to their children (see ch. 3, sec. 3.3.9).

- There were no significant differences with regard to marital status for parents of achievers and under-achievers. Children from single-parent families in this study were four and three were from the achievers' group. This finding is not in accordance with the previous research that children from single-parent families have significantly lower grades and test scores than children from two-parent families (see ch. 3, sec. 3.3.1). The reason for this outcome might be that many single-parent families today are not financially burdened and thus can afford the running of the family together with the education for their children. The majority of black single-parent families are headed by women who function well as parents. This findings may also be attributed to the small sample used in this study.

- There was a significant difference between achievers and under-achievers with regard to the socio-economic status of the family. From this study, under-achievers' parents have a lower socio-economic status as compared to the achievers' families. This is in agreement with the literature findings that stated that parents from low socio-economic status place less emphasis on the importance of schooling and maintain separation between their roles as parents.
and those of their children's teachers than do middle-class parents (see ch. 3, sec. 3.3.10).

- There is a significant difference between achievers and under-achievers with regard to family size. Under-achievers' families were bigger than that of achievers. This confirms literature findings that increasing family size impacts negatively on school achievement, partly due to less stimulation they receive from parents (see ch. 3, sec. 3.3.3).

- From the under-achievers' group, three of the subjects are last born children of four, five, and six children while one subject is second born child of four children and the last subject is the only child. From the group of achievers, two subjects are first born children. There is a significant difference between achievers and under-achievers with regard to position of the child in the family. This is in agreement with literature findings that first born children with one or two siblings perform academically better than would be expected from their measured ability, and later born children do worse than their measured ability would indicate (see ch. 3, sec. 3.3.3).

6.3.2 Findings regarding prenatal and postnatal factors

- Although according to literature (see ch. 2, sec. 2.2.1), the best years for childbearing are between 20 and 35 years of age, there was no significant difference between achievers and under-achievers with regard to the age of the mother when the child was born: The mothers were between ages of 36 and 40 from both groups.

- There was no significant difference between achievers and under-achievers with regard to mothers well-being during pregnancy. The mothers were all healthy and followed well balanced diets. All children were full-term babies. These contradictory (to the literature) findings may be ascribed to the small sample used in the empirical investigation.
6.3.3 Language development

There is a significant difference between achievers and under-achievers with regard to language development. The under-achievers, as infants, received less verbal stimulation from their care-givers as their care-givers gave first preference to other duties in the home while achievers had responsive care-givers who talked to them.

There is a significant difference between achievers and under-achievers with regards to the way their parents encouraged their verbal abilities. Under-achievers' parents reported that they did not correct the child's mistakes immediately and believed that the child would improve as he grows. Parents of achievers reported that they corrected the child's mistakes in a friendly and supportive way by repeating the correct words or sentences themselves.

There is a significant difference between achievers and under-achievers with regard to the way parents involved their children in family discussions. Parents of under-achievers felt that children remain children and they should not enter into discussions with parents, parents will give them orders and they should do as parents say. Parents of achievers involved their children in daily discussions and talk about everyday events. A possible reason for the under-achievers' parents to behave in this way might be that they still adhere to the black culture and want to bring their children up the way they were brought up.

6.3.4 Play and cognitive development

Parents of under-achievers as compared to parents of achievers were more restrictive to their children as babies and most of the time if children were not asleep, they were carried on their parents' back for safety while the parents continued with their daily routine. Parents of achievers allowed their children to freely explore and experiment within a safe environment.
Children from both groups played with their peers, but compared to under-achievers, achievers had more toys and played with their caregivers or parents whereas parents of under-achievers were not involved in play with their children. Thus there is a significant difference between achievers and under-achievers with regard to the role of play in cognitive development.

6.3.5 Findings with regard to home atmosphere and academic achievement

6.3.5.1 Findings with regard to educational material available at home

There is a significant difference between achievers and under-achievers with regard to the educational material available at home. Under-achievers do not have a quiet place to study because of smaller houses and more family members while achievers have a conducive place for study.

Achievers' parents have created a learning environment by having additional books in their homes for their children. Children are motivated also by seeing the parents reading and visiting libraries. Under-achievers' parents did not see the importance of buying extra books except prescribed books for school.

A significant difference was found between achievers and under-achievers with regard to the activities done at home with parents. Parents of achievers were engaged in home activities with their children, like reading to their children, singing together and so on, whereas parents of some of the under-achievers only undertook trips with their children but did not engage in activities with them.

6.3.5.2 Findings with regard to parenting style of interaction

There is a significance difference between achievers and under-achievers with regard to parenting style of interaction. Parents of under-achievers were either authoritarian, permissive or uninvolved whereas parents of achievers were authoritative. This finding is in line with the literature findings stating that
authoritative parenting styles are believed to promote cognitive development by encouraging independent problem solving and critical thinking (see sec. 3.2.1.1).

Parents from both groups saw education as a way to a brighter future, they differ however with regard to their expectations. Parents of achievers had higher educational expectations for their children. They expected their children to become professionals whereas parents of under-achievers were satisfied if their children can find jobs and make a living. This is in agreement with the literature findings which state that high-achieving children tend to come from families who have high expectations for them (see ch. 3, sec. 3.2.7).

6.3.5.3 Findings with regard to parental involvement in the child's schoolwork

There is a significant difference between achievers and under-achievers with regard to parental involvement in school work. Parents of under-achievers were not involved in the child's school work even to the extent that they could not mention a single topic done by children at school. Some parents only tell children to study, but never become involved. Parents of achievers were involved in their children's school work to an extend that they knew almost all topics done by their different children in different subjects.

Concerning television watching, when under-achievers are compared to achievers, under-achievers spend most of their time watching television rather than with their studies. There is no restriction or guidance from parents in this regard. Achievers were found to spend more time with their studies and less time watching television.

Parents of under-achievers never visited their children's school even when requested to. They could not even name their children's class teachers. They placed the responsibility on their child's education completely on the teacher. Parents of achievers on the other hand were found to visit the school even if they were not called. They were involved in the extra curricular activities of the school and are familiar with their children's class teachers.
6.3.5.4 Findings with regard to emotional aspect of the family and academic achievement

- From the group of under-achievers, two reported to have a good relationship with their parents and siblings while three of them reported to be emotionally upset because of poor relationship with their parents (see ch. 5, sec. 5.2.8). The achievers reported to have a good relationship with their parents and siblings. Two children from single-parent families reported to have intimate relationship with their mothers. From these it can be deduced that there is a significance difference between achievers and under-achievers with regard to the emotional aspect of the family.

6.4 CONCLUSIONS

- The first conclusion to be drawn from this study is that early cognitive stimulation by parents or care-givers play an important role in the child’s cognitive development. It is important that the child should have a responsive care-giver who provide an enriched home environment and mediate between the child and the environment.

- Secondly, parents should involve their children in everyday family activities. When parents involve their children in discussions, respect their opinions, correct their mistakes in a friendly manner and do some activities together, the child’s cognitive skills will be expanded.

- Thirdly, the degree and quality of parental involvement in the child’s school work activities is positively related to academic performance. Parents should become actively involved in their children’s education and know that they are equally responsible for their child’s education. For children to be successful at school, parents should not only encourage their children to study, but they should assist them with homework, create a structure at home for their children to follow, monitor the children’s time and set rules for television viewing.
Lastly, the parent-teacher relationship is important for the children's success at school. Parents should work hand in hand with teachers. They should attend parents' meetings, help with extracurricular activities like fund raising and discuss their children's academic performance with teachers. In this way the child will realise that his/her parents are interested in him/her which affect his academic performance positively.

6.5 LIMITATIONS OF THE STUDY

- The sample of this study is small, involving children from only three primary schools, therefore generalisations cannot be made.

- As this study was limited to black Sotho-speaking South Africans, generalisations with regard to other cultural groups cannot be made.

- The researcher has designed her own unstructured questionnaire, and no formal standardised evaluation was used. The use of unstructured interviews may lead to subjective interpretation.

- Parents reported about the early cognitive stimulation of their children and thus they may be biased in their reports of their children.

6.6 RECOMMENDATIONS

The researcher recommends a refinement of the findings to be used as qualitative guidelines in a parent guidance programme. Such a programme can be used to:

- inform prospective parents of their important role in the overall, but specifically the cognitive development of their children.
better equip parents as well as other care-givers to plan their children's activities in such a way that optimal cognitive development can be actualised.

parents need to be educated about the role they can and are expected to play in the education of their children. Parents need guidance on how to assist their children with school work, how to create a learning environment and how to monitor the child's time especially with regard to television viewing.

6.7 CONCLUDING REMARKS

Early cognitive stimulation, quality of the home and parental involvement in the education of the child are positively related to the child's academic achievement. It is of utmost importance for parents to be responsive to their newly born baby, to create a stimulating and safe environment for experimentation and exploration. Parents should not only encourage their school-going children to study, but they should become actively involved in assisting them with their school work.

Finally, the researcher wants to capture the essence of this study in the words of Bloom (1981:80) "if a house does not and cannot provide the basic developments, the child is likely to be handicapped in much of his later learning and the prognosis for his educational development is very poor."
BIBLIOGRAPHY


APPENDIX

SECTION A: PARENTS

1 BIOGRAPHICAL DATA

2 PRE- AND POSTNATAL FACTORS

3 LANGUAGE DEVELOPMENT

4 EARLY STIMULATION AND COGNITIVE DEVELOPMENT

5 EDUCATIONAL MATERIAL AVAILABLE AT HOME

6 PARENTING STYLE OF INTERACTION

7 PARENTAL INVOLVEMENT IN THE CHILD'S School work

8 HOME ATMOSPHERE AND ACADEMIC PERFORMANCE

SECTION B: THE CHILD

1 PARENTING STYLE OF INTERACTION

2 HOME ATMOSPHERE

3 MATERIAL AVAILABLE AT HOME
1 BIOGRAPHICAL DATA

A PERSONAL PARTICULARS OF THE CHILD

NAME: .......................................................... · · · · · ·
DATE OF BIRTH: ................................................
AGE: ..........................................................
SCHOOL: .....................................................
STANDARD: ..................................................
NO. OF FAILURES: ...........................................

B PERSONAL PARTICULARS OF PARENTS

<table>
<thead>
<tr>
<th>FATHER</th>
<th>MOTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE:(NO): ..................................................</td>
<td></td>
</tr>
<tr>
<td>AGE ON LEAVING SCHOOL: ..................................</td>
<td></td>
</tr>
<tr>
<td>OCCUPATION: ................................................</td>
<td></td>
</tr>
<tr>
<td>HIGHER EDUCATION: ........................................</td>
<td></td>
</tr>
<tr>
<td>MARITAL STATUS: ..........................................</td>
<td></td>
</tr>
<tr>
<td>NUMBER OF CHILDREN IN THE FAMILY: .....................</td>
<td></td>
</tr>
<tr>
<td>POSITION OF THE CHILD IN THE FAMILY: ..................</td>
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</table>

2 PRE- AND POSTNATAL FACTORS

Age of the mother when this child was born ? ..........................................

Is there a special diet that the mother followed when she was pregnant? Specify

.................................................................
PREGNANCY
NORMAL / SERIOUS ILLNESS / USE OF DRUGS OR ALCOHOL / ANXIETY /
INCOMPATIBLE BLOOD GROUPS / ANAEMIA / HIGH BLOOD PRESSURE.

IF OTHER PROBLEMS EXPERIENCED, WHAT TYPE OF PROBLEMS:

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MATERNAL EMOTIONAL STATE:

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............................................................

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BIRTH: PREMATURE / OVERDUE / VERY LONG / VERY SHORT / BLUE BABY /

OTHER COMPLICATIONS:

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............................................................

............................................................

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............................................................

............................................................

............................................................

WAS THE CHILD WELCOME? ......................................

ANY HEAD INJURIES: ......................................

INCIDENTS OR TRAUMATIC EXPERIENCE
4  LANGUAGE DEVELOPMENT

Who looked after the child? ..............................................

How did the child vocalise during infancy? ..........................

How did you respond to his vocalisation? ..............................

When did you start talking to your child? ............................

How frequent do you talk to your child? ..............................

What means do you prefer for teaching your child a new skill, demonstration or verbal, explain? .........................

How do you encourage the child's verbal ability? ..........................

How do you correct the child's verbal mistakes? ..........................

Do you allow your child to participate in a discussion? Explain. ..........................
5 EARLY STIMULATION AND COGNITIVE DEVELOPMENT OF THE CHILD

Who was the child’s caregiver? If different from no 4 above? .................................

Was he allowed to explore and experiment? Explain. .................................

Who played with the child? .................................

Does the child have toys? What kind of toys? .................................

Do you allow your child to think differently from you? Explain? .................................

6 EDUCATIONAL MATERIAL AVAILABLE AT HOME

Describe the house you are living in. How many rooms are there? .................................

Any members of the extended family living in the same house? .................................

Are there any books at home? .................................

If yes, what kinds of books do you have at home? .................................
Do you read to your child and how frequent?

Do you listen to your child reading?

Do you initiate talks with your child about the books he/she is reading?

Are you a member of the library?

Do you read newspapers?

Does your child have a quiet place to study?

Does your child have a timetable to follow for her studies? Explain?

Do you ever undertake trips with your child? What kinds of trips?

Activities done at home with the child.
7  PARENTING STYLE OF INTERACTION

Do you set guidelines for your child to follow? How do you do that?  ..........  

Is the child involved in the family discussions? If yes, explain? If no, explain.  ..

How do you feel when the child differ from the family's opinion?  ..............

What is the value of education to you as a parent?  ..............................

What are your expectations towards your child's education?  ....................

What career do you wish your child to follow and why?  .........................
Who helps the child with homework? How does he/she go about helping the child?

Can you mention the subjects that the child is doing?

Can you mention some of the topics that the child is doing in any subjects?

Do you ever visit the child's school? When? Why?

Is there a particular part that you play at your child's school? If yes explain?

Do you know your child's class teacher?
How is the relationship between the child's parents or between single parent and extended members of the family? .................................................................

How is the relationship between you and your child? ..............................

How is the relationship with extended members of the family living in the same house if any?

Relationship of the child with other children in the home? ...........................
SECTION B

1 PARENTING STYLE OF INTERACTION

Do your parents involve you in the family's discussions? If yes explain how? 

If you differed from the family's opinion how do your parents react? 

Do you have a daily routine that you do at home? 

How do you go about doing it? 

Who supervise you in your daily routine at home? 

Do you watch television? 

What programs do you watch? 

How long do you watch television? 

Do you do school work at home? If yes how do you go about doing it?
Who helps you with homework? .................................................................

How do your parents react when you are not doing well at school? ..............

How do you feel about your parent's expectations with regard to your academic
performance? .........................................................................................

Are there any activities that you do together with your parents? ....................

2 HOME ATMOSPHERE

How is the relationship between your father and your mother? ......................

How is the relationship between you and your parents? ............................... 

How is the relationship between you and your brothers and sisters if any? .......

.................................................................
3 MATERIAL AVAILABLE AT HOME

Do you have toys to play with? If yes what kind of toys do you have? ..............

Do you play with your parents? If yes, explain? ........................................

Do you have books at home except for the prescribed schoolbooks? ..............

Do your parents read a book to you or tell you a story from the book or newspaper?

Do you have a place where you study? ..........................................................

Is that place conducive for study? Explain? .................................................