

CHAPTER TWO

LITERATURE SURVEY: DIABETES MELLITUS AND THE FOUNDATION PHASE LEARNER

2.1 INTRODUCTION

In order to identify the needs and assets of the learner with diabetes in the foundation phase it is necessary to investigate diabetes mellitus as a chronic illness. The first section of this chapter explores the definition, epidemiology, aetiology, signs associated with diabetes, management of diabetes, characteristics and complications of diabetes and the incidence of diabetes in South Africa. The characteristics of the chronically ill learner and the implications of diabetes mellitus for the learner, the family, the school and the community are investigated. In the second half of this chapter the development and learning of the foundation phase learner will be discussed in conjunction with his/her developmental assets.

When the child is studied from an ecological perspective, the interacting relationships become evident. In relationship with his/her ecology the foundation phase learner with type I diabetes, which is regarded as a major and serious form of the disease of diabetes, has an impact on friends, family, the school and teachers, which together form a community. Socio-economic, cultural and language barriers as well as illiteracy influence the community. To understand the needs and assets of the learner with diabetes in the foundation phase it is important to note that children's state of health involves more than merely the physical aspects. It concerns the whole person as a physical, affective, social and spiritual being in his/her totality (Kapp, 1991:157). Every living person has some gifts or capacities of value to others. In a strong ecology, these gifts are recognised but in a weak ecology the friends, family, teachers and the school cannot give their gifts and express their capacity (Kretzmann & McKnight, 1993:27).

Kapp (1991:157) emphasises that every person strives to avoid illness and to enjoy good health. In terms of the constitution of the World Health Organisation, "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, and political belief, economic or social condition" (WHO, 1946:1).

The goals of a public school education for early childhood education include emotional development; intellectual and perceptual development; communication, literacy and language development; the development of numeracy and mathematical concepts; the development of cultural, artistic and arts and crafts skills; the development of an understanding of technology and technological processes; the development of an understanding of economic principles, spiritual, moral and ethical development; the development of human and social awareness and physical development (RSA,1996:23). However, chronic illness may compromise each goal. Disease processes, absenteeism and diminished expectations for academic performance all take their toll (Thies, 1999:396).

2.2 DIABETES MELLITUS

2.2.1 What is diabetes mellitus?

2.2.1.1 Definition

Type I diabetes mellitus is defined below for the purpose of this study.

According to Sandberg and Barrick (1995:163) “type I diabetes is a chronic disease in which the body does not produce adequate insulin, a hormone synthesized by the pancreas. Insulin is released into the bloodstream when glucose (sugar) increases as it does after a meal. By binding to receptors on body cells, insulin allows glucose from ingested food to move from the bloodstream into the cells where it is broken down for energy. When inadequate quantities of insulin are produced, body cells can not utilize glucose for energy production” (Sandberg & Barrick, 1995:163).

2.2.1.2 Epidemiology of diabetes mellitus

Diabetes occurs worldwide and the incidence of both type I and type II diabetes is rising. It is estimated that 150 million people worldwide had diabetes by 2000, and this is expected to double by 2010. This global pandemic principally involves type II diabetes, and is associated with factors including increased longevity, obesity, unsatisfactory diet, a sedentary lifestyle and increasing urbanisation. The prevalence of both types of diabetes varies considerably around the world and is related to differences in genetic and environmental factors. A rise in prevalence occurs in migrant populations going to industrialised countries, e.g. Asian and Afro-Caribbean immigrants to the United Kingdom. The prevalence of known diabetes in Britain is around 2-3%. In Europe and North America the ratio of type II: type I is approximately 7:3. In Northern Europe the prevalence of type I diabetes in children has doubled in the last twenty years with a particular increase in children younger than five years old. The onset of type II diabetes is also occurring at an earlier age in many populations and in some ethnic groups, such as Hispanic and Afro-Americans, is now being observed in children and adolescents (Frier & Fisher, 2002:644).

Type I diabetes is most often diagnosed in children aged from 5 – 6 years and 11-13 years, although the individual may first become symptomatic at any time from infancy to early childhood. The prevalence of type I diabetes varies from 0,6 to 2,5 cases per 1000 children and the incidence of newly diagnosed cases has been shown to vary by age (increasing with age from childhood to adolescence), race (higher among Caucasians than any other racial groups) and season (higher in winter than in summer). The illness affects both sexes with equal frequency (Sandberg & Barrick, 1995:163).

2.2.1.3 Aetiology of diabetes mellitus

Frier and Fisher (2002:653) state that although the precise aetiology of both main types of diabetes is uncertain, environmental factors interact with a genetic susceptibility to determine which people with the genetic disposition will develop the clinical syndrome and at what time the diabetes will commence. Factors associated with type I diabetes include genetics, environmental factors, viruses, diet, stress, immunological factors and pancreatic pathology (Frier & Fisher, 2002:653).

2.2.1.4 Signs associated with diabetes mellitus

According to Frier and Fisher (2002:643) the following signs and symptoms are associated with diabetes mellitus:

- “Weight loss (insulin deficiency)
- Obesity – may be abdominal (insulin resistance)
- White spots on shoes (glucosuria)
- Dry mouth and tongue
- Deep sighing respiration (Kussmaul breathing)
- Skin infections – boils, candidiasis” (Frier & Fisher, 2002:643).

2.2.1.5 Characteristics of diabetes mellitus

Votey (2001:2) states that type I diabetes is characterised by the inability of the pancreas to secrete insulin because of the autoimmune destruction of the beta cells. The distinguishing characteristics of a patient with type I diabetes are that if insulin is withdrawn, ketosis and eventually ketoacidosis will occur. These patients therefore depend on exogenous insulin for their survival.

Often called juvenile-onset diabetes, type I diabetes is typically diagnosed in childhood, adolescence or early adulthood. Type I diabetes also develops in older adults. Its incidence peaks in adolescence (Votey, 2001:3).

Diabetes mellitus in children is a multifactor genetic illness, caused by the interaction between various genes and environmental factors such as infection, stress and certain types of food. Diabetes mellitus is a disturbance of metabolic function, in particular involving fats and carbohydrates, as a result of a deficiency of effective insulin secreted by the pancreas. This illness affects almost every system in the body. Diabetes mellitus in children is a lifelong illness and these children require continuous attention, twenty-four hours a day, seven days a week. However, the development of assets during the child’s growth and development makes this an illness with which anyone can live, especially if it is controlled (Kapp, 1991:164).

2.2.1.6 Treatment of diabetes mellitus

Three methods of treatment are available for diabetes patients: diet alone, oral hypoglycaemic drugs and insulin. Approximately 50% of new cases of diabetes can be controlled adequately by diet alone, 20-30% will need an oral hypoglycaemic drug, and 20-30% will require insulin (Frier & Fisher, 2002:656).

The goal of treatment for type I diabetes involves injections of insulin once or twice a day. The treatment is intended to keep blood glucose levels as close to normal as possible. Meal planning involves both choice and timing of snacks and meals, to match the times and doses of insulin injections. Exercise is considered beneficial because it facilitates the utilisation of insulin by the body and reduces blood glucose levels. However exercise may result in hypoglycaemia (low blood sugar) if the diabetic person has consumed insufficient calories prior to exertion. Illness and stress (including psychological stress) may impair insulin action, leading to hyperglycaemia (high blood glucose). Because of the complex interaction between these variables, it is unrealistic to expect that blood glucose will

remain constantly stable, particularly in young diabetic children (Sandberg & Barrick, 1995:163).

Two basic types of diet are used in the treatment of diabetes: low-energy, weight-reducing diets and weight maintenance diets (Frier & Fisher, 2002:657).

2.2.1.7 Complications of diabetes mellitus

Silink (1995:311) states that it is generally accepted that the complications of diabetes are largely the consequence of poor metabolic control in patients (including children) with type I diabetes.

Table 2.1 illustrates several indicators of poor diabetic control, that Silink (1995:312) identifies as associated with diabetes complications.

TABLE 2.1: Indicators of poor diabetic control (Silink, 1995:312).

1	Polyuria and polydypsia
2	Enuresis
3	Blurred vision
4	Skin infections
5	Weight loss
6	Poor growth
7	Pubertal delay
8	Deteriorating school performance and school absenteeism
9	Signs of diabetes complications
10	Blood lipid abnormalities
11	Elevated glycosylated haemoglobin
12	Elevated fructosamine

Pal (2002:36) lists the complications of diabetes mellitus as blindness due to retinopathy, the development of cardiovascular disease, renal disorders, delayed healing of wounds, infected skin wounds and severe circulatory disorders. Diabetes can also cause anaemia, which may be a warning sign of serious kidney disease.

2.2.1.8 Diabetes in South Africa

It is estimated that there currently over 2 million persons diagnosed with diabetes in South Africa, and that the current rate of growth of this disorder is about 11% per annum – i.e about 220 000 new cases every year. This means that South Africa currently has an estimated average of more than one new case of diabetes diagnosed every 3 minutes. More than 25 new cases of diabetes are diagnosed every hour and more than 603 new cases of diabetes every day. To make matters worse, informal estimates suggest that there are currently a further 1 million persons with diabetes in South Africa, who have not yet been diagnosed (Diabetes South Africa, Pretoria Branch, 2003).

2.2.2 Diabetes as a chronic illness

Corna (1992:1) notes that an acute illness typically involves an emergency reaction in which normal routines are suspended and all energies and resources are mobilised to cope with the trauma for a defined period of time. The potential for stress is high, but the duration of the episode is relatively short. By contrast, a chronic illness may involve an adjustment of broad aspects of life-style over an extended, even indefinite period. This quest for adjustment is not restricted to the individual but also affects friends, family, the school, teachers and the community as a unit.

Rosenthal-Malek and Greenspan (1999:38) point out that diabetes is an autoimmune illness, similar to rheumatoid arthritis or multiple sclerosis. Autoimmunity is a problem where the body's white blood cells, which normally fight infection, turn on a part of the body. In diabetes, the white blood cells target the cells that produce insulin. After a certain amount of time, there is a lack of insulin and one of the two main forms of diabetes, eventually develops, either non-insulin-dependent diabetes, the more common form, or insulin-dependent diabetes, the more serious form.

In diabetes mellitus the lack of insulin leads to the inability of the body to use the glucose, and consequently to increased glucose levels in the blood. The kidneys are unable to cope with the excessive glucose and it becomes excreted in the urine. When an excess of glucose is excreted in the urine, the body loses large quantities of water and dehydration occurs as a result of the large volume of urine excreted. A lack of effective insulin causes symptoms of a serious condition called ketoacidosis, which may lead to diabetic coma. It is important for teachers to know the following typical symptoms in learners with type I diabetes, particularly those in the foundation phase:

- Children with type I diabetes have an excessive output of urine, generally pale in colour
- Excessive urination leads to severe thirst and dehydration
- The increased loss of fluids may alter the pressure in the eyeball, leading to disturbances in vision
- These children lose weight because the food they eat does not nourish them properly, so their bodies react in a way similar to starvation by metabolising their fat cells
- The child shows signs of drowsiness, fatigue and general weakness
- The urine contains sugar as well as acetone leading to a sweetish smell of apples or acetone.

Knowledge and understanding of diabetes mellitus is important, because it may initially take several weeks for the symptoms to develop to the stage where coma occurs. However, when a child is being treated and does not get insulin regularly or gets too little or the treatment ceases, the same symptoms will present themselves within a day or two (Kapp, 1991:164).

Schools and teachers should also note that children who are chronically ill are also at high risk of having developmental and learning problems because they do not feel well, cannot pay proper attention, are often absent, etc. (Kapp 1991:29). Among children diagnosed with insulin-dependent diabetes before the age of five years, chronic mild fluctuations in blood glucose levels, or severe episodes of hyper- or hypoglycaemia, can impair the development of their visual scanning and spatial abilities. This process suggests that critical periods may occur during development when the brain is sensitive to fluctuations in blood glucose and the associated alterations in acid-based balance. Children may have difficulty with reading and performing planning tasks. Episodes of acute hypoglycemia can

cause temporary confusion in all age groups. Chronic hyperglycemia will eventually damage the retina of the eyes (Thies, 1999:395).

Kapp (1991:179) states that chronic illness affects the moral development of the child in the sense that he/she may develop an unfounded feeling of guilt. Children with chronic illnesses often feel that they are perhaps to blame for getting the illness. They may also feel guilty about the expense and inconvenience that their illness causes. They can sense a silent reproach from their parents. For the child in relationship with his/her ecology it is necessary to note that this feeling of guilt about the illness may remain with the child and even reappear later during adulthood. Some adults consider illness as a punishment for their sins or question why they are being punished in this way by an illness.

Learners with a chronic illness such as diabetes should be encouraged to lead as normal a life as possible, both at home and at school. Unnecessary restrictions of activities may reduce the learner's enjoyment of life and interfere with friendships and social activities. A normal life for a child with a chronic health problem means more than merely controlling the illness and minimising hospital visits. It includes developing realistic expectations, keeping up with schoolwork, forming friendships and participating in the same activities as other children of his/her age whenever possible (Kapp, 1991:179).

2.2.3 Characteristics of the chronically ill child

Moos and Tsu (cited in Edwards & Davis, 1997) identify a number of tasks facing the child with a physical illness:

- Coping with pain and incapacitation
- Dealing with the hospital environment and developing relationships with the hospital staff
- Keeping an emotional balance by managing feelings of anxiety, resentment and isolation
- Maintaining a positive self-image
- Preserving relationships with family and friends
- Preparing for an uncertain future (Edwards & Davis, 1997:18).

A child's confidence, positive self-esteem and self-reliance are strong protective factors, as are the child's cognitive abilities, both in terms of understanding the illness and the range of coping strategies available to him/her. The child's age is important, in terms of not only the experiences and possible coping resources available but also how the child may be affected. Younger children seem to be more severely affected in their scholastic achievement, whereas older children seem to be more severely affected in their social adjustment (Edwards & Davis, 1997:19).

Outwardly, the diabetic learner is no different from any other learner and fits in well at school. Yet the focus should not be on the learner and not include the illness. The illness is part of the learner and the diabetic cannot lay down this burden, however much he or she longs to, nor can the teacher ignore the illness (Van den Aardweg, 1973:7). The continual striving to keep a balance between hyperglycaemia and hypoglycaemia is in itself enough for us to assert that the diabetes mellitus learner is an exceptional learner. The following factors compel us to recognise the learner with type I diabetes as an exceptional learner in our schools:

- The diabetic learner is chronically ill. Diabetes is one of the severest of the endocrine disorders

- The adolescent who is a diabetic is the most difficult diabetic to control.
- Stress and tension cause swings in blood glucose levels, which affect the learner adversely
- The diabetic learner goes to school each day carrying an emotional burden of perpetual daily injections, the discipline of adhering to a diet, a regular routine of testing blood or urine, injections, eating at regular and frequent intervals, taking exercise and the various emotional stresses and other factors which are unforeseeable (van den Aardweg, 1973:5).

As the learner with diabetes is chronically ill, he/she is often absent from school and hospitalised from time to time. Kapp (1991:177) argues that changes take place in a person during illness. These changes affect not only the child, but also everyone with whom the child has a relationship. When a person is ill, being with others may have a positive influence on relationships. A feature of the illness is the isolation it entails. Life continues at home and at school but the diabetic child is no longer a participant. The sick child may endure many long, empty hours. During a long sickbed the child's friends may possibly visit him/her only once, if at all. They find the situation unfamiliar and consequently the visit may be an unsatisfactory experience. Regression occurs at a social level during an illness, which leads to fixation on the child. The child withdraws, becomes introverted and his/her interest in the outer world diminishes. In a healthy child, his/her body is the point of departure for self-involvement. By contrast, in a sick child his/her body is the point of departure point for retreat and withdrawal. The sick child may have less control over his/her body than previously, leading to doubt about his/her abilities and shyness. As the child is less productive, he/she receives less recognition. This may lead to a feeling of inferiority in the group and cause a loss of self-worth (Kapp, 1991:177).

Kapp (1991: 177-178) mentions the following about chronically ill children:

- More egocentric
- Everything revolves around them to the extent that they reach out differently to other people
- Their relationship with friends, family, teachers and the school changes because they have changed
- They become more dependent on others
- Taking medicine illustrates one of the most obvious forms of dependence and the illness increases the gulf between these children and other people
- Their illness makes them spectators instead of participants
- Young children who are ill lag behind in learning the skills required for playing with other children
- They are consequently cast out from the group when they eventually recover
- Chronically ill children often have to make new social contacts because they have lost their status in the group, owing to their illness
- Chronically ill children reach the unpleasant realisation that they are expendable in the group
- The world of chronically ill children is a world in which they can lose their relationships
- These children may feel that they have been left out. This may lead to distrust, which in turn makes it difficult to build relationships with other children
- The social relations of chronically ill children may change. The relationship they establish with their peers may be more superficial
- They may use defence mechanisms such as clowning or defiance (Kapp, 1991:177-178).

2.3 IMPLICATIONS OF DIABETES MELLITUS

2.3.1 The learner

Diabetes mellitus has several implications for the learner. The diet of the learner with diabetes has to be strictly controlled. The amount and type of food eaten by diabetics is important, for example food with a high sugar content should be avoided, and it is preferable to eat almost the same amount at the same times each day (Corna, 1992:60). Snacks may often be needed, sometimes during school hours. Urine or blood tests are required 2 to 3 times daily to monitor blood sugar levels. Insulin injections are administered once or twice a day, depending on the child's age and how long he/she has had diabetes. In young children, the parents have to take responsibility for administering the insulin. The child will eventually have to take responsibility for controlling the illness. Deciding how much insulin to give a child depends on factors such as exercise and nervous tension, since diet and insulin dosage are adjusted to different levels of physical activity. However it is not always possible to predict the physical activity for the day (Corna, 1992:61). The management of type I diabetes places considerable responsibility on diabetics and their families, and requires major changes in life-style and frequent daily attention to the illness (Corna, 1992:62).

Corna (1992:63) points out that diabetic children have to gain special knowledge about medicine and nutrition, learn to test urine, to inject insulin, to regulate their diet and to adjust their physical activity. They have to follow special routines, and need to accept that they are different from their friends and classmates. The diabetic child faces far more conflicts and pressures than children who do not have diabetes or other chronic illnesses.

Learners with diabetes will sometimes feel overwhelmed by the task of managing their illness. They may think that diabetes is taking over their lives, that they are alone, and that no one else understands what they are going through. At such times, many children feel ambivalent about improved self-management. On the one hand, it may seem that this is too much of a struggle for their efforts to be worthwhile; while on the other they may at the same time feel guilty and fearful about the results of their poor self-control. This feeling of hopelessness, the sense that there is no solution, no way to alleviate what seems to be an unbearable situation, invariably leads to even less control of their condition. At these times they have the greatest need for care and close attention from their friends, family, school and teachers (Plotnick & Henderson, 1998:17).

When a child is ill, his/her environment changes. It no longer has an inviting appeal to participate. As illness makes it difficult for sick children to learn about things in the world and to relate to them, there is a negative effect on cognitive development. These children withdraw and demonstrate a general disinterest and unhappiness. Chronically ill children show poor motivation, which adversely influences their willingness to learn. Their sick bodies play a restrictive role in these children's relationship with their ecology. The stress caused by the illness causes regressive behaviour. Newly acquired skills are easily "lost" and this causes anxiety. This regression, which results in attenuated cognitive activity, are often more threatening than the illness itself. Chronically ill children are often absent from school. The class continues the schoolwork while the sick child is absent. Shortcomings and gaps develop in the child's education. It should be noted that it is difficult for these children to understand new work because they have not caught up with previous work (Kapp, 1991:180).

Rosenthal-Malek and Greenspan (1990:40) identify ways in which learners with diabetes are affected in the classroom:

- Lunch and snacks have to be eaten at specific times which may not always coincide with the schedules and routines of the classroom or the school
- Moreover, they may have to test their blood sugar after break or after exercise, because exercise reduces the blood sugar levels
- Diabetes affects learners in other ways that are not as obvious. For example although diabetes does not affect learners' performance in the long run, it may affect learning on specific days
- Although diabetics do not have a higher incidence of learning problems than learners without diabetes, what does happen is that when diabetics have low blood sugar they may think about how hungry they are, or that they are dizzy or shaky
- In addition they may occasionally have problems with reading or writing clearly because of blurred vision. This is a temporary condition caused by either high or low blood sugar levels
- Diabetes may affect behaviour at specific times. Many learners become belligerent and moody when their blood sugar is low
- Attendance may also be a problem for some learners. Because the timing of the highs and lows in blood sugar levels affects all learners differently, attendance problems vary for every learner with diabetes (Rosenthal-Malek & Greenspan, 1999:40).

When diabetic learners in the foundation phase were asked about their diabetes, there were responses such as "I worry about getting stuck somewhere without any insulin or any food. Like getting separated from my mother at the mall", or "I don't want the kids in my class to know I have diabetes, because they'd tease me and wouldn't pick me for their sports team. If they knew I have diabetes, I'll be the last kid picked". The hurt from these rejections, and perceived rejections, could remain with a child for many years. Even if it is not important to play the game, it is still important to be accepted and picked for the team. The feelings engendered by these situations, and their relation (or perceived relation) to diabetes, will become intertwined with children's feelings about their illness and its impact on their lives (Plotnick & Henderson, 1998:12).

In research carried out by van den Aardweg (1973:6) it was found that all forms of stress play an important part in reducing good control over diabetes. Such stress often manifests during tests and examinations. During an examination, the diabetic's blood glucose level tends to rise and hyperglycaemia and even hyperglycemia with ketosis may result. The learner with diabetes now shows fatigue, loss of the ability to concentrate, lack of reasoning ability and a lack of willpower. Friends, family, the school and teachers seldom realise the battle the diabetic child wages during such times of stress. In addition, diabetic children seem to be slower in performing their mental and/or manual skills, so they have difficulty with completing tests and examinations or any project within the time allotted. The psychological problems of diabetic children ought to be kept to a minimum. They need a larger helping of understanding and encouragement than average learners do. The diabetic learner in the foundation phase has difficulty with keeping to a strict routine at school. The regimen of regular, adequate meals is sometimes impossible to adhere to as it may conflict with the demands of the school. For some diabetic children, for example those in rural areas, the long time spent travelling to and from school increases the interval between main meals, which is detrimental to good control. Conduct at school may vary from good and attentive in the morning to poor and inattentive later in the day, due to a tendency to become mildly hypoglycaemic prior to a meal and especially after exercise (van den Aardweg, 1973:6).

The chronic nature of an illness such as diabetes saps the child's energy, making it difficult for the learner to participate fully in the social and academic life of the school. Falling behind academically leads to a need to catch up, and catching up takes time away from keeping up with schoolwork. Self-confidence, achievement and motivation become undetermined. Not surprisingly, children with chronic conditions feel more anxiety and depression than their peers. Their stress does not arise as much from the illness as from dealing with other friends, family, the school and teachers whose expectations of them is altered by common attitudes to illness (Thies, 1999:395).

Corna (1992:65) states that the main developmental tasks of learners with diabetes include independence and identity formation, and diabetes interferes with the accomplishment of these and other developmental tasks. However, this could be overcome by focusing on the presence of the assets and capacities available in the learner's ecology.

2.3.2 The family

Every family is a balanced system where individual people have interacting relationships. After learning that a child has a chronic illness, families tend to lose some of their equilibrium, which threatens their stability. The stress of the illness may cause severe disruptions, particularly if each parent attempts to deal with his/her own fears and frustrations alone. Mothers and fathers can become consumed by the need to care for the sick child, at the expense of nearly everything else in their lives. They may find themselves constantly investigating new options, reading about new treatments and pondering the future. By contrast, a child's chronic illness often has positive effects on families. It may bring parents and other family members closer together. Families who communicate openly may be strengthened by the experiences associated with managing their child's health. The family's management of the child may provide a sense of cohesiveness, mission, mastery and pride (Schor, 1995: 541).

According to Kapp (1991:178-179) when a child falls ill, not only does his world change but so does the world of other members of the family. The life of the ill child becomes subservient to the overpowering demands of the illness and the lives of the other members of the family also become subservient. The result is that the ill child can become a sort of tyrant around whom the family revolves. Often the mother makes better contact with the child because she has more time to devote to him and converses with him in a calm, patient manner. The father also tends to be more aware of what is going on in the home when a child is ill. The sick child enjoys everyone's attention. The other children may be neglected and consequently become jealous because the sick child has the lion's share of the parent's attention. This may upset or harm the relationship between the sick child and the other children in the family.

When a child is ill, life changes for the entire family. Schor (1995:542-543) notes that brothers and sisters often feel neglected. Some may feel guilty because they are not sick too. As part of the magical thinking of childhood, they may wonder whether an evil thought they had about siblings might have caused the sick sibling's illness. They may feel anxious about becoming sick themselves, or they may sometimes wish they were sick, too, so they could become the centre of the family's attention. They might become angry if they are asked to assume more household chores than their sibling, or feel guilty about resenting the additional responsibility.

Parents sometimes feel responsible for the illness that their child has developed. They have guilt feelings about the child's illness. They may react by being over-indulgent and over-protective. Parents may think the young child's illness is a family catastrophe and blame the child for the inconvenience and expense the illness causes (Kapp, 1991:179).

The diagnosis of diabetes may cause any number of feelings in each family member as well as in the extended family as a group. These feelings often follow a pattern similar to the grief process. The learner may deny the disease or feel deeply sad. Anger is very common, as are fear and guilt. Schoolteachers are in a position to listen and provide support (American Diabetic Association, 2001:1).

Ordinarily the family provides for the protection, nurture, socialisation and development of its members, but a chronic illness makes it more difficult to provide such physical and emotional well-being. Maintaining morale, setting goals and establishing values may be more difficult for the families of chronically ill children, as physical and emotional resources are already strained (Corna, 1992:18). During early and middle childhood, the child may have difficulty achieving independence within the family, as the parents assume the major responsibility for the child's performance of health behaviours. The feeling of being different from their friends may interfere with the development of peer relationships. The development of a positive self-esteem may also be affected (Corna, 1992:64).

The responsibility for diabetes control will gradually shift to the child, but parental supervision should be part of the process every step of the way. Responsibility should not be shifted on the basis of age alone. Cognitive ability varies widely in children. If responsibility is transferred too soon, diabetes control is likely to worsen (Plotnick & Henderson, 1998:15).

Table 2.2 shows several common feelings among parents of children with chronic illnesses, as listed by Schor (1995:540).

TABLE 2.2: Common feelings among parents of children with chronic illnesses.

Negative	Positive
Anger	Achievement
Anxiety	Closeness
Embarrassment	Joy
Frustration	Love
Grief	Mastery
Guilt	Pride
Isolation	Self-confidence
Powerlessness	Self-esteem
Sadness	Strength

Guilt is common among parents, as they often feel that they somehow caused the illness. Guilt can be an excruciating and disabling emotion, adding to the stress within the family and sometimes making it difficult for parents to support their child and each other (Schor, 1995: 540).

2.3.3 The school

At school where individuals and groups of people are interdependent on one another, most teachers will probably work at some stage with one or more of these learners with diabetes in the classroom. Frieman and Settel (1994:196) note studies indicating that teachers do not believe that they have adequate information about chronic illnesses.

Freeman and Settel (1994:200) emphasise that the illness should not define the chronically ill child. The teachers and school should expect the same standards of acceptable behaviour from the chronically ill learner as they do from any other learner. The learner should be praised when appropriate and disciplined when necessary. The teacher has to set appropriate limits for behaviour, even for learners with a serious illness. Teachers need to accommodate the chronically ill learner, but in several areas the classroom environment should be compatible with the learner's medical restrictions. For example, a diabetic child's dietary restrictions need to be considered before a teacher plans a class party or celebrates a classmate's birthday. A diabetic learner might also have to make some dietary or insulin adjustments before doing physical activity.

The American Diabetic Association (2001:1) mentions that it is necessary for teachers and schools to note the following implications of diabetes mellitus:

- Learners with diabetes have to be allowed to check their blood sugar at school
- When a child with diabetes has low blood sugar (*hypoglycemia*), he or she should be given access to emergency glucose to treat the low blood sugar
- When a learner with diabetes has high blood sugar (*hyperglycemia*), he or she should be allowed free access to water and the restroom
- Teachers should allow learners with diabetes to eat snacks when prescribed by their doctor
- This means that physical education teachers and athletic coaches should consider keeping a supply of emergency glucose on hand to treat hypoglycemia. They can provide glucose tablets, which work best and will not be confused with sweets.

If a learner with diabetes is left untreated, hypoglycaemia could lead to loss of consciousness, convulsions and coma (American Diabetic Association, 2001:1). Some of the symptoms of hypoglycaemia are behavioural, such as mood changes or temper tantrums, and parents may have difficulty deciding whether these are acting-out behaviours or symptoms of hypoglycaemia. Children may use hypoglycaemia to manipulate their parents, for example by faking early symptoms of hypoglycaemia or using it as an excuse for unacceptable behaviour. Hypoglycaemia is therefore a source of great stress for the family as well as for the child (Corna, 1992:57).

Plotnick and Henderson (1998:1) state that a wide constellation of factors in everyday life influence a learner's blood glucose levels, and these factors change frequently – not even hourly, but from minute to minute. Stress, changes in routine, travelling, sleeping late and parties – these all affect blood glucose. Different types of insulin produce different peaks and troughs in insulin levels. What is right on Monday may not be right on Tuesday. If a blood glucose level is too high, that is a problem; but if it is too low that is an even greater problem. A balance has to be constantly maintained. In addition, the consequences of wrong decisions or missed judgements may threaten the diabetic's health or life. Missing a dose of an antibiotic or a session of physical therapy usually poses little risk for a child with medical problems requiring such treatments. However, missing a day of insulin would be as dangerous for the learner with diabetes as injecting too much insulin.

Some schools and teachers may think that learners with diabetes sometimes feign the symptoms of low or high blood sugar levels to get out of the classroom, or to get let off an activity they do not like. This is highly unlikely, however, as most learners with diabetes do not want to be different, and they do not want to be treated differently from the other children (American Diabetic Association, 2001:1).

Childhood diabetes mellitus is usually insulin-dependent. It has a fairly low incidence, so there is usually only one or two such diabetics in a school. As a result, few diabetic children will have diabetic friends. Diabetic learners' reaction to their illness depends on their age: for example, pre-school children often have problems with feeding and other behaviours, whereas children aged 5-12 years are usually able to understand the problem, and to co-operate with the therapy (de Villiers, 1995: 21).

Careful observation of the diabetic learners in our schools will reveal that some of them use insulin several times a day. Their eating habits differ from those of the other schoolchildren. Diabetics have to take special care to avoid injury, unlike the other learners at school. Taking proper care of diabetes is complicated by factors such as ignorance, cultural differences, the diversity of the community, varying family involvement and socio-economic factors. Friends, family, the school, teachers and the community should be informed of the special needs of the diabetic learner. Each community ought to work with the assets present in their ecology and focus on the assets and capacities that would meet the needs of their learners with diabetes.

2.3.4 The community

A child is an individual and is part of a community which comprises groups of people living in a area that is regarded as a whole, and which has some important common interests and concerns (Donald, *et al.* 1999:9). Any child, not only the diabetic child, can develop a positive attitude within a community. Community members can be asset builders who can improve interaction so as to strengthen the relationships among families, teachers and the school. When the child in the community is empowered through the value of assets to identify his/her own needs and to improve his/her own skills, the community as a whole becomes empowered.

Various aspects of a community may affect the learner with diabetes. For the purpose of this study, the following aspects are explored below.

2.3.4.1 Socio-economic implications of diabetes mellitus

Cole and Cole (2001:436) emphasise that poverty touches all aspects of family life: the quality of housing and health care, access to education and recreational activities. Poverty influences parenting by raising the level of parental stress. Parents who are under stress are less nurturing, more likely to resort to physical punishment and less consistent when they interact with their children. Unexpected large bills, illness in the family and quarrels increase their irritability and at the same time place the rest of the family under pressure. Poverty decreases the likelihood that the family will have the means to deal with multiple stresses.

Poverty crushes peoples' spirit, makes them feel depressed and interferes with their ability to form and maintain mutually enriching relationships. Children from impoverished homes bear the particularly heavy burden of their parents' distress. Parents who live in poor

housing worry about their next meal. They feel they have little or no control over their lives, and become anxious, depressed and irritable. They discipline their children by using the least effort, such as corporal punishment and authoritarian commands, rather than explaining, reasoning and negotiating. They may ignore a child's good behaviour and pay attention only to misbehaviour. Consequently their children may have social, emotional and behavioural problems. The child's own characteristics also play a role: a child who has a difficult temperament or is unattractive has even worse problems. The mediating influence of community support is extremely important for creating networks and forming beneficial relationships (Papalia & Wendkos Olds, 1996:527).

Learners with diabetes who live in poverty-stricken rural and remote areas have poorer health than those living in more urban areas, because of the higher risk factors and difficulties in accessing health services in such rural areas. Diabetes is one of the main reasons for increased rates of death among people in rural and remote areas. People in rural and remote areas also have disadvantages in accessing adequate and appropriate health care. These disadvantages include long distances, a shortage of health professionals and inadequate training, poor economic infrastructure and ongoing logistic and communication problems (American Diabetic Association, 1999:1).

Poor socio-economic conditions may hamper the learners' development and learning to such an extent that his/her potential cannot develop fully. Such learners do not have the extent of pre-school and extramural experiences required for optimum school achievement. They are not brought up in a way which prepares them for school, and the consequence of this is usually poor school achievement (Kapp, 1991:30). Poor children often do not eat properly, grow properly or get the immunisations and medical care they need (Papalia & Wendkos Olds, 1996:318).

Poverty and poor socio-economic conditions have a major effect on the diabetic's health management. Ebersöhn and Eloff (2003:31) note that assets may be used for addressing some problems. The learner with diabetes who lives in poverty will need to develop supportive sustainable relationships and recourses to manage his/her diabetes properly.

2.3.4.2 Cultural implications of diabetes mellitus

Corna (1992:131) notes the stress levels of black parents with diabetic children, which may indicate an over-sensitivity to the illness. In the South African context these stress levels may be particularly relevant because some cultures regard diabetes as a disability and diabetics are shunned in many black communities, perhaps owing to a lack of understanding of the illness. Distrust of the medical system may lead black parents to seek unorthodox medical assistance, for example from traditional healers, resulting in poorly controlled diabetes which limits the diabetic child's normal participation in activities.

Limited opportunities for parents in the community to learn about the management of diabetes may make the task of caring for a diabetic child more difficult for black parents, and the children might fail to learn self-management of their diabetes. Failing to learn about the nature and control of the disease may lead to feelings of helplessness and insecurity about what diabetic children can or cannot do (Corna, 1992:132).

Corna (1992:133) also notes that black families with diabetic children utilise an informal support system such as members of the extended family, friends and members of the community. Black parents do not believe they are the only ones who can care for the child, but tend instead to delegate the responsibility for care to others in the community, such as

siblings, extended family or friends. Corna (1992:137) notes in his study the difference between these black parents and white parents. The white parents find there is a lack of support from the community, possibly indicating self-contained family units, whereas black communities in South Africa rely on family, friends and the community for support.

Cultural factors may influence the way in which a family perceives the meaning of illness and its treatment. In some cultures people think that illness is a punishment. They may believe that God is punishing them and that they must have done something bad to deserve this illness. Some stricter religious beliefs may reinforce this perspective. Another attitude that may be culturally related is a fatalistic approach; a sense that there is nothing that can be done to change the outcome of the disease. Naturally, such an attitude to the management of diabetes could not be further from the truth (Plotnick & Henderson, 1998: 10).

Many cultures regard illness as a form of punishment inflicted upon someone who has either transgressed himself, who did something wrong in a previous life, or who is paying for an ancestor's sin. People who believe in such causes tend to distance themselves from and are often unsympathetic towards the afflicted person. In some religious households, parents hope and pray for a miracle. This may improve the child's quality of life temporarily but may also discourage certain treatments (Papalia & Wendkos Olds, 1996:477).

Children from culturally different environments, such as immigrant children, are most at risk. They have problems with language and socialising, and have poor self-concepts. There also tends to be a lack of support from friends, family and the community (Kapp, 1991:30).

2.3.4.3 Illiteracy and diabetes mellitus

Plotnick and Henderson (1998: 10) point out that parents with poor learning skills and ability may take years to master the tasks of caring for their children with diabetes, and may never master these tasks fully. In cases where the parents of a learner with diabetes are illiterate, the regimen of care should be simplified as much as possible. For example, the learner's mother could be shown how to use pre-mixed NPH and regular insulin, the clinician could put a piece of tape on the syringe at the dose mark to which the insulin should be drawn, and identify morning doses with a picture of the sun and evening doses with a picture of the stars. However, such a child's diabetes would never be under as strict a control as would that of someone on a multiple-shot regimen, who is able to make the many decisions that are required every day to maintain such a regimen.

2.3.4.4 Language barriers and diabetes mellitus

Language can be a barrier to parents of a learner with diabetes from non-English speaking backgrounds in accessing the range of diabetes services available, appropriate education and information for effective self-management, and ongoing community support. A significantly higher proportion of adults in some ethnic groups reported two major risk factors for diabetes, namely physical inactivity and obesity. The prevention and care of the learner with diabetes among people from backgrounds where English is not spoken, could be improved through regional co-ordination and the dissemination of information in community languages. The strategy also recommended is that education courses should include training in cultural sensitivity (American Diabetic Association, 1999:1).

2.4 DEVELOPMENT AND LEARNING OF THE LEARNER IN THE FOUNDATION PHASE

Child development and growth have been viewed over the years from different social and cultural perspectives. The child in his/her reciprocal relationship with his/her ecology is part of a community where friends, family and community members play an important role in each developmental phase.

In many communities adults begin to have new expectations when their children approach middle childhood. Cole and Cole (2001:468) note the example of the Ngoni of Malawi in central Africa, where adults believe that the loss of milk teeth and the acquisition of secondary dentition (which begins around the age of six years) signals that children are ready for a different kind of life. When this physical change occurs, Ngoni adults expect these children to begin to act more independently. Children of both sexes are held accountable for being discourteous. They are expected to stop playing childish games and to start learning the skills that will be essential when they grow up. The boys leave the protected control of women and move into dormitories, where they have to adapt to a system of male dominance and male life. In the late Middle Ages, at the beginning of modern times, and for a long time after that in the lower classes, children mixed with adults as soon as they were considered capable of doing without their mothers or nannies, not long after a delayed weaning (in other words, at about the age of seven years). These children immediately went straight into the great community of adults, sharing the work and play of their companions, old and young alike. Society in modern times expects children around the age of six or seven years to begin learning reading, writing and arithmetic at school to prepare them for productive adult life.

Identify the needs and assets of the learner with type I diabetes in the foundation phase requires knowledge and understanding of the development and learning of this learner. There is an integrated relationship where communities, schools, teachers, friends and family interact with one another, with development processes in the lives and experiences of individual learners and in the life of every teacher.

2.4.1 Physical and motor development and learning

Any foundation phase classroom has learners of all shapes and sizes: tall ones, short ones, fat ones and slender ones. They have a markedly different appearance from children who are a few years younger (Papalia & Wendkos Olds, 1996:431).

According to du Toit and Kruger (1991:104) changes in the foundation phase take place mainly in the proportions of the body, in contrast with the major changes in height and mass that occur during the pre-school years. Therefore learners in this phase grow more slowly than in both the pre-school and adolescent phases.

Table 2.3 shows the description by du Toit and Kruger (1991:105) of the physical changes taking place in the learner in the foundation phase.

TABLE 2.3: Physical changes in the learner in the foundation phase (du Toit & Kruger, 1991:105)

HEIGHT AND MASS	The primary school child's height and mass increase more slowly and more evenly than in the pre-school years
PROPORTIONS OF THE BODY	The child's body begins to take on a more adult-like appearance. Although the head is still large in proportion to the rest of the body, the disproportion between the various facial features disappears. The mouth and chin enlarge, the forehead becomes broader and flatter, the lips thinner, and the neck longer. The child's chest and abdomen gradually become flatter and his/her legs and arms grow rapidly in length.
BUILD	The child's mass depends to some extent on his/her particular build, which may vary from being extremely ectomorphic (thin), or mesomorphic (muscular or average build) to extremely endomorphic (fat). The child's build often determines how others respond to him/her, as well as the way he/she perceives himself/herself. The endomorphic child, for instance, is usually less popular and often manifests negative feelings about his/her body. Ectomorphic (fat) and mesomorphic children (average build) are more readily accepted by the group. They generally have positive feelings about their bodies.
GENDER DIFFERENCES IN HEIGHT AND MASS	In the foundation phase, boys are usually a little taller and heavier than girls.
SENSES	Visual maturity is usually reached between the sixth and eighth year. Peripheral vision is fully developed and the primary school child is able to discriminate between very minor differences in colour.

The following physical changes occur during the primary school years:

- The brain reaches adult size and mass
- Breathing becomes slower and deeper
- Blood pressure rises, but heartbeat decelerates (du Toit & Kruger, 1991:106).

Papalia and Wendkos Olds (1996:438) noticed that when a group of learners in middle childhood went home after school, some of them would run or skip and others would leap onto narrow ledges and balance until they jumped off, trying to break distance records but occasionally breaking a bone instead. Some of these youngsters would go home, eat

something and dash outside again. They would skip with skipping ropes, play ball, skate or cycle. They kept getting stronger, faster and better co-ordinated. They derived great pleasure from testing their bodies and learning new skills. However, these authors also noted that many children went inside their homes after school and did not emerge for the rest of the day. Instead of practising new skills that stretched and strengthened their bodies they would stay indoors, often in front of the television or computer.

The school beginner's motor skills are sufficiently developed for performing certain fine hand and finger movements. For instance, these children can already trace figures, paint and draw and they also quickly learn to write. The gross motor movements are better developed, however, and at this stage these learners' increased strength, co-ordination and muscular control enable them to use their bodies confidently. The balance, elegance and suppleness of their physical actions improve considerably, and for this reason they thoroughly enjoy climbing, jumping and ball games. Children are tremendously active physically during this period. Their improved motor ability and concomitant greater self-confidence are beneficial to various facets of their personality development. Specific motor abilities may increase their popularity (social) and enhance their self-esteem (affective growth) (du Toit & Kruger, 1991:106).

Green (2001:87) states that "the physical self-concept arises out of perceptions of one's own body in terms of how it looks and what it can do, and is the early basis for gender identity. It is strongly influenced by feedback from others with regard to one's physical appearance and competence". However, physical development is at risk in poor communities. Learners whose physical development has been impeded by poor health are likely to have missed out on opportunities for cognitive, language and social development and will require extra input (Green, 2001:91).

Green identifies several strategies for promoting learning and physical development, namely that the school and teachers should be aware that –

- some learners need to be part of a school-feeding scheme;
- tiredness can cause irritability and restlessness;
- learners are not equally developed in their motor skills;
- a range of activities can develop perceptual and motor skills;
- learners need physical activity;
- some learners are not developmentally mature;
- the school and teachers have a responsibility to teach learners about health-related issues (Green, 2001:93).

2.4.2 Cognitive development and learning

Thomas (1991:147) notes that “Piaget believed as children grow older they gain more experience with direct physical knowing, while at the same time their nervous systems are maturing. They are gradually freed from having to carry out direct physical behaviour in order to know something. They come to produce mental images and symbols (words, mathematical figures) that represent objects and relationships. The older child’s knowledge increasingly becomes mental activity. Older children think about things by carrying out interiorised actions on symbolic objects” (Thomas, 1991:148).

In Piaget’s system this process of development for generating a growing complex of schemes, is governed by four factors: heredity (internal maturation), physical experience with the world of objects (spontaneous or psychological development), social transmission (education or instruction) and equilibrium. The first of these factors has to precede the second (Thomas, 1991:148-149).

Piaget identifies different stages for different aspects of growth and development: the sensory-motor period (birth to age 2), pre-operational-thought period (about age 2 to age 7), concrete-operational period (about age 7 to age 11) and the formal-operations period (about age 11 to age 15). For the purpose of this study, which is to identify the needs and assets of the learner with diabetes in the foundation phase, the concrete-operational period (about age 7 to age 11) will be examined (Thomas, 1991:151).

In the concrete-operational period the learner between 7 and 11 years old becomes capable of performing true operations, ones directly related to objects. Concrete does not mean that the learner has to see or touch the actual object as he or she works through a problem, but rather that the problem involves identifiable objects that are either directly perceived or imagined. It is during these years that a learner’s understanding of conservation matures (Thomas, 1991:151).

Conservation refers to those aspects or events that remain constant when other changes are produced in objects or situations. Distinguishing between what has been changed and what has been conserved during transformation marks a major advance in a learner’s reasoning skills during this stage. By the end of this stage, children have markedly increased their abilities to account for the causes of physical events so that they are now ready to solve not only problems that involve objects but also ones concerning hypotheses and propositions about relationships (Thomas, 1991:151).

Table 2.4 lists a number of intellectual characteristics at different age levels, as identified by Humphrey and Humphrey (1989:83).

TABLE 2.4: Intellectual characteristics at ages seven, eight and nine years
(Humphrey & Humphrey, 1989:83-85).

SEVEN-YEAR-OLD CHILDREN	EIGHT-YEAR-OLD CHILDREN	NINE-YEAR-OLD CHILDREN
<ul style="list-style-type: none"> • Abstract thinking begins • Are able to listen longer. • Can read some books by themselves • Are able to reason, but have little experience upon which to base judgements • Their attention span is still short and retention poor, but they do not object to repetition • Reaction time is still slow • Learning to evaluate the achievements of themselves and others • Concerned with own lack of skill and achievements • Becoming more realistic and less imaginative 	<ul style="list-style-type: none"> • Can tell the day or month or year • Voluntary attention span is increasing • Interested in far-off places, and ways of communication now have real meaning. • Becoming more aware of adult world and their place in it • Ready to take on almost anything • Show a capacity for self-evaluation • Like to memorise • Not always good at telling time, but keenly aware of time 	<ul style="list-style-type: none"> • Individual differences are clear and distinct • Some real interests are beginning to develop • Beginning to have a strong sense of right and wrong • Understand explanations. • Interests are closer to those of ten or eleven year olds than seven or eight year olds. • As soon as a project fails to hold interest, it may be dropped without further thought • Attention span is greatly increased • Seem to be guided best by a reason, simple and clear-cut, for a decision that needs to be made • Ready to learn from occasional failure of their judgement as long as learning takes place in situations where failure will not have serious consequences • Able to make up their own minds and come to decisions • Marked reading disabilities begin to be more evident and may tend to influence the personality. • Range of interest in reading in that many are great readers though others may have little interest in books • Will average between six and seven words per remark

Green (2001:87) states: "An academic self-concept is formed from experiences of success and failure in school and in the related feedback and responses from teachers, parents and peers."

Kitson and Merry (1997:49) assert that cognitive development always has to interact with learning demands. Not only do learning relationships change when a child goes to school, but they also becomes increasingly complex and differentiated as the child progresses through the later primary years.

During the foundation phase there is cognitive change in the transition to the more adult use of strategies. Repetition (sometimes called rehearsal or rote learning) tends to be the first strategy to emerge and by the age of ten about 85 per cent of children are able to use it, though they may not always do so without being reminded. Repetition literally imprints the material before it can disappear, and enables it eventually to become part of long-term memory, but on its own repetition is not a particularly efficient strategy. Other powerful techniques for learning are also beginning to emerge during this period. These other techniques do not simply prolong the information for a few seconds, but transform or elaborate on it, enriching it and linking it to things the learners know already. Forming visual images for words brings into play the powerful visual memory system and makes it far more likely that the items can be retrieved. If the order of words is not important, regrouping them into categories forges links between the items, so that recalling one word makes it likely that it will remind the learner of the others in that category. If the word order is important, linking the words in a different way in order to preserve the sequence, for example in a story, would similarly make it far more likely that each item will be remembered in turn. Imposing a structure or meaning seems to be the key. Without such strategies the learner would be able to remember very little (Kitson & Merry, 1997:51).

Kitson and Merry (1997:52) emphasise that simply having strategies is not enough to guarantee improvements in learning; there are at least two other cognitive skills that learners need to develop. Both of these require an ability to reflect on their own thinking and are therefore called metacognition.

- Learners should be able to recognise when a strategy is appropriate and generally be able to control their use of different strategies so that they use the best one. To do this they have to be able to compare new problems with familiar ones and to transfer or generalise from previous experience.
- Self-checking is an important general strategy and can be applied to a wide range of problems. Negative information can apparently be just as useful as positive, though younger children may not always appreciate this in their desire to get the right answer.

Children need to have a range of strategies available. They also need to develop skills for deciding which strategies are appropriate and to use feedback to monitor their success. Children may have such skills without being able to describe them to someone else, and a correlation between improved learning and the reported use of metacognitive skills could mean that either one could be the cause of the other. The growth of metacognition in child development is a major factor influencing children's success in school and also enabling them to feel increasingly involved in and responsible for their own learning (Kitson & Merry, 1997:52).

Green (2001:94) notes the following strategies for promoting learning and cognitive development:

The school and teachers should try to –

- create a classroom atmosphere in which learners feel safe to air their opinions and express their thoughts;
- find out what interests different learners and at times let them choose what they will study from a list of different opinions;
- let learners sometimes decide how they will study;
- explain why something they are doing is relevant and important; and
- show a positive attitude to mistakes.

Vygotsky (cited in Green, 2001) emphasises that what children know is already important. Teachers should note that learners already possess a great deal of everyday general knowledge, of which part is accurate, part incorrect, part relevant to school learning and part irrelevant. It is advisable for learners to connect their everyday knowledge and the new information they are taught to build generalisation skills. This would show an open attitude to knowledge and learning (Green, 2001:94-95).

2.4.3 Emotional development

Brenner and Salovey (1997:168) define emotions as “a response that guides the individual's behaviour and serves as information that helps the individual achieve goals”.

Emotions are thought to have the following three components:

- The cognitive-experiential component comprises thoughts and awareness of emotional states (i.e. one's feelings)
- The behaviour-expressive component comprises such domains as speech, body movement, facial expression, posture and gesture (i.e. the visible signs of emotions)
- The physiological-biochemical component comprises physical states, and is reflected in such measures as brain activity, heart rate, skin response and hormone levels. (Like the cognitive-experiential component, this dimension is generally not visible to others) (Brenner & Salovey 1997:183).

Understanding the developmental changes in children's capacity to regulate emotions can help friends, family, the school and teachers to assist learners when they became upset or emotionally distressed. In most of the research on learners' methods of coping with stressful experiences, coping is viewed as a process comprising two principle components: stressor and strategy. Any event that evokes distress in the child is considered a stressor. Any effort to manage distress is considered a strategy. Successful coping or emotional regulation is determined by the range of strategies available, the ability to select the strategy that best meets the demands of particular stressors, and the ability to implement these strategies (Brenner & Salovey 1997:170).

Du Toit and Kruger (1991:117) note that the emotional development of the primary school child is characterised by a greater measure of emotional flexibility and differentiation. By means of greater emotional differentiation, the child is able to express a variety of emotions which are more specific, diverse and sophisticated than those of younger children. In turn, learners in the early junior primary phase realise that their emotional life differs from that of learners in the senior primary phase. Firstly, the sort of situation leading leads to the manifestation of the emotions differs and secondly, the way in which the child

reveals his/her emotions differs. In this phase a gender difference in emotional response also develops. Gender role identification plays a major role in the way that children reveal their emotions. A boy often refrains from showing that he is afraid or sad because he fears that he will be labelled a “sissy” whereas girls are taught not to be as aggressive as boys, since aggression is not regarded as feminine (du Toit & Kruger, 1991:117).

Du Toit and Kruger (1991:119-120) list the following characteristics of the primary school child’s emotional life:

- The child shows ever-increasing understanding of the feelings of others
- The child learns to express his/her emotions according to social rules and also to control, suppress or hide these emotions
- The manifestation of his/her emotions not only meets the requirements of his/her cultural and peer group but also accords with the community’s view of how a boy or girl should behave
- The child gains deeper insight into his/her feelings and also learns to understand other children’s feelings.

Pre-school children express anger physically. School-age children have a greater ability to control their bodies and to use words. They also know what is and what is not acceptable. Anger may be shown in the forms of impertinence (not showing respect), sulkiness and using a scapegoat (blaming others for one’s own mistakes). Children in this age group also show anger by gossiping, plotting and even imagining the downfall of their enemies. Withdrawal from a situation such as giving up or doing less than one’s best may be another sign of anger. The kind of anger and aggression changes with age. Like pre-school children, school-age children become angry when what they want is denied them and when their possessions are threatened. However, in contrast to pre-school children, school-age children are also angered by what they see as wrong to others. In later years, anger at social wrongs may be turned into positive social actions (Decker, 1990:354-355).

Humphrey and Humphrey (1989:66) state: “Dealing with childhood emotions implies that sympathetic guidance should be provided in meeting anxiety, joys and sorrows and that help should be given in developing aspirations and security.” A child is emotionally healthy when his/her emotions are properly controlled and he/she is becoming emotionally mature. This depends to a certain extent upon factors such as fatigue, inferior health status, intelligence, social environment, family relationships and aspiration levels, as such factors influence emotionality in childhood.

Humphrey and Humphrey (1989:74) identify the following emotional needs of children:

- The need for a sense of security and trust
- The need for self-identity and self-respect
- The need for success, achievement and recognition
- The need for independence.

Table 2.5 lists the emotional needs reflected in the developmental characteristics of different age levels, as identified by Humphrey and Humphrey (1989:75-76).

TABLE 2.5: Emotional needs of children aged seven, eight and nine years (Humphrey & Humphrey, 1989:75-76).

SEVEN-YEAR-OLD CHILDREN	EIGHT-YEAR-OLD CHILDREN	NINE-YEAR-OLD CHILDREN
<ul style="list-style-type: none"> • Curiosity and creative desires may condition responses • May find it difficult to take criticism from adults • They want to be more independent • Reach for new experiences and try to relate themselves to enlarged world • Overanxious to reach goals set by parents and teachers • Critical of themselves and sensitive to failure • Emotional pattern of anger is more controlled • Becoming less impulsive and boisterous in action than at six 	<ul style="list-style-type: none"> • They dislike taking much criticism from adults • Can give and take criticism in their own group • May develop enemies • Do not like to be treated like children • Have a marked sense of humour • Their first impulse is to blame others • They are becoming more realistic and want to find out for themselves 	<ul style="list-style-type: none"> • May sometimes be outspoken and critical of the adults they know, although these children have a genuine fondness for the adults • Respond best to adults who treat them as individuals and approach them in an adult way • Like getting recognition for what they have done and respond well to merited praise. • Likely to be backward about public recognition, but enjoy private praise • Developing sympathy for and loyalty to others • Do not mind criticism or punishment if they think it is fair, but are indignant if they think it is unfair • Disdainful of danger to them and of their safety, which may be a result of increasing interest in activities involving challenges

Kitson and Merry (1997: 53) state that the search for meaning implies certain attitudes and emotions to solving problems, such as willingness to admit that one does not yet know the answer or that there may be a better solution than the solution one has just thought of. Successful learners are not afraid of failing, and do not feel threatened by it. On the contrary, they may relish finding apparently pointless problems to solve. They may insist that they do not want to be told the answer even when it is readily available (Kitson & Merry, 1997:53). Successful learners have an internal locus of control, and attribute success largely to their own efforts. They prefer tasks that are moderately difficult in line with the previous idea of comfortable challenge. They see themselves as good learners and have a high self-esteem (Kitson & Merry, 1997:60).

Unsuccessful learners may latch impulsively onto the first answer that seems reasonable and persist with it in the face of evidence that it is wrong. They attribute success to external factors, including pure luck, and see their learning as the teacher's responsibility, often acting in passive and helpless ways. They may develop strategies for avoiding tasks on the grounds that if they do not try they cannot fail; and they prefer tasks which are

either very easy (pretending no challenge) or impossibly difficult (so that no one can blame them for failing). They see themselves as poor learners and have a low self-esteem (Kitson & Merry, 1997:60).

2.4.4 Social development and learning

Decker (1990:347) argues that during the period when learners are in the foundation phase, these children begin to show much greater social awareness. They develop a sense of industry as they learn some of the skills needed in the adult world of work. They also deepen their social relationships with adults and peers. The proper attitude to work is learned at this time. Children with a sense of industry see work as the way to learn new ideas and skills and to achieve in worthwhile ways. These children also see work as a way to win approval from others. Parents, teachers and friends encourage them to learn skills. The skills learned in this stage help the child become ready for adult life. Each community has its skills that are important in adult life.

Once children begin to spend a significant amount of time with their friends, they have to learn to create a satisfying place for themselves in the social group. Their greater appreciation of social rules, along with their increased ability to consider other people's points of view, are essential resources for this developmental task. However, no matter how sophisticated or sensitive they are, there is no guarantee that their peers will accept them. Children still have to seek out friends, come to terms with the possibility that they may not be liked, learn to compete for social status and deal with the conflicts that inevitably arise (Cole & Cole, 2001:571).

In the pre-school years the child's social world primarily consists of the family, relatives and friends. On entering school a much wider social reality unfolds. In contrast with the egocentrism of the younger child, the foundation phase learner already shows a sensitivity to other people's feelings, attitudes and needs. He/she is also more willing to venture to establish social relationships. Although the child begins increasingly to venture outside the safe family circle, his/her parents remain his/her primary supporters. Parental encouragement, support, love and guidance are therefore crucial for unfolding the child's personality. In spite of the parents' powerful influence on the child's life, the relationship with his/her parents is characterised by a clear process of emancipation (du Toit & Kruger, 1991:121).

Du Toit and Kruger (1991:123) note that the child's egocentric individual play is replaced by group play. The circle of friends broadens accordingly and time spent together in the company of friends becomes increasingly important. The child does everything to be accepted and increasingly identifies with the group's ideas and values. Children in the junior primary phase usually form groups of four and five. This grouping of friends takes place in an unstructured and informal way. Children join a group voluntarily and leave it as soon as they become dissatisfied with interaction or play. They prefer to have a leader when playing group games.

Du Toit and Kruger (1991:123) state that the peer group performs important functions in the child's total development and describe this as follows:

- The peer group provides a bridge for the child's gradual emancipation from his/her parents
- The group offers the child the security that he/she previously felt in the safe haven of the parental home

- The peer group is a group of equals. Any child can give an opinion in the group and hold his/her own, in contrast to the subordinate role the child has in the parent-child relationship
- In the group the child can gain knowledge and insight about himself/herself and learn to evaluate himself/herself
- If the child is accepted by the peer group, a positive self-concept is formed which leads to self-acceptance
- Demands made on the child by the peer group are at his/her level of competence because he/she is in the company of equals
- The group enables the child to achieve in all the developmental domains in general, and benefits his/her personality development in particular
- The peer group fulfils his/her need for camaraderie and friendship
- The peer group gives the child the opportunity to practise social skills and to experiment with new ideas, behaviour and attitudes
- The peer group is an informal source of knowledge and helps the child to adapt to social rules and regulations (du Toit & Kruger, 1991:123).

Participation in peer groups is important to later development because it fosters the ability to communicate, to understand other people's point of view, and to get along with others (Cole & Cole, 1989:511).

As children begin to participate in peer groups, their relationship with their parents undergoes significant changes:

- Parents become more demanding, with respect to both their children's domestic duties and their achievement in school
- At this time, parental control shifts from direct to indirect methods, which include reasoning, humour, appeals to self-esteem and eliciting feelings of guilt in the child (Cole & Cole, 1989:512).

Decker (1990:352) notes that certain qualities seem to make children likeable by peer standards. These qualities change somewhat during the school years. For instance, first-graders say they like tough children but in later grades, children see nice and smart children as popular. Skills that are desirable in a culture, such as athletic ability, also affect popularity.

Table 2.6 lists the special needs identified by Humphrey and Humphrey (1989:52-53), that are reflected in the developmental traits and characteristics of growing children.

TABLE 2.6: Social characteristics of children aged seven, eight and nine years
(Humphrey & Humphrey, 1989:52-53)

SEVEN-YEAR-OLD CHILDREN	EIGHT-YEAR-OLD CHILDREN	NINE-YEAR-OLD CHILDREN
<ul style="list-style-type: none"> • Want recognition for their individual achievements • Sex differences are not of great importance • Not always good losers • Conversation often centres on family • Are learning to stand up for their own rights • Interested in friends and not influenced by their friends' social or economic status • May have nervous habits such as nail biting, tongue sucking, scratching or pulling at their ears • Attaining orientation in time • Get greater enjoyment from group play • Show greater signs of co-operative efforts 	<ul style="list-style-type: none"> • Girls are careful of their clothes, but boys are not • Leave many things uncompleted • Have special friends • Have longer periods of peaceful play • Do not like playing alone • Enjoy dramatising • Start collections • Enjoy school and dislike staying home • Like variety • Recognition of property rights is well established • Respond well to group activity • Interest will focus on friends of own sex • Beginning of the desire to become a member of the club 	<ul style="list-style-type: none"> • Want to be like others, talk like others and look like them • Girls are becoming more interested in their clothes • Are generally conformists and may be afraid of anything that is different • Able to be on their own • Able to be fairly responsible and dependable • Some loyal friendships may develop • Increasing development of qualities of leaders and followers • Increasing interest in activities involving challenges and adventure • Increasing participation in varied and organised group activities

Green (2001:87) states: "the social self-concept develops from experiences of social acceptance or rejections by peers and adults."

Vygotsky (cited in Papalia & Wendkos Olds, 1996) mentions that social interaction is a key factor in cognitive development. All higher planning and organisation functions in cognitive development appear twice: first as the result of interaction with other people, usually adults; and then after the child has internalised what the adults have taught. He extends these beliefs about the way children learn, to their performance on intelligence tests and to their growing skills in thinking, reading and writing. This influenced the metaphor of scaffolding in teaching. Scaffolding is the temporary support that friends, family, teachers and the school give a child to do a task. There is an inverse relation between the child's current ability and the amount of support needed. The more difficulty a child has with doing a task, the more direction the caregiver should provide. As the child becomes able to do more, the adult helps less. Scaffolding seems to come so naturally that teachers often do not recognise the method itself or even that they are teaching (Papalia & Wendkos Olds, 1996:466).

Social awareness is vital in children's learning between the ages of seven and eleven years. Vygotsky and Bruner were interested in the social factors and the role of the adult in facilitating children's development. They emphasise not only the immediate social

situations in which learning takes place, but also the wider cultural context which shapes all thinking (Kitson & Merry, 1997:53).

From seven years of age, social and cultural factors are beginning to interact with the child's metacognition skills. According to Gardner (cited in Kitson & Merry, 1997), two sorts of intelligence are therefore involved: intrapersonal and interpersonal. The former refers to the emerging sense of self and the attachment to the here and now which are needed in order to reflect on one's own thinking, and the latter to the growing awareness of and sensitivity to other people needed to develop as a successful and valued social being (Kitson & Merry, 1997:54).

Goleman (cited in Stern, 1999) teaches that children's emotional and social skills can be cultivated, so that the child will gain both short-term and long-term advantages with regard to well-being, performance and success in life. He outlines five crucial emotional competencies that are basic to social and emotional learning:

- Self and other awareness: understanding and identifying feelings; knowing when one's feelings shift; understanding the difference between thinking, feeling and acting; and understanding that one's actions have consequences in terms of others' feelings
- Mood management: handling and managing difficult feelings; controlling impulses; and handling anger constructively
- Self-motivation: being able to set goals and persevere towards them with optimism and hope, even in the face of setbacks
- Empathy: being able to put oneself "in someone else's shoes" both cognitively and affectively; being able to see someone's perspective; being able to show that one cares
- Management of relationships: making friends, handling friendships; resolving conflicts; co-operating; collaborative learning and other social skills.

The mastery of these five competencies results in enhanced emotional intelligence (Stern, 1999:2).

Maurice Elias (cited in Stern, 1999) states: "Many of the problems in our schools are the result of social and emotional malfunction and debilitation from which too many children have suffered and continue to bear the consequences. Children in class who are beset by an array of confused or hurtful feelings cannot and will not learn effectively. In the process of civilizing and humanizing our children, the missing piece is, without doubt, social and emotional learning. Emotional well-being is dramatically and positively predictive not only of academic achievement, but also of satisfactory and productive experiences in the world of work and marriage, even of better physical health" (Stern, 1999:2).

Green (2001:97) notes the following strategies for promoting learning and social development:

The school and teachers should try to do the following:

- Create a classroom climate of respect, and ought to behave respectfully themselves towards colleagues and learners
- Teach learners to show respect by acknowledging and listening to one another
- Use stories and role-play activities to teach social skills and acceptable behaviour

- Use behaviour modification techniques to establish habits of respect and appropriate social behaviour
- Create a sense of belonging in the classroom by involving everyone
- Acknowledge the diverse cultural context to which learners already belong
- Help all learners in the class to understand, speak about and respect differences, including the differences created by disability
- Help learners to identify and value the ways in which each of them is unique
- Speak openly about feelings and provide learners with a language for doing so (Green, 2001:98).

2.4.5 Moral development

Papalia and Wendkos Olds (1996:463) state that moral development is an outgrowth of personality, emotional attitudes and cultural influences. It is important to note that moral judgement develops along with cognitive growth.

Piaget's approach to moral development is divided into two major stages:

- The morality of constraint

In this stage the young child thinks rigidly about moral concepts. Children in this stage are quite egocentric; they cannot imagine more than one way of looking at a moral issue. They believe that rules cannot be changed, that behaviour is right or wrong and that any offence deserves punishment (unless they themselves are the offenders)

- The morality of co-operation

This stage is characterised by moral flexibility. As children mature they interact more with other people and come into contact with an increasingly wide range of viewpoints; some of which contradict what they have learned at home. Experience and maturation interact to help them develop their own moral standards. These children conclude that there is not one unchangeable absolute determining what is right and wrong. Children can now make more subtle judgements about behaviour, consider the intent behind it and use punishment judiciously. They are now formulating their own moral codes.

Selman examined the ability to take roles. This is the ability to assume another person's point of view. Selman divides the development of role taking into five stages, numbered 0 to 4. For the purpose of this research, only stage 1 and stage 2 are discussed below.

- Stage 1 (about age 6 to 8 years)

Children realise that other people may interpret a situation differently from them.

- Stage 2 (8 to 10 years)

Children develop reciprocal awareness (Papalia & Wendkos Olds, 1996:463).

Damon (cited in Cole & Cole, 2001) found that in children's reasoning about rules and fairness, children between the ages of 5 and 7 years begin to believe that all participants have an equal claim to rewards. Their argument recognises that now there are mitigating circumstances, and the only fair treatment is equal treatment. From the age of 8 years onwards, children begin to take particular circumstances into consideration, believing that some individuals in the group or class may have a legitimate claim to more than an equal share of the group's or class's rewards if they contributed a greater share to the group's or class's work or if they are handicapped in some way, such as by poverty or ill health.

Changes after the age of 8 years reflect children's increased sophistication in the way they logically weigh multiple relevant factors.

According to Cole and Cole (2001:571), in studies done on moral issues related to actions in real-life situations it was found that moral judgement was important for moral action. When conditions require one to resist temptation, some elements of social control and a threat of punishment appear to be necessary for younger children to behave morally, despite the consequences. This is unlikely to be uniformly achieved at any age.

2.4.6 Developmental tasks

Du Toit and Kruger (1991:133-134) assert that the community, of which the child is a member, expects him/her to meet certain requirements. These requirements or developmental tasks act as milestones or signs that the child is becoming an adult. The mastery of developmental tasks is the responsibility of the parents as well as of the child's teachers and peer group. To be accepted by the peer group the child has to prove that he/she has mastered these tasks. If the child fails to master them, his/her behaviour appears childish and differs from that of his/her friends.

The following developmental tasks are regarded as of cardinal importance during the primary school years:

- **Mastery of the physical skills necessary for play**

To be accepted by the peer group, the child should manifest the required physical skills necessary for participation in play. This means the child should be able to run, jump, climb, kick well, etc. The mastery of physical skills enables the child to tackle more difficult developmental tasks (du Toit & Kruger, 1991:133-134). The peer group rewards with acceptance and admiration, the child who masters these skills. The group also uses aloofness and contempt to punish a child who fails. A girl may keep her status in the peer group even if she fails to learn these skills, but boys invariably lose their status (Ferreira, Pretorius & Bender, 1994:97).

- **Forming a positive attitude to the body**

A positive attitude to healthy eating habits and personal hygiene should be inculcated in children. During these foundation phase years, children should begin to wash their hands before meals, brush their teeth and be neat and tidy. Children should fulfil the requirements for good manners expected by the community and school (du Toit & Kruger, 1991:133-134). This is also the stage when sexual curiosity and experimentation start. Havighurst (cited in Ferreira, *et al.* 1994) states: "Success in this task leads to a well-balanced personality, with a reasonable degree of physical neatness and orderliness and a set of attitudes about sex which permits sex to become a source of pleasure in later life without causing either guilt feelings on the one hand or complete servitude to the sex impulse on the other."

- **The acquisition of social skills**

Ferreira, *et al.* (1994) state that in this period the child leaves the safe relationship with the family and has to find his/her place in the peer group. One of the independence tasks of the primary school child is to play with friends and no longer merely alongside them, as was the case during the pre-school years. Therefore children in this stage should already

have the social skills necessary for getting along with friends and adults. These children should be able to play according to the rules of the game, be generous and tolerant. Also, they should sometimes be prepared to subordinate their wishes or will to that of others (du Toit & Kruger, 991:133-134).

- **Development of an appropriate gender role**

The child increasingly identifies with the parent, teacher or peer group of the same gender. Gender-appropriate play is increasingly manifested and by the end of the primary school years, there is usually no longer room for the other gender in the peer group (du Toit & Kruger, 991:133-134). This developmental task begins at home where boys are taught to behave like boys and girls to behave like girls. The gender role is strengthened by the child's positive identification with the parent of the same gender (Ferreira, *et al.* 1994:98).

- **The mastery of basic skills**

The basic skills (reading, writing and arithmetic) comprise the most important independence tasks of the primary school child. The quality of these skills improves very little during the secondary school years. By the end of the primary school years, these skills should already function as automatisms (du Toit & Kruger, 991:133-134).

- **The acquisition of basic concepts**

The child should have a wide range of general knowledge. His/her vocabulary and linguistic powers are increased by direct instruction, as well as by communicating with friends and adults (du Toit & Kruger, 991:133-134). During the child's development he/she forms new concepts from vicarious experiences such as reading and television. During this period the child forms concepts such as time, space, quantity, temperature, height and speed (Ferreira, *et al.* 1994:99).

- **The forming of conscience, morality, a scale of values and a normative structure**

The child gradually internalises moral values and norms. He/she can already distinguish reasonably well between right and wrong, good and bad and uses moral values in his/her everyday behaviour (du Toit & Kruger, 991:133-134). A child's conscience is generally formed by being brought up with love. Good behaviour is rewarded and bad behaviour punished, in conjunction with the child's dependence on and identification with the parents. The parents are the first people who inculcate respect as a rule of conduct. Conscience and morality are influenced by the following:

- Education and upbringing
- Love, rewards and punishment
- Example of the educator
- The child's experience with his/her peer group (Ferreira, *et al.* 1994:99).

- **The development of definite attitudes to social groups, institutions and ideas**

Du Toit and Kruger (991:133-134) mention that the foundation phase learner still primarily bases his/her attitude on the parents' attitude. However, by the end of the senior primary phase the child begins to form his/her own attitude to, for instance, the church, school, racial groups and social status. This development of the child's own attitude is linked to a

heightened sense of personal independence. Ferreira, *et al.* (1994:100) state that the child's attitude to social groups may be influenced by the following:

- Imitating people who are important.
- Acceptable and unacceptable experiences.
- A single intense emotional experience (pleasant or unpleasant).

- **Stabilisation of personal independence**

The child progressively assumes greater responsibility for his/her actions and establishes autonomy and independence in various fields during these years. His/her cognitive abilities and enlarged body of knowledge enable the child to make independent decisions. Physical independence and geographical freedom increase and the child shows signs of psychological independence (du Toit & Kruger, 991:133-134). Children discover during childhood that their parents are not infallible. The child starts to make independent decisions. The peer group will give support and the opportunity to plan and make decisions without the child's parents. This is also the stage where a child tends to focus on a role model (Ferreira, *et al.* 1994:100).

These developmental tasks are characterised by the forming of concepts, gender roles, friends and peer groups in the child's ecology, where interdependence and relationships play an important role in the child's environment.

2.5 DEVELOPMENTAL ASSETS

The foundation phase learner shares his/her ecology with positive experiences and wisdom from family, friends, teachers, the school and community members. These influences protect the learner from problem behaviour and promote positive attitudes and good behaviour. The power of these experiences and wisdom is evident across all the cultural and socio-economic groups in a community. These powerful shapers of young people's lives and choices are their internal and external assets, which are indispensable for healthy development (Search Institute, 1997).

The Search Institute (1997) has developed a framework of developmental assets. These assets show the important role that families, the school, teachers and the community play in shaping children's lives. The forty critical factors are subdivided into external and internal assets.

External assets are the positive experiences that young people receive from the people and institutions in their lives. Table 2.7 lists the four categories of external assets identified by the Search Institute (1997).

TABLE 2.7: External assets (Search Institute, 1997)

SUPPORT	Young children need to experience support, care and love from their families, friends, neighbours and many others in the community. They need organisations and institutions that provide positive, supportive environments
EMPOWERMENT	Young children need to be valued by their community and need to be given opportunities to contribute to others. For this to occur, they have to be safe and feel secure
BOUNDARIES AND EXPECTATIONS	Young children need to know what is expected of them and whether activities and behaviours are “in bounds” and “out of bounds”.
CONSTRUCTIVE USE OF TIME	Young children need constructive, enriching opportunities for growth through creative activities, youth programmes, congregational involvement and quality time at home

The community’s responsibility does not end with the provision of external assets. There is a need for a similar commitment to the internal qualities that guide choices and create a sense of centredness, purpose and focus. This encourages the wise and responsible judgement of the individual within a community (Search Institute, 1997). Table 2.8 lists the four categories of internal assets identified by the Search Institute (1997).

TABLE 2.8: Internal assets (Search Institute, 1997)

COMMITMENT TO LEARNING	Young children need to develop a lifelong commitment to education and learning
POSITIVE VALUES	Young children need to develop strong values that guide their choices
SOCIAL COMPETENCIES	Young children need skills and competencies that equip them to make positive choices, to build relationships and to succeed in life
POSITIVE IDENTITY	Young children need a strong sense of their own power, purpose, worth and promise

These are all-powerful influences on an individual within a community. These powers are essential for guiding and caring for the learner with diabetes in the foundation phase within his/her ecology.

2.6 CONCLUSION

The diagnosis of diabetes influences human behaviour. Feelings such as anxiety, fear and distress are overwhelming. A child is human and therefore a person and individual with all the traits and emotions common to human beings. The child is a person in a world of other humans, objects, norms and ideas. Therefore while the child matures, he/she has to orient himself/herself to his/her life-world. Experiences of success and efficiency boost the child's self-respect and self-esteem, which in turn helps to develop a positive self-concept (du Toit & Kruger, 1991:27).

The diagnosis of diabetes has an impact on the interacting relationships in the child's ecological system. It affects the child's friends, family, school and community. This ecology may either intensify or eliminate the child's problems. The ecological environment should be regarded as an opportunity for interaction because it is relationship-driven, and should be based on strengths, not weaknesses. The individuals in the collaborative environment of the diabetic ought to take responsibility for mobilising various resources to assist the diabetic learner.

The diabetic child may feel guilty about the stress he/she causes the family. As it is sometimes difficult for parents to see and cope with their child's anguish, communication and relationships are extremely important. The emotional status of the learner with diabetes affects his/her physical health and in turn his/her emotional health reflects the family's emotional health.

Through children's development they will become increasingly aware of their bodily appearance and what their bodies can do. Emotional, social and moral competencies will increase and self-awareness and self-motivation will become evident. Children's acceptance by their peers as well as their academic achievement became important issues. Through children's development they need to identify and use varying appropriate strategies and skills, which will reflect their thinking and actions. Although children will also become increasingly responsible for their own learning, ill health may compromise these concerns and responsibilities.

All individuals as well as their environment are endowed with multiple assets. These assets can be identified and mobilised with the help of caring people (Ebersöhn & Eloff, 2003:ix). These wise and responsible people can help to build relationships and capacities that will reassure the learner with diabetes that other people are interested in him/her as an individual, not only in the illness or problems it causes.