GUIDELINES FOR THE LANGUAGE ASSESSMENT OF SEVERELY MENTALLY HANDICAPPED INDIAN PUPILS

by

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SUPERVISOR: PROF L DU TOIT

NOVEMBER 1992
DECLARATION

I declare that GUIDELINES FOR THE LANGUAGE ASSESSMENT OF SEVERELY MENTALLY HANDICAPPED INDIAN PUPILS, is my own work and that all sources that I have consulted or quoted have been indicated and acknowledged by means of complete references.

SIGNED: M. VANDAYAR
SUMMARY

Title: Guidelines for the language assessment of severely mentally handicapped Indian pupils.

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Degree: Master of Education

Subject: Orthopedagogics

At: University of South Africa

Supervisor: Professor L Du Toit

In special schools for severely mentally handicapped Indian children the class teacher has to assess each pupil’s level of language functioning before he can devise an effective language intervention programme to suit the pupil’s individual needs. Generally, class teachers are not sufficiently trained to administer such language assessments themselves.

The aim of this study was to formulate scientifically sound guidelines according to which class teachers can administer their language assessments.

In order to formulate such guidelines, an investigation was undertaken on the phenomenon of mental handicap and the characteristics of severely mentally handicapped pupils. Attention was focussed on language and normal language acquisition before the language of the severely mentally handicapped was examined in detail.

On the basis of these findings, guidelines were suggested to the class teacher for the assessment of language in the education of severely mentally handicapped Indian pupils in the Durban area.
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1 CHAPTER ONE
INTRODUCTION, STATEMENT OF PROBLEM AND AIMS OF THE STUDY

1.1 INTRODUCTION

Language can be regarded as the basic instrument by which man, throughout the ages, has communicated with his fellow beings (Van Schalkwyk 1982:1). This "basic instrument" may take various forms, for example, non-verbal language, oral or written language.

The child needs language not only for communication purposes, but also because it plays an important role in his development, especially in the areas of social, personal, emotional and cognitive development. He also needs language for learning about and exploring the world. For the schoolgoing child, language becomes the foundation of almost all his school subjects (McLoughlin & Lewis 1981:437).

However, many handicapped children experience difficulties in acquiring and using language skills. There is a whole range and variety of abnormal language behaviours which may be exhibited by handicapped children.

A group of handicapped children who are particularly affected in the area of language is the severely mentally handicapped. Their poor intellectual abilities prevent them from learning spontaneously or from profiting from everyday experiences. As a result their development in language and in other abilities is extremely slow and difficult. Their development also shows striking individual differences as they not only differ from
other children but they also differ from one another. These differences are evident in every aspect of their development, especially in language development.

According to Du Toit (1988:117) severely mentally handicapped children need timely, appropriate and effective education to prepare them for life. Appropriate education implies education which is suited to each child's abilities and for his present and future needs.

In planning individual language programmes for the severely mentally handicapped child (henceforth referred to as the SMH), the first step would necessarily entail careful and detailed language assessments. This study deals with the manner in which such assessments could be administered by classroom teachers.

Before giving a background to the problem, some terms, used in this research, have to be explained.

1.2  EXPLANATION OF TERMINOLOGY USED
1.2.1  Language

Language refers to "a body of words and the ways of combining them so that man can express himself" (Van Den Aardweg & Van Den Aardweg 1988:155). As early as 1962 Webster's definition of language captured the essence of language. It states that "Language is a system of verbal and/or non-verbal symbols and sequences of symbols developed for the purpose of interpersonal communication about experiential events". Other authors refer to language as a "rule governed symbol system" (Gerber & Bryen 1981:27); "abstract systems with rules governing the sequence of the basic units" and "rules governing meaning and use" (McCormick & Schiefelbusch 1990:5).
Language is made up of five components (that is, phonemes, morphology, syntactics, semantics and pragmatics), which make up the system of symbols of verbal and/or non-verbal symbols. This symbol system is governed by rules set by the particular community in which it is used, for example, the French, the English, the Afrikaner or the Indian have their own set of rules for their language. These rules govern the sequence of the basic units when using it to convey the intended meaning.

Language may also take various forms such as oral, written and non-verbal language. This dissertation, however, is concerned with oral language which involves information being received by listening and information being expressed by speaking.

1.2.2 Assessment

According to the Concise Oxford Dictionary, the verb "assess", is an act of "estimating the magnitude or quality of". Taylor (1989:1) however, gives a simple, practical definition of the word "assessment". He maintains that assessment refers to "the gathering of relevant information to help an individual make decisions".

Of great importance to the class teacher of the SMH is when assessments are conducted for planning purposes. This helps the class teacher to design and implement educational programmes to assist these "exceptional" children to learn. Such assessments are usually individual rather than group orientated.

Assessment activities are all of the necessary procedures used to collect information (Hargrove & Poteet 1984:2). These procedures may be formal or informal:
formal assessment refers to the use of standardized tests, scoring and interpreting results to assess a child;

informal assessment inter alia includes the teacher's systematic observation, checklists, inventories, interviews with parents and questionnaires.

In this research, assessment is used to refer to teaching directed assessment. This aims at estimating the SMH child's existing oral language skills, with the view to effective, oral language training intervention.

1.2.3 Evaluation

The word "evaluation" means "the process of estimating the worth or importance of - an appraisal" (World Book Dictionary). According to McCormick and Schiefelbusch (1990:115) evaluation is the "monitoring of child progress and intervention procedures". This continuous monitoring, in the form of evaluation, is also important as it informs the teacher whether, and to what extent, a child is progressing towards the teaching objectives, and when and what changes should be made in his teaching programme.

1.2.4 Severely mentally handicapped (SMH)
1.2.4.1 Mental handicap

In this study, the term mental handicap will be used. Other terms such as "mental retardation", "mental subnormality" or "mental disability" used in literature, may also arise but will be regarded as synonymous. In addition, the researcher would make use of the term "he" when referring to the SMH, not because the mentally handicapped are only confined to males,
but because it would make easier reading. The researcher acknowledges that both males and females make up the mentally handicapped population.

SMH refers to a severe degree of mental handicap. It would be more appropriate to define mental handicap first.

1.2.4.2 Definition of mental handicap

The most recognized and accepted definition of mental handicap is that of the American Association on Mental Retardation (AAMR). This version, written in 1983, defines mental handicap as "subaverage general intellectual functioning resulting in or associated with concurrent impairments in adaptive behavior and manifested during the developmental period" (Kidd 1983:243-244).

According to Du Toit (Kapp 1989:342), three criteria are involved in this definition:

a) a level of intelligence functioning which is below average;

b) an inability to comply with social norms that apply to persons of that age;

c) manifestation before the age of 18 years. Persons who deteriorate intellectually after adulthood, for example, as a result of brain damage or senility, are not considered to be mentally handicapped.

In educational circles the general definition such as that of the AAMR usually does not suffice. In most countries the mentally handicapped are divided into three groups. These being:
Group I: IQ 50 - 75/79
Group II: IQ 25 - 49
Group III: IQ 0 - 24

Although the IQ is no longer the decisive factor for classification purposes in education, the same categories are still used in the most recent educational report (HSRC 1981:88 et seq.). The following detailed study of the three groups is taken from Du Toit (1989:343-344).

Group I: The educable mentally handicapped (IQ 50 - 75)

This group is referred to as "educable" although they do not fully benefit from the education of the regular school. Their rate of learning is much slower than that of normal children but they are able to master the academic skills of the junior and senior primary classes. This is in keeping with the view that a minimum IQ of 50 is necessary to be able to read and write.

Group II: Severely mentally handicapped (IQ 25 - 50)

The severely mentally handicapped pupil experiences problems with learning typical academic skills at school. He can learn the following if teaching is purposeful and intensive: basic self-care and communication skills; sufficient social skills which would enable him to safely move about the home and his neighbourhood; domestic and vocational skills in order to live in a protected environment and perform simple routine work under supervision. Since these pupils are unable to master typical scholastic skills, they are referred to as "ineducable but trainable". Their schools are referred to as "training centres". However, they are now regarded as educable as other
children because they can progress to adulthood. They are "teachable" but the content is much simpler than that for the child in the regular school. It is important to note that in South Africa these children are classified as "severely mentally handicapped" but according to the AAMR classification they are regarded as "moderately handicapped".

Group III: Profoundly mentally handicapped
(IQ 0 - 25)

This group was normally excluded from education because they only acquired the simplest self-care, social and communicative skills, even with the most intensive training. They are usually multiply handicapped and are admitted to institutions for the mentally handicapped (now called care and rehabilitation centres), or are cared for at home.

1.2.5 Indian

The term "Indian", in this instance, refers to all South African Indian citizens, resident in the Republic of South Africa and who originated from India, in about the year 1860. They had originally arrived in Natal because the English planters there had faced a shortage of labour and had therefore urged the Natal Legislative Assembly to allow the immigration of Indians in Natal (Rambiritch 1969:11-12). According to Bughwan (1972:62) the population of Indians living in South Africa, is the second largest community of Indians outside India, and constitutes three percent of the total population of the Republic of South Africa. They comprise of two main groups: Moslems and Hindus.
1.2.5.1 Indian culture

Culture is one’s life style, including language, religion, system of values, moral codes, dress, housing, occupation and methods of education (Borok 1989:68). Naicker noted in 1979 (p.28) that although the Indians in South Africa have been influenced by western culture, they have not discarded their own culture. Meer (1969:64) adds that they placed great value on their close-knit family structure which gave them an inner strength to overcome crises situations in life.

However, soon there was a significant change. Naguran (1978:44) observed that urbanization had influenced the way of life of the Indian people influencing all areas of thought and practice. Chetty (1985:8) added that the Indian community in South Africa is a mixture of both eastern and western cultures. In spite of there being a great shift away from the traditional eastern life-style, the Indian has not wholly and fully accepted westernization. Therefore they have not been absorbed into the mainstream of the dominant culture.

1.2.5.2 The Indian and his language usage

Hindus formed the majority of the earliest groups of Indian immigrants. According to the 1980 census, the Hindus made up the largest percentage of the total Indian population - that is, 62.38 percent (Arkin et al 1989:35).

The Hindus speak one of four languages: Tamil, Hindustani, Telegu or Gujerati (Meer 1969:10). The Moslems speak the Urdu dialect of Gujerati. The Christians form the third group and are mostly converts from either the Moslems or the Hindus. There has been a tremendous change in home languages used by the Indian community in South Africa. From the earliest days, the Indian have had English-speaking employers. They became
dependent on English and it naturally took precedence over their own languages (Bughwan 1972:62). They predominantly accepted the English language as a medium of communication (Naicker 1979:183; Ramphal 1961:16a).

Today Indians regard themselves as South Africans and realise that their progress depends upon their acculturation in a western society. According to Maasdorp (1968:33) "one of the indications of acculturation is the adoption of the English language". Since English has become the main medium of communication in virtually all aspects of the Durban Indian’s life, there is a demand for greater fluency in speech. The South African Statistics (1987:1.19) found that about 73 percent of the total Indian population communicated in English.

Therefore Arkin et al (1989:34) maintain that English has emerged as the main home language of the South African Indian community. The vernacular (that is, the Indian dialect) is still spoken, in some instances, and many Indian pre-schoolers can speak their mother tongue before entering the English medium school. However, once in the school situation, mother tongue is given very little or no recognition in the school years.

Some Indian parents are guilty of combining the vernacular with English in their daily speech, for example, the mother may refer to "bread" as "roti" (Hindi vernacular) or to the food being "karo" meaning "pungent". This could cause confusion in the SMH Indian child. Very often he would use these words in class and the teacher is faced with the task of making him learn the equivalent English word.

Furthermore, Afrikaans is being taught as a language in the Indian schools. Therefore in addition to the vernacular, the two official languages may be spoken by the South African
Geographically, Durban comprises of a number of suburbs, stretching from Merebank and Chatsworth in the south to Phoenix and Mount Edgecombe in the north. According to Arkin et al (1989:30) because of the Group Areas Act of 1950, by 1974 about 40 percent of the Indian population had been uprooted and resettled. The majority of the population around Durban were resettled in the large dormitory townships of Chatsworth and Phoenix.

The 1980 census report reveals that 75 percent of the Indians in Natal lived in the Durban-Inanda-Pinetown area and that the majority of this population live in the sprawling townships of Chatsworth and Phoenix (Arkin et al 1989:31). Chatsworth as a whole, may be described as a residential area with several businesses, situated about twenty kilometres from the central business area of Durban. Phoenix, also both a residential and industrial area, is now regarded as one of the "largest Indian townships in the country" (South Africa 1988/1989:542-543).

In both Chatsworth and Phoenix some Indians live as owners of privately-built homes, while the greater majority live in economic or sub-economic, semi-detached council houses on very small plots of land. Meer (1969:94) described these as "row upon row of houses, mostly double storeyed and semi-detached structures". However, in recent years the housing position has improved considerably. It now provides "inner surroundings where the human being can satisfy his natural, physical, mental and social needs" (Reddy 1983:26). At present the housing for urban Indians is generally of a high standard when their incomes are considered (South Africa 1980/1981:288).
1.3 BACKGROUND TO THE PROBLEM

1.3.1 Historical development of the education of the mentally handicapped

1.3.1.1 Special education services outside South Africa

For many centuries, prior to the early 1800's, the mentally retarded did not come under the influence of education. It was only in the nineteenth century that a number of pioneers, such as Jean Itard, Edouard Seguin and Samuel Howe (Ingalls 1986:86) and Johann Jacob Guggenbühl (Gearheart & Litton 1979:5) developed a special interest in securing better treatment for the retarded. It must be mentioned that most of the originators of special education were European physicians (Hallahan & Kauffman 1988:18). Although this was largely individualistic work it stimulated others to treat all sorts of handicapped people more humanely.

A Frenchman, Jean Itard, attempted to educate a "wild boy" who was found behaving like an animal in the woods (Ingalls 1986:99; Gearheart & Litton 1979:3). After five years of training he transformed him into a partially civilised human who could recognise objects and understand many words. Itard thus proved that even a child diagnosed as an idiot could be taught many social skills if he was exposed to systematic training. Itard's work made society recognise and be enthusiastic towards the education and care of the mentally handicapped (Gearheart & Litton 1979:4). Similarly, Edouard Seguin, one of Itard's students also attempted to train several retarded children and wrote a text on the education of the mentally handicapped when he emigrated to the United States, called "Idiocy and its treatment by the physiological method" (Hallahan & Kauffman 1988:18). In the same vein, Samuel Howe of the United States established the first training centre for the mentally handicapped in the 1850's (Ingalls 1986:99). Simultaneously Guggenbühl, a Swiss physician, established
institutionalised care of Cretins (a type of mental handicap).

These individualistic works indicated that every child has a right to an education, especially the child usually known as "handicapped". According to Gearheart and Litton (1979:4) it was believed that education and training which was suited to the needs of the individual human beings would assist them to become effective citizens. Presently it is the belief of most professionals in the field of mental handicap that these individuals should have the same fundamental rights, freedoms and privileges granted other citizens (Litton 1978:4).

The term "special education" refers to education of a specialised nature given to disabled children and youth, for example, those identified as being mentally retarded, deaf, hard of hearing, speech impaired, visually handicapped, orthopedagogically handicapped or learning disabled. These children are unable to benefit sufficiently from instruction given in the ordinary school because of physical or mental disability, or behaviour aberration (Behr 1984:109).

Today, education departments in most countries are expected by law to provide special educational services for all the disabled persons (Ingalls 1986:94).

(i) The United States of America

In the United States of America (USA) Congress passed the Education of all Handicapped Children Act in 1975 (Ingalls 1986:98). Public Law 94-142 was designed to ensure that all disabled children have access to a free and appropriate public education with emphasis on special education and related services designed to meet their unique needs (Kirk & Gallagher 1989:50). In accordance with the normalisation principle the emphasis now is on educating handicapped children in the least
restrictive environment. This implies educational circumstances which are as near as possible to that which is regarded as normal.

(ii) The United Kingdom

In the United Kingdom (UK), the Education (Handicapped Children), Act of 1970 made the central Department of Education and Science responsible for the education of all children, regardless of their level of intelligence, or the severity of their handicaps (Du Toit 1985:76). The British concept of special education embraces the notion of any form of additional help, wherever or whenever it is provided, from birth to maturity, to overcome educational difficulty. Following the Warnock Report (1978) the Education Act 1981 (which was an amendment of the 1970 Act) introduced legislation pertaining to children with special educational needs (Griffiths & Russell 1985:36).

In common with other western industrial countries, England is moving towards normalising education by integrating the mentally handicapped with normal individuals. Integration in schools is, however, a long way from being established. One of the reasons for this could be the fact that the education of the severely mentally handicapped demands the highest level of training, competence and skills. There may therefore be no haphazard planning or indiscriminate admission of these children to mainstream education (Du Toit 1985:82-83).

(iii) Europe

In Europe, special education was originated by European physicians and even now European scholars and their ideas continue to influence the developments in special education in other countries. According to Hallahan and Kauffman (1988:23)
the Scandinavian countries have been at the forefront in providing care, education and rehabilitation to the mentally retarded. In addition to this, the principle of normalization has been documented as having its beginning in services to the mentally handicapped in these countries (Gearheart & Litton 1979:12).

In the Netherlands, schools for the mentally handicapped were already founded soon after 1900. Thus there were thirty schools for the mentally handicapped before the Primary Education Act was passed in 1920 (Du Toit 1985:66). This Act made provisions for children with mental or physical defects. At present most education of the mentally handicapped takes place in special schools. Hallahan and Kauffman (1988:24) noted that in some European countries the quality of services for handicapped people is well beyond that found in America.

1.3.1.2 Provision of special education in South Africa

When the history of education in South Africa is compared to the history of education in western countries, it is found to be relatively short. In the early part of this century, in the period before Union, each province had its own laws and ordinances relating to mental illness and its provisions for this group of afflicted people. However, from 1925 the Union Education Department started to support special schools unofficially (Du Toit 1989:63). The Vocational Education and Special Schools Act, Act 29 of 1928, enabled the Union Education Department to establish "special schools" (Behr 1988:122). In 1949 the name of the Union Education Department was changed to the Department of Education, Arts and Science. Although a few special schools were established, only the mildly mentally handicapped were catered for, the lot of the SMH child remained unchanged. It was only after the Van Wyk Commission was appointed to inquire into the care of mentally
deficient persons in 1967 that provisions were made for the White SMH in South Africa. Thus the Mentally Retarded Children's Training Act, Act 63 of 1974 was passed for the White SMH of school-going age by the Department of National Education (Behr 1988:127).

However, all the Acts were subsequently revoked by the acceptance of Act 70 of 1988: Education Affairs Act (House of Assembly) (Du Toit 1989:65). This Education Affairs Act (House of Assembly) 1988, (Act 70 of 1988) provides for all aspects of the education of White children with special educational needs to be under the control of a single authority, the Minister of Education and Culture of the Administration of the House of Assembly (Behr 1988:128). This Act, which applies to Whites, now serves as the overall guideline for the teaching of all handicapped children within the present department. In this Act, the term "handicapped child" refers to a child who is able to benefit from a specialised education program for handicapped children but because he deviates to such an extent from the majority of the children of his age in body, mind or behaviour that he:

* cannot benefit sufficiently from instruction provided in the ordinary course of education;

* needs specialised education to facilitate his adaptation in the community; or

* should not attend an ordinary class in an ordinary school, because such attendance may be harmful to himself or to the other pupils in such a class.

Concerning other population groups, the following Acts make provision for the establishment, maintenance, management, control and the rendering of financial aid to schools for special education:

* Indian Education Act 61 of 1965 as amended.
* Coloureds Education Act 47 of 1963 as amended.
* Education and Training Act 90 of 1979.

These Acts do not contain a list of handicaps and does not mention "educability". Thus all categories of handicaps may be provided for under the same Act (Du Toit 1989:66).

As this dissertation concerns the Indian SMH, provisions of special education for the Indians would be discussed next.

1.3.1.3 Provision of special education services for the Indians by the Department of Education and Culture (House of Delegates)

Prior to 1966, Indian Education had been in a "state of deprivation", especially with respect to school accommodation and provision (Samuels 1985:12). However, the takeover of Indian Education by the Department of Indian Affairs in Natal, in April 1966, and a year later, in the Transvaal, saw the beginning of a new era in the provision of education for Indians. The sad part, however, was that in 1966 there were no facilities for the education and training of children with special needs, other than the Arthur Blaxall School for the Blind founded in Durban in 1954 (Singh 1983:9).

The Indian Education Act, Act 61 of 1965, made provisions for "the education and training of children who differ from other children so much, that special facilities have to be made available in order to meet their special needs through special
curricular content, special methodology, special instructional materials and suitably-trained professional staff in specially designed accommodation". The shortcoming of this Act, as mentioned in the Delange Report (HSRC 1981:94-95) was that Indian Education Act 61 of 1965 did not distinguish between the so-called educable and trainable children. The result of this was that trainable children may be admitted to the special schools which are under the control of the Department concerned, but profoundly retarded, special care SMH children were excluded.

The Indian community's role in providing education for its children was one of great magnitude and worth. A group of educationists, dedicated to the task of providing training for the ineducable Indian SMH, undertook this daunting task. The first move towards establishing a training centre for Indians was made by the Indian Auxiliary Committee which was formed under the auspices of the Durban Mental Health Society in April 1968. After many meetings, they called for an establishment of a Junior Training Centre. Meanwhile legal arrangements were progressing.

The Durban Indian Women's Association continued the pioneering efforts to provide a class for these children, at the Natal Tamil Vedic Society in Durban, taught voluntarily by two teachers.

The sheer enthusiasm and dedication of all those associated with the Indian Auxiliary Committee led to the establishment of the first centre for Indian children in the Republic of South Africa— the Golden Gateway Training Centre in 1976 (Golden Gateway 1976:8).
According to Mr Krog (then, Director of Indian Education): "It demonstrates once again the determination and zeal of the Indian Community in assisting to provide educational facilities for all its children" (Golden Gateway Official Opening Brochure 1976:8). On 7 July 1975 the Golden Gateway Training Centre was registered as a school, in terms of Section 6(1) of Indian Education Act No. 61 of 1965. The Department of Indian Affairs, through the Division of Education, accepted the responsibility for the education and training of this category of children whose needs hitherto were provided for by the Department of Health.

Subsequently, the Indian Education Act of 1965 was amended by Act 39 of 1979 which makes provision for special education and training to suit the needs of handicapped children. This education includes "general cultural education, vocational education and medical, dental and mental examination and treatment ..." (Behr 1984:278). He further maintains that the Division of Indian Education has assumed the responsibility of training mentally retarded children. The training is provided in centres that are privately run. If these centres are registered and approved by the Division, they would receive a state subsidy similar to that given to the schools for visually or aurally handicapped children. In 1983 six training centres received state subsidies. Three of these are in the Durban area. They are:

* Golden Gateway Training Centre
* West Park School
* S. Dass School.

However, since the SMH is exempt from compulsory schooling, school attendance is optional and depends on availability of place in the special schools. These special schools are dependent on the community as well as on the government subsidy
and charity. This places the education of the SMH at the mercy of public sympathy to a certain extent.

1.3.2 The nature of the education of the SMH

The education of the SMH is a specialised form of education aptly described by Hallahan and Kauffman (1988:6) as: "specially designed instruction that meets the unique needs of an exceptional child". The instructional intervention should be intense and precise, making use of special materials, teaching techniques, and even special equipment and facilities. Children with physical disabilities may, for example, need wheelchairs and ramps. Therefore Kirk and Gallagher (1989:60) are justified in stating that special education programmes are different from regular education programmes because they try to take into account the child's "interindividual differences" (between children) and "intraindividual differences" (within the child itself). Hallahan and Kauffman (1988:6) add that the type of special education required depends on the extent to which the child differs from the average; children with greater differences usually need more continuous prolonged and intensive intervention.

1.3.2.1 The aim of education

In any educational programme, the SMH should be considered first as an individual with similar basic needs and drives as non-retarded persons. According to Litton (1978:34) these basic human needs include "physiological needs, safety needs, belongingness and love needs, esteem needs and the need for self-actualization". Therefore the ultimate aim of education ought to be to assist each SMH individual to satisfactorily realize his maximum potential and to fulfil his basic needs and drives.
The Coordination Committee of the Department of National Health and Population (Durban Mental Health Society 1986:47) reported that the aim of the educational and training system should be to guide the immature child effectively to full maturity. Landman (Du Toit 1985:22), in his definition of adulthood and maturity, refers to some of the qualities that an adult should have. These are:

* an adult should live a life of human dignity;
* make his own decisions and act accordingly;
* be responsible - identifying with certain norms;
* live in accordance with his philosophy of life.

In considering these characteristics, one realises that the SMH with their serious limitations, would not fully attain this aim of education. They should, however, be helped to reach the highest possible level of moral, independent adulthood that is attainable for them in terms of their potential.

It is important to bear in mind that the purposes of special education for the SMH are the same as for normal children. According to Gearheart and Litton (1979:79) the three general purposes of education are:

* to allow for development of knowledge;
* to provide a basis for vocational competence;
* to allow opportunity for self-realization.

The SMH can acquire basic knowledge and facts; they can be trained for sheltered employment and they can achieve the personal fulfilment of self-actualization. However, their level of achievement is far lower than that of a normal child. Therefore their educational emphasis is different.
The primary educational goals for the SMH, considering their low level of functioning and achievement, include the following:

* ability to care for one's personal needs (self care and personal health);
* effective communication or language usage;
* appropriate social behaviour and emotional stability;
* development of perceptual-motor and physical skills;
* some functional academic skills;
* development of recreational and leisure time skills;
* ability to be economically useful in the home or community and/or successful vocational adjustment (Litton 1978:35).

These goals are considered "general goals" and indicate the direction of the education of the SMH. According to Du Toit (1988:7) specific goals are then defined to enable the teacher to know exactly what he should teach the child.

1.3.2.2 Curriculum

(a) Curriculum content

A curriculum is defined by Luftig (1989:178) as a "structured and sequenced set of learning tasks or outcomes". These learning tasks are selected to realise the educational goals for a specific group of children. In the case of the SMH, their curriculum should enable them to reach the goals listed in 1.3.2.1 above. The educational emphasis of special
education for them is, therefore, not on academic skills but rather on "functional daily living skills" (Hallahan & Kauffman 1988:80). Snell (1987:50) refers to these skills as "functional life routines" and Du Toit (1989:369) as "activities for daily living".

These skills or activities are divided more or less into the following curriculum areas: self-care, communication, socialisation, perceptual-motor skills, religious instruction, leisure time and recreational skills, work-orientated and domestic skills. Therefore when selecting a curriculum for the SMH it would be beneficial to focus on activities for daily living, for example, mathematics instruction should focus on elementary number and monetary concepts (for making change when purchasing); the development of verbal skills should focus on the ability to give personal information (Luiselli 1982:27). Furthermore Brown maintains that these daily activities can be broken into a "series of routines" which are composed of different skills needed to function in the natural environment (Snell 1987:50).

However, one must bear in mind that in a multi-cultural society, as exists in South Africa, skills that are useful or functional for one pupil cannot be assumed to be so for another. Therefore instructional goals which could be immediately usable must be determined individually, based on both the pupil’s needs and the characteristics of the environments in which he is expected to function.

In the education of the SMH the curriculum can be divided into two sections, these being:

* the core curriculum
* individual teaching programmes.
(i) The core curriculum

The core curriculum is or should be supplied by the relevant Department of Education. The class teacher extracts objectives/goals from this curriculum and devises an effective programme of instruction.

According to Ouvry (1987:94) the importance of certain core areas makes it possible to construct a curriculum model which would be generally appropriate for any class of children with severe handicaps. This curriculum model will provide a unifying structure to guide the practical implementation of educational activities. It would be flexible so that the activities used can reflect the individual needs and capabilities of the children. This core curriculum will be influenced by factors such as the physical structure of the school, organisation of the school as a whole, and the resources available in terms of facilities, equipment and staff in the special class. From this core curriculum the class teacher selects curriculum areas, devises activities and instructional programmes which will contribute towards the progress of the SMH in his class.

Currently, in South Africa, the curriculum for the SMH is not "set" as in ordinary teaching or in the regular school, because the curriculum for the SMH has to suit the needs of the relevant school or individual children. Therefore the "core curriculum" of the special school has to be more flexible than those in the regular schools. Furthermore, since the developmental level differs greatly among the SMH themselves (Cunningham & Sloper 1978:13) the curriculum for the SMH must accommodate all the children, regardless of whether they are ahead or very far behind in class.
A review of the Indian special schools, under the wing of the House of Delegates, revealed no "set" or "core" curriculum for the Indian SMH. In a telephonic interview with the Chief of Special Education, Mr P.B. Singh, in May 1990, he revealed that there is no blueprint for the education of the Indian SMH. Much of what is taught is based on trial and error, where each school devises its own curriculum, based on the needs of the children it serves. According to Behr (1988:278) the pattern of special education that operates in White schools has been adopted by the Division of Indian Education.

(ii) Individual teaching programmes

Since one of the major purposes of special education is to meet the individual needs of exceptional children, it is important for the class teacher to design individual programmes according to the needs of each SMH child in his class.

The individual programme can be devised once the core curriculum has been defined. The teacher refers to the successive levels within the curriculum structure, selecting those parts which are appropriate for each child (Ouvry 1987:103). According to Kirk and Gallagher (1989:74) the individual education programme should include:

* the nature of the child’s problem;
* the long-term objectives of the programme;
* the short-term objectives of the programme;
* the special education services required;
* the criteria for gauging the effectiveness of those services.
Children's individual programmes must be carefully planned, using selected core curriculum components to form a coherent and balanced programme of activities. These individual programmes will depend upon the children's existing abilities and the specific learning difficulties arising from their disabilities. In this instance, assessment would most definitely play an important role. A careful and detailed assessment procedure would provide a clear knowledge of a child's abilities and difficulties. It is an important prerequisite for planning teaching programmes.

In other countries the teaching of the mentally handicapped is regarded as very specialised and great emphasis is placed on individual education programmes. For example, in the United States of America it is enforced by law that each child has a right to education. Furthermore, the Education for all Handicapped Children's Act (PL 94-142) made it compulsory for every handicapped child to have an individualised educational programme - IEP (Kirk & Gallagher 1989:74). IEP is described as either the "Individualised Education Plan" or the "Individualised Education Program".

Before this individual programme can be devised, a team of professionals assess the child's eligibility for special education services. They then formulate an individual instructional programme based on the assessment data. This would include identifying annual goals, short-term objectives and individuals responsible for accomplishing the goals as well as specific features of the instructional plan. Parents play an important role in this IEP because they have to be directly involved in setting and approving the educational goals. The professional team works closely with the parents of the child concerned.
Unfortunately this method of devising individual educational programmes does not seem to be practised in South Africa. Although special education is provided for the SMH in special schools, there is no team of professionals who work together with teachers and parents to devise individual programmes of instruction for the children. The class teacher is left to his own resources to devise, what he considers, effective programmes of instruction for the SMH children in his class.

(b) Instructional levels

From a perusal of western literature it is noted that the levels of instruction for the severely mentally handicapped include the pre-primary, primary, intermediate, prevocational and vocational levels. Smaller schools have few levels because of the smaller number of pupils (Litton 1978:52).

In South Africa, according to Du Toit (1989:369) the SMH are divided into groups according to their chronological ages. The groups are:

* pre-primary (three to six years);
* primary (six to nine years);
* middle group (nine to twelve years);
* senior group (twelve to fifteen years);
* work-orientated group (fifteen to eighteen years).

In each of the above groups the various curriculum areas are adapted according to the needs and abilities of each group of children as well as to the individual needs of children within the group.
1.3.2.3 Teaching principles in the education of the SMH

In the attempt to educate the SMH, the teacher has to apply certain teaching principles, thereby creating circumstances in which a child's chances of learning are optimal. Some of these teaching principles as found in Du Toit (1989:366); Lerner et al (1987:144); Litton (1978:59) and Hallahan and Kauffman (1988:80-81) are:

* Individualisation: The teacher has to bear in mind that each SMH has its own individual, physical, developmental and learning problems. Therefore the educational curriculum should meet his special needs (Lerner et al 1987:144). This will affect planning lessons, presenting them, choosing teaching and learning aids for individualised programmes drawn up for each child (cf. 1.3.2.2 (i)). However, individualisation does not mean that these children must be taught only on a one-to-one basis. Individualisation is also possible in small groups. Hallahan and Kauffman (1988:82) point out that some group instruction may contribute to the pupil's social development. It is important to bear in mind that in order to individualise assessment is required.

* Activity: For learning to take place, the child must be "an active participant in the learning situation" (Lerner et al 1987:147). As will be noted later, one of the characteristics of the SMH is that they are passive and seem disinterested. Litton (1978:59) maintains that "little learning will take place if the students are passive observers". Therefore the teacher must activate the child, in various ways, so that learning can take place.
Involvement: According to this principle which is closely related to activity, the child must be involved in as many ways possible in the learning situation. The teacher must give the child many opportunities to use his various senses (for example sight, touch, hear, smell and even taste) in a learning situation. Therefore Litton (1978:59) stresses that all senses should be developed and utilized to enhance efficiency in learning.

Verbalisation: In the teaching situation, the teacher must constantly use spoken language to verbalise his own actions. When he uses words which the child can understand, it helps to fix the child’s attention on relevant matters (Du Toit 1989:367). The child must be encouraged to also verbalise as this will maintain his interest in the activity and at the same time, will promote language development.

Encouragement: The SMH child must be constantly encouraged and motivated to begin and complete a task. According to Lerner et al (1987:145) this positive encouragement would reinforce the pupil’s efforts even when only partial success is achieved. However, encouragement must be in a form that he understands and it can range from verbal praise to concrete rewards.

Repetition: The teacher has to continually repeat a lesson until the child has learnt and memorised it properly. According to Litton (1978:59) repeating activities in the same or a different way facilitates learning and over learning. The SMH child would not benefit from hearing, seeing or experiencing something once only.
Provide real experience where possible: The SMH should be taught in real, rather than simulated situations, where possible, because they have difficulty in perceiving connections between the real and simulated situations. Hallahan and Kauffman (1988:81) maintain that since many skills taught to the SMH are for use in settings outside the classroom, instruction should be given in the natural settings. Furthermore, the SMH have difficulty in generalisations and transferring what they have learnt in one situation, to another new one.

Task analysis: According to Lerner et al (1987:140) task analysis is the process of examining how an individual learns, then applying this information to the skills that the individual is expected to acquire. To facilitate learning a task or skill, it can be subdivided into smaller components or steps which can be taught individually to the child. The child can learn the steps of a skill by forward chaining or backward chaining (Du Toit 1989:367). As the child succeeds in completing one step, he progresses to the next step until the task is completed. This makes assessments easier because the teacher can record the steps which the pupil is not proficient in (Snell 1987:46).

From the simple to the difficult: The individual steps in the task must increase gradually in the degree of difficulty. The child must not find the tasks too difficult for it might cause him to withdraw and stop trying. The teacher should therefore select teaching objectives which are suited to the child’s abilities.
Reduction of subject matter: Since the SMH cannot pay attention to several things simultaneously, all irrelevant and unnecessary details should be omitted. These details should be added gradually only after the basic contents have been mastered properly. Litton (1978:59) also states that the initial learning session should be uncomplicated.

These are only some of the teaching principles. It is important to note that in order to apply the above principles the teacher should know the child.

1.3.2.4 Language in the education of the SMH

When a child is born into this world, he has to learn to communicate to become part of that world. It is common knowledge that communication plays an important part in the development of any child. Furthermore, in present day society, an individual is judged by his communicative ability. An integral part of communication is the use of language. According to Litton (1978:117) our society demands that an individual be able to receive and interpret oral and/or written language and be capable of self-expression. Language also helps the child to understand a far wider range of past and present events and happenings. In this way language influences intellectual development. It is for these reasons that the achievement of language skills is regarded as an important aspect of any education. It is represented in the curriculum areas such as listening, speaking, reading, writing and spelling.

In the education of the SMH, language training is of even greater importance. However, the SMH have long been considered a "poor risk for linguistic training because of multiple organic problems" (Burton 1976:81). It is a known fact that severe mental retardation inhibits the development and the
mastery of language. As Jones and Cregan (1986:17) state, the more severe the handicap, the greater the language impairment. This places the SMH at a disadvantage in society. The reason being, that these children, more than their normal counterparts, need to make their wants known and to understand and reply to other people's requests. Therefore functional communication skills, indicating needs and wants rather than formal linguistic skills should be emphasised in the education of the SMH (Snell 1987:247).

According to Ouvry (1987:138) education would become meaningless without communication between the educator and the pupil concerned. Therefore all SMH pupils must be taught to communicate, if not verbally, then by manual signs, symbols, pictures, gaze or a combination of methods.

1.3.3 The importance of language assessment

The first step in designing an individual teaching programme for a child is to get a clear picture of the child's abilities, his difficulties and his special educational needs. On the basis of this knowledge the various components of the teaching programme can be planned, that is, the long and short term aims, the teaching objectives, teaching strategies, educational aids and the form of evaluation (cf. 1.3.2.2 (i)). This type of knowledge which is required can only be obtained by careful assessment activities. Burton (1976:65) refers to this as "teacher-directed assessment" where the assessment becomes a teaching tool.

In the United States of America, and in other affluent countries, special interdisciplinary teams are appointed for administering such educational assessments. These teams consist of specially trained professionals such as the educational psychologist, social worker, speech therapist, and
so on (cf. 1.3.2.2 (i)). As they are especially trained, they make use of formal assessment procedures such as standardized tests.

There is, however, a growing awareness of the inefficiency of this type of assessment for planning individual teaching programmes for the SMH children. This criticism rests mainly on the following:

(i) Tests used are usually not appropriate for SMH children because they are designed for non-handicapped children (Van Etten et al 1980:72).

(ii) SMH children do not respond properly in test situations where strange people test them.

(iii) The data obtained from these tests are often irrelevant and not of much value in planning teaching programmes.

For these reasons authors such as Burton (1976) and Snell (1987) plead for more teaching-directed assessments in which these people who are actually working with the child play the major role. Such assessments should be informal and the data obtained should have direct implications for the teaching.

1.3.4 The problems of class teachers regarding language assessment

In South Africa (cf. 1.3.2.2.(i)) interdisciplinary teams are not available at schools for the SMH. Although a few Indian special schools do have speech therapists, they soon discover that it is a time consuming task for the therapist to assess every child in the school, let alone administer effective therapy to all those in need of it.
In the light of limited human and financial resources it is improbable that such teams will be appointed in the near future. Therefore class teachers have no other choice but to assess the SMH children themselves.

However, it is not an easy task to assess the SMH. The reasons being:

* The SMH child’s development is not in keeping with that of normal children – he displays "inter-individual differences" (Lerner et al 1987:139). He falls behind his peers and this discrepancy between body size and developmental level creates confusion for the teacher. The teacher finds it difficult to know at what level he must encounter the child.

* The developmental levels differ more among SMH children themselves than among a group of normal children (Cunningham & Sloper 1978:13). Thus there is no "normal" developmental rate for the SMH.

* The SMH children may even experience developmental differences within their own personality structure. This is also referred to as "intra-individual differences" (Lerner et al 1987:139). For example, his motor development may be that of a normal six-year old whereas his language development would be that of a two year old.

* The development of SMH children is not a steady developmental progress but often proceeds in plateaux. They may stay at one level for a long time before further development continues. They may even show regression (Hutt & Gibby 1976:249).
The careful assessment of language abilities is even more difficult because it is complex and involves many skills. Language has various components (cf. 1.2.1) and teachers require special knowledge on what to assess, how to assess, when to assess and what to do with the assessment data.

In practice no specific guidelines exist in South Africa. In the Diploma in Special Education (severe mental handicap) offered by UNISA, teachers who enrol for the course get some training. However, not all teachers enrol for this course. The Department of Indian Education also does not have guidelines for teaching-directed assessment of language which can be applied by the class teacher of the SMH.

1.4 STATEMENT OF THE PROBLEM

The problem experienced by the class teacher regarding language assessment as described above, brings the following question to the fore. According to which guidelines should teachers assess the language abilities of SMH Indian children in order to be able to plan appropriate and relevant individual language programmes for them?

1.5 AIMS OF STUDY
1.5.1 General aim

The general aim of this study is to formulate guidelines according to which teachers of SMH Indian children can assess the educational needs of each child in order to devise an appropriate programme of language intervention.
1.5.2 **Specific aims**

In order to reach the above-mentioned general aim, more specific aims are required, inter alia the following:

1) to describe the phenomenon of mental handicap and the development of SMH children;

2) to examine the phenomenon of language and to trace the normal development of language;

3) to examine the nature of language problems in general and of the SMH in particular;

4) to formulate criteria which may be used as broad or general guidelines to ensure that the assessments are scientifically based, and to devise specific guidelines according to which class teachers may assess the language needs of individual SMH children.

1.6 **METHOD OF STUDY**

This research is conducted by means of a literature study. Therefore the material presented is essentially of a descriptive and comparative nature rather than a statistical one. It is descriptive because it involves an in-depth description of the SMH child and his language problems. Simultaneously, it uses a description of normal language development as a baseline of comparison to reveal how the language of the SMH deviates from the "normal" development of language.

Although this investigation is concerned with the Indian SMH from Durban, references will be made to selected literature sources of British and American studies because of the lack of
research on the language and communication abilities of the SMH in South Africa. From various investigations, comparing the language of the SMH with that of the "normal" child, deductions about the language of the SMH child will be made.

1.7 THE FIELD OF STUDY

This study is undertaken in the field of Orthopedagogics. The Greek word "Orthopedagogics" is defined by Du Toit (1989:13) as "that sub-discipline of pedagogics which studies the problems concerning the education and instruction of children and the correction of such problems". It encompasses both the handicapped and non-handicapped child because central to the field of study is the "problematic education situation" and not the child "being different" (Du Toit 1985:17).

The aim of Orthopedagogics is to improve the quality of assistance rendered to children in problematic educational situations. According to Van Niekerk (Kapp 1989:16) it is the duty of the Orthopedagogue to diagnose and to discover the exact nature and extent of the problem before offering guidelines which would help to solve such a problem.

The SMH always remains within the framework of Orthopedagogics. His education does not necessarily go wrong but his handicap causes a complex education situation which requires Orthopedagogical reflection. Orthopedagogics studies those practical situations in which educational and teaching problems occur, and, using this information formulates guidelines to improve the quality of intervention. At the same time Orthopedagogics offers the educator criteria so that he can evaluate his own conduct and accountability (Du Toit 1989:14).
Since Orthopedagogics emphasises correcting the problematic aspects regarding the child or the educational situations, it would include orthodidactics. This Greek word is composed of "orthos" (straight, to straighten out) and "didaskein" (to teach). When analysed it means the "study of corrective teaching" (Du Toit 1989:15).

This study is orthodidactical in nature because the focus is on the teaching situation. It therefore makes use of didactical insights. However, Orthopedagogics, including Orthodidactics, is to a great extent dependent on insights gathered by allied sciences as well. Du Toit (1989:17) maintains that the child cannot be fully understood or helped unless notice is taken of the findings of these allied sciences. In this study, language and language development is investigated in depth. This will require making use of data gathered by language psychologists and linguistics. Simultaneously, an in-depth knowledge of the SMH requires insights from the medical field such as supplied by physiology, neurology, and paediatrics.

Therefore Orthopedagogics must sometimes cross the boundaries of pedagogics for the sake of those insights which are relevant to the study of the child so that assistance to the child in the problematic education situation can be rendered.

1.8 PLAN OF STUDY

This dissertation has been planned in the following manner:

* in chapter one the introduction, statement of the problem, demarcation of the field of study, aims of investigation, the method of research, and the programme of investigation are discussed;
* chapter two describes the phenomenon of mental handicap and the developmental characteristics of the SMH;

* chapter three discusses language, its structure and normal development;

* chapter four describes the language disorders and language characteristics of the SMH child;

* chapter five outlines general and specific guidelines for the class teacher for assessing the educational needs of the SMH children;

* chapter six contains a summary of the research, conclusions and recommendations for the practice as well as for future research.

1.9 CONCLUSION

Special education provisions for SMH children developed during the previous century, mainly as a result of the work of individuals such as Itard, Seguin, Howe and Guggenbühl. Today special education is regarded as a highly specialised and intensive form of education aimed at assisting handicapped individuals to reach their maximum potentials and attain the highest possible level of moral, independent adulthood possible for them.

In South Africa, at present, special education is controlled by various departments, according to race groups. The Indian Education Department provides special education for the Indian SMH. In Durban there are three special schools receiving state subsidies.
SMH children are educated according to a core curriculum which supplies general guidelines. But individual teaching programmes are required as well, especially in the area of language where the SMH experiences special difficulties. Before any such programme can be planned, careful assessments are required. This is no easy task.

In South Africa, class teachers have to take this responsibility without the assistance of professionals and without any specific guidelines.

This dissertation aims at supplying such guidelines. In order to do this, the phenomenon of mental handicap must first be investigated.
CHAPTER TWO

THE SEVERELY MENTALLY HANDICAPPED CHILD: A
DETAILED STUDY

2.1 INTRODUCTION

This chapter attempts to give an in-depth view of the severely mentally handicapped child (henceforth referred to as SMH). Although this study is concerned with the Indian SMH child in Durban, the lack of literature pertaining to the Indian SMH led to the use of Western literature on the SMH. Aspects of these are found to be pertinent to the Indian SMH. An in-depth study of the SMH is required so that the child can be seen in totality. This would facilitate an understanding of the possible problems such a child could be faced with. Furthermore, the communicative abilities and problems could be viewed against this background so that effective assessments could be carried out by the class teacher.

This study would first investigate the phenomenon of mental handicap by making a detailed study of its definition, classification, causes and characteristics. Then the implications of severe mental handicap on the development of the child will be examined.

2.2 DEFINITION
2.2.1 Difficulties in defining mental handicap

For over a century, scientists have sought to find an answer to the question: "What is mental handicap?" A variety of definitions have been proposed. The phenomenon of individuals who are not able to cope with the demands of life adequately is
as old as recorded history. In the Koran we learn "to treat foolish kindly" (Koran: 7), and in the Bible the prophet Jeremiah spoke about normal people acting foolish (Jeremiah, 4,22). The mentally handicapped have been referred to, in common terminology, as being stupid, slow and foolish. They have been labelled "idiots, imbeciles, morons" and "feebleminded" (Litton 1978:7).

Various persons and organisations use their own criteria for defining mental handicap to suit their needs (Matson & Mulick 1983:5). The label "mentally handicapped" is frequently misunderstood, both by the general public as well as by the professionals and is often used in a stigmatising manner (Taylor 1990:v). According to Rowitz (1989:287) such a labelling has negative effects on the life course of the individual who is labelled, as well as on their parents and siblings. This creates the situation where there is always lower expectations from the retarded children. This documented negative effect is confirmed by Bak and Siperstein (1986:95). Zigler and his co-authors (1984:215) argue that without a clear and universally accepted definition of mental handicap, efforts to understand its nature and improve the lives of the handicapped people must be seriously compromised.

Traditional attempts to define mental handicap can be placed roughly into three categories:

* definition based on intelligence test scores
* definition based on failure of social performance
* definition based on the cause or nature of the handicap
2.2.2 Definition based on intelligence

Some people have defined mental retardation solely in terms of the intelligence quotient (IQ) as measured by standardised intelligence tests. These tests were specifically designed to detect children who would not be able to benefit from a normal school curriculum, that is, the mentally retarded child (Ingalls 1986:54; Kirk & Gallagher 1989:133). One of the earliest of these tests was developed by Alfred Binet. With the aid of such a test, the person with an IQ of below 70 on a standard IQ test is regarded as mentally retarded (Barnett 1986:111; Matson & Mulick 1983:xii). The primary advantage of this definition is its reliability and objectivity. IQ's appear to be relatively stable and can therefore serve as a criterion of mental retardation (Hodapp & Zigler 1986:118).

However, Ingalls (1986:54) warns against defining mental retardation solely in terms of IQ. There are many cases where a handicapped child with a low IQ seems to make satisfactory adjustment to the environment. This supports Barnett's claim (1986:111) that mental retardation is determined by an interaction between an individual and his environment.

Furthermore, since IQ tests are verbally orientated, it discriminates against children whose native language is other than English (Ingalls 1986:54). Another factor against this idea is that a child's IQ is not always a reliable prediction of his adult intelligence. Researchers have found that IQ's are unstable in young children. Their IQ at 6 years of age may differ up to 20 points from that acquired at the age of 18 years (Ingalls 1978:39). One very pertinent criticism levelled against using IQ as the sole criterion, is the one by which McLaren and Richards (1986:304) maintained that those SMH who are functioning at lower levels often lack the expressive and receptive communication skills, motivation and behavioural
control which are pre-requisites for a valid IQ assessment. This view is also echoed by Snell (1987:42) who states that students with profound or severe handicaps do not even score on these IQ tests. However, in the absence of any other tests, the IQ test is still being used to classify the individual as "trainable" (Burton 1976:68).

2.2.3 Definition based on a failure in social adjustment

The issue of classifying a child as SMH is integrally related to the way one defines a disability. According to White (1985:166) definitions of disability, and consequently evaluation or assessment strategies, constantly change to reflect changing societal values and attitudes. For example, the change in defining mental handicap is seen in Grossman's definition (1983:1) which adds the concept of "adaptive behaviour". This definition moved away from the sole measurement of intelligence and moved towards the gathering of more meaningful and relevant information. Snell (1987:40) maintains that this added a new dimension to assessment, that is, the measurement of an individual's adaptation to environmental demands.

In current literature many definitions use the criterion of "adjustment to the environment and culture" (Whitman 1990:347; Kirk & Gallagher 1989:134). It was found that the SMH is incapable of adjusting to the environment and culture and therefore of leading an adult, independent life. As early as 1954, Benda defined the mentally retarded as "a person who is incapable of managing himself and his own affairs, or being taught to do so, and who requires the supervision, control and care for his own welfare and the welfare of the community" (1954:115).
This definition was not valid in all situations, as is seen in the cross-cultural studies cited in Barnett (1986:112). These studies suggest that cultures determine mental retardation differently because of variations in their social and economic structures. Therefore a person's efficiency is judged according to the important tasks that composed the daily life in a given culture. Thus an intellectually slow developer might be considered "normal" in a rural farming community; but considered "retarded" in a modern urban culture where a mastery of "languages and mathematics" is important (Kirk & Gallagher 1989:134).

This criterion of social adjustment is difficult to measure reliably. The most common method for assessing this behaviour is the informal judgement by teachers or others directly concerned with the child. This sometimes causes difficulty because different people have different ideas concerning what constitutes successful adaptive behaviour. In this light, one can understand Hodapp and Zigler (1986:65) urging the use of intellectual functioning in a definition because "social adaptation is itself undefined and simply too vague to have utility in a classification system".

2.2.4 Definition based on the essential cause of mental handicap

When a definition is centred around the actual causes of the retardation, it concerns the medical criterion. The definition used in the Soviet Union is based on this criterion.

The Soviet Union's definition of mental retardation is "a child who has been consistently impaired in cognitive processing, as a result of brain injury" (Gindis 1988:381). This is in addition to what Luria had cited in 1978 that "mentally retarded children ..... have suffered from a severe brain
disease while in the uterus or in early childhood, and this has disturbed the normal development of the brain and produced serious anomalies in their mental development" (Ingalls 1978:56). The characteristics of this irreversible brain injury are regarded as total impairment of higher psychological functions with many sensori-motor defects (Ingalls 1978:56).

In the USA, although the definition is not based on essential causes, there are a number of researchers who view the SMH in the context of a medical model and considered mental retardation as "pathological, incurable, causing the person to deviate from societal norms" (Weller & Aminadev 1989:281).

Zigler et al (1984:215) defined mental retardation as due to either catastrophic organic injury or genetic inheritance. Antonak et al (1989:96) claimed that mental retardation "cannot be cured in the medical sense because it is not a disease". If there is a disease which is detrimental to a person's development (for example phenylketonuria) that disease can be cured, thus preventing or reducing retardation. The problem with this criterion is that, although a large number of persons can be considered SMH, (according to intelligence and social criteria), when there are no signs of neurological damage, then they are excluded and not considered mentally handicapped (Du Toit 1989:342).

2.2.5 The definition of the American Association on Mental Retardation

The most universally accepted definition was devised by the American Association on Mental Retardation (AAMR). This reads:
"Mental retardation refers to significantly sub-average general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the development period" (Grossman 1983:1).

According to this definition, there are three criteria to be considered before a person can be classified as mentally retarded. These are:

* "significant sub-average intellectual functioning" - meaning that the IQ level of the concerned person must be at least two standard deviations below the norm for his age group (Ingalls 1986:56);

* "deficits in adaptive behavior" is the ability of the retardate to adjust to the demands of his/her natural social environment according to his/her age-mates;

* "the development period" is set as the period between birth and the eighteenth birthday of the person concerned. As this is seen as a developmental disorder, those adults whose intellectual powers have deteriorated because of senility or brain damage, are not considered retarded.

For an individual to be considered retarded, all three of the above criteria have to be met. There are many individuals who meet one or two of these criteria and are not considered retarded. The most important aspect of this definition is that it makes no reference to the cause, incurability or permanence of retardation.

However, according to this definition, one can infer that emotional disturbance, cultural deprivation or other adverse circumstances can also produce mental retardation, for example, autism. Kirk and Gallagher (1989:275-278) maintain that
although all autistic children are not mentally retarded, a large proportion are both retarded and autistic.

2.3 CLASSIFICATION

The classification of the mentally retarded has been no easy task. Just as there are various definitions of mental handicap, there are many systems proposed for the classification of the mentally handicapped. Early attempts to define and classify mental handicap were recorded in legal, medical and religious literature. According to Scheerenberger (1983:287) there are "references in ancient documents to a variety of handicapping conditions that we now regard as mental retardation". This history reveals the dilemma that professionals faced in diagnoses and differentiation of the condition from other physical and mental disorders.

It has been found that classification systems have been established for various purposes. These systems generally reflect the goals of those who devise them and the purposes that they will serve, for example, educators for educational placement in special schools; clinicians - to determine treatment; researchers - to define the population under study; policy-makers for regulations and the social security act for eligibility of disability. According to Matson and Mulick (1983:158) when classification is seen in this light, one can anticipate a certain amount of subjectivity, either in the classifier or the professional group or organisation which is using the classification system. In each case the system would be geared towards a certain objective which is devised by the particular organisation using the system. To add to this, Barnett (1986:112) claims that "a person is judged according to his ability to cope with the important tasks that compose daily life in a given culture". Therefore one cannot classify a person as mentally retarded in one society, by using a specific
set of criteria of classifying retardation which is developed for another society. One can conclude that classification requirements are therefore unique for a particular society in a particular period.

A number of researchers agree that there is no single "correct" system or valid set of rules for classification, and that classification of all types of mental handicap is complex. It would be correct to assume that no single approach is superior to the other because each reflects a different ideological perspective. Whatever the classification system used, it must at all times be practically effective for the individual who is being classified.

According to Lowitzer et al (1983:287) traditionally, classification was done to help in identifying characteristics and problems of an individual; the enumeration of a client's needs; the specification of treatment and intervention strategies and the determination of eligibility for services.

Zigler and Balla (1982:7) maintain that a classification system should benefit those classified by being helpful to their service provider. Over the years, efforts to label people as mentally retarded elicited both favourable and unfavourable commentary. Turnbull and Wheat maintain that classification of individuals as "mentally retarded/ handicapped", assigns them to lower echelons of life and to "second-class citizenship" (Matson & Mulick 1983:157). This also affects the self-concept of the handicapped individual. The favourable comment has been that classification or labelling is necessary "for the rational development and for provision of services to those with exceptional needs" (Lowitzer et al 1983:287).
The current classification system for the mentally retarded uses IQ, adaptive behaviour and etiology (Dunlap 1989:7). This study confines itself to the classification system for the education of the SMH. It would therefore concentrate on classification for placement in special schools.

The American Association on Mental Deficiency (AAMD) which recently changed its name to American Association on Mental Retardation - AAMR (Kirk & Gallagher 1989:132) has developed a system of "diagnostic" classification of the retarded based on the individual's level of functioning, principally determined by the Wechsler Scale Test (Ingalls 1986:54).

The AAMR's classification is:

* Mild mental retardation IQ 50/50 to 70
* Moderate mental retardation IQ 35/40 to 50/55
* Severe mental retardation IQ 20/25 to 35/40
* Profound mental retardation IQ below 20

(Kidd 1983:244).

This division is not followed in educational circles (Du Toit 1989:343).

In the USA, Ingalls (1986:61) states that the educational classifications of retarded children are:

* Educable mentally retarded (EMR: corresponds roughly to the mildly mentally retarded of AAMR)

* Trainable mentally retarded (TMR: corresponds roughly to moderately and severely mentally retarded)

* Severely mentally retarded (SMR: corresponds roughly to the severely and profoundly mentally retarded).
Educators have maintained that though IQ scores play an important role in placement, "specific skill levels and educational needs" of a given child, would determine into which of the three groups the retarded individual should be placed (Heward et al 1984:82). In Britain, under the Mental Health Act (1959), children with IQ 50-70 have been called "mentally sub-normal" (Woods 1975:174).

In most countries the mentally retarded are divided into three groups for educational purposes, namely:

<table>
<thead>
<tr>
<th>Group</th>
<th>IQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>50-75/79</td>
</tr>
<tr>
<td>II</td>
<td>25-49</td>
</tr>
<tr>
<td>III</td>
<td>0-24</td>
</tr>
</tbody>
</table>

(Du Toit 1988:343).

In South Africa, the educational report by the HSRC (1981:88 et seq) uses the same categories. Although IQ is no longer the decisive factor, there are other criteria which are considered. Refer to the detailed groupings in Chapter One (1.2.4). At present the following categories are being used:

1. Mildly (educable) mentally handicapped (Group I) - the child must:
   - have scholastic impairment
   - be too old for the ordinary class
   - have an IQ ranging between 50 and 79

2. Severely (trainable) mentally handicapped (Group II - SMH) - the child must:
   - have an IQ of approximately 30 - 50
   - be ineducable and exempt from compulsory schooling
- have a chronological age of 6-18 years at first admission

- be physically able to move to participate in the training programme

- be able to communicate meaningfully to make his needs known and to carry out instructions.

3. Mentally handicapped special-care children - these children must:

- have a very low intelligence figure: IQ 0-30

- be excluded from special schools for the SMH

All of the above refers particularly to White children. In the case of Indian children, the Indian Education Act (Act No. 61 of 1965) does not distinguish between educable and trainable children, with the result that trainable children may be admitted to the special schools which are under the control of the department concerned. However, mentally retarded, special care children are excluded (HSRC 1981:94).

Researchers agree that the SMH or TMR are not considered educable in academic achievements. They cannot, independently or socially adjust in the community, and they need total occupational adjustment at the adult level (Matson & Mulick 1983:5; Heward et al 1984:69; Kirk & Gallagher 1989:135). These children profit from systematic training in dressing, feeding and toiletting in special schools. The educational emphasis is on oral language development, self-help skills, socialisation and preparation for living and working in a sheltered environment (West Park School Brochure 1990:10).
2.4 PREVALENCE

In order to cater for the mentally handicapped, it is important to know how many mentally handicapped people are in the general population. This figure, known as prevalence or epidemiology, is usually expressed as the number of handicapped people per thousand people in the general population.

When determining prevalence of the mentally handicapped in South Africa, it would be wise to pay heed to the report of the work committee, education for children with special educational needs (HSRC 1981:128), which stated that "although figures are available for Western European countries, it is extremely risky to simply accept these figures for the heterogeneous population of South Africa". The most recent statistics available for the prevalence of the intellectually handicapped in South Africa is given by the Co-ordination Committee of the Year of the Disabled Persons (Durban Mental Health Society 1986:116) as 30 per 1 000: of which:

25 are mildly retarded
4 are severely retarded
1 is profoundly retarded (dependent on special care).

This percentage corresponds largely to the percentage of the actual number of pupils in White education in the Republic of South Africa who are receiving special education at the moment (Durban Mental Health Society 1986:116).

However, according to the findings of the South African Association for the Scientific Study of Mental Handicap (SAASSMH 1990:19), the above prevalence rate of 30/1 000 is considered a relatively "low" or conservative estimate especially for children under 19 years of age. A rate for mental retardation (IQ less than 50) of 4/1 000, is often
quoted, to pertain to individuals under the age of 19 years. This rate is slightly higher than the overall rate for IQ less than 50. It is estimated that 12% of the mentally handicapped fall in the IQ less than 50 group, which gives a rate of slightly more than 4/1 000 which is considered "more reliable compared with individuals in the higher than 19 age group" because at higher ages the mentally handicapped individuals tend to become less identifiable in the population (SAASSMH 1990:23).

However, it is difficult to determine the actual incidence of mental handicap. There are various factors which influence the results of the incidence/epidemiological studies. These are:

2.4.1 Criteria

According to McLaren and Bryson (1987:251) there is a genuine problem with the definition of mental handicap. Different agencies use different criteria for diagnosis, thus giving rise to discrepancies (Ingalls 1986:66). Furthermore it is not feasible to give everyone in the community an IQ test, therefore other criteria have to be used thereby making prevalence figures significantly different (Ingalls 1986:251).

2.4.2 Cut-off point

The problem of the particular classification system that is used by some agencies who use the higher cut-off point for the IQ, is that the incidence of the mentally handicapped increases. Thus those using the lower cut-off point will naturally affect the prevalence of the mentally handicapped (Ingalls 1986:251).
2.4.3 **Age**

Studies have shown that the prevalence of mental handicap tends to increase with age until about 20 years, after which it decreases (McLaren & Bryson 1987:244). In almost all the studies, the highest prevalence was between the ages of 10 and 20 years (McLaren & Bryson 1987:244).

Furthermore, there is evidence from several recent surveys of prevalence, which showed that a higher proportion of mental handicap was found in the school going age of the population than in the older groups. This suggests that many with mental handicap lost this designation when they became adults (Warren 1987:75; Kirk & Gallagher 1989:135; Ingalls 1986:74). Pre-school children and adults show a lower incidence, perhaps because they are not assessed in the same way as the school going child, who is confronted with the demands of intellectual achievement (Kirk & Gallagher 1989:127) or because there is no mechanism in society for systematic screening of their intellectual abilities (Ingalls 1986:74).

2.4.4 **Locating the SMH**

There is the general problem of locating all the handicapped in a given population. The usual method is to survey clinics and agencies for lists of cases but sometimes not all are reported (Ingalls 1986:66).

2.4.5 **Male-female ratio**

Most researchers found that mental handicap is consistently more prevalent in males. They report a male to female ratio of about 16:1 (McLaren & Bryson 1987:247; Kirk & Gallagher 1989:127; Ingalls 1978:72). One possible explanation could be, that males are more likely to be labelled because of sex-
role expectation than physiological difference (McLaren & Bryson 1987:247; Ingalls 1978:73). Fishback and Hull (McLaren & Bryson 1987:244) also found that marked differences which were apparent prior to 12 years became insignificant after that age, because, where the demands for intellectual competence are strongest, the gender differences are not found. Kirk and Gallagher (1989:127) are of the opinion that the prevalence in boys is higher than in girls, probably because the slower myelination of the neurons makes boys more susceptible to brain damage than girls. For the same reason Ingalls (1986:73) declares that male foetuses are more susceptible to various kinds of trauma than female foetuses.

2.4.6 **Socio-economic status**

The socio-economic status of a particular group play a part in affecting prevalence figures. The incidence of mental handicap (especially the milder form), is far greater in groups from low socio-economic level than from the higher income group (Kirk & Gallagher 1989:127; Ingalls 1986:75). According to Woods (1975:175) mental retardation is enhanced by poor living conditions and lack of opportunities for mental stimulation.

2.5 **CAUSES OF MENTAL HANDICAP**

2.5.1 **Two distinct categories of causal factors**

A clear distinction can be drawn between the causes of mild mental handicap (educable mentally handicapped) and the more severe levels of retardation (trainable and special care retardates). Ingalls (1986:103) refers to this as "two broad categories of mentally retarded people". These categories consist of:

* non-organic causes - mildly retarded;
specific organic causes – severely and profoundly retarded.

In South Africa, the Department of National Health and Population Development, in accordance with the United Nations Classification of Causes, divide the causes, for practical purposes, into genetic and non-genetic (acquired) factors. The latter may be further distinguished into biological factors (diseases), accidents and socio-cultural environmental factors (HSRC 1988:21).

2.5.1.1 Non-organic causes

The mildly retarded category includes those people for whom there is no apparent, organic cause for their lowered intellectual capacities. They make up 80-85% of the people identified as retarded (Heward & Orlansky 1984:86). Since there is no organic cause but there is a definite relation to cultural and familial factors, he calls it the "cultural-familial category" (Heward & Orlansky 1984:86). Ingalls (1986:103) further breaks this down to:

* culturally retarded (caused by the individual's psycho-social environment);

* familially retarded (caused by heredity);

* functionally retarded (individuals come from low-income families).

Poverty and social disorganisation in the home environment increases the health risks. It also contributes to early and progressive language defects and a variety of cognitive problems (Kirk & Gallagher 1989:144).
2.5.1.2 Organic causes

The severely and profoundly retarded category, which this dissertation is concerned with, are mostly "organically retarded" (Ingalls 1986:103). Their problems were believed to be "within the child" (Safford 1978:106). Dutton (1975:17) referred to this as "some underlying pathology which has led to arrested or incomplete development of the brain". Kirk and Gallagher (1989:139) look at "genetic, biochemical and polygenic influences on the affected child". Most recently, Burack and Zigler (1990:532) stated that organically retarded persons are those whose "intellectual potential has been thwarted by organic insult".

The parents of these children come from all levels of the population. The cause of their handicap is not connected with the level of intelligence of their parents or with their socio-economic level (Durban Mental Health Society 1986:4). According to Bowley and Gardner (1985:99), "explanations, instead, were on neurological lines ... the higher nervous system had suffered some kind of damage". All the known causes of retardation are biological or medical - referred to as "clinical or pathological (brain damage) retardation" (Heward & Orlansky 1984:86). These again can be divided into genetic disorders and brain damage.

2.5.2 Genetic disorders

According to the Department of National Health and Population Development in South Africa (HSRC 1988:21) approximately 4%, that is 1,2 million individuals, have a genetic defect. Studies have shown that human genetic abnormalities are so common that they involve "half of all human fertilization" (Kirk & Gallagher 1989:140). However, not all of them are associated with mental handicap. Although a number of genetic
disorders have been identified, there are three major classes of these disorders which are closely associated with mental handicap. These are:

* single gene disorders - transmitted by dominant, recessive or x-chromosome linked genes, for example, Phenylketonuria;

* multifactorial problems: transmitted by multifactorial combination of several genes interacting with the environment, for example, spina bifida;

* chromosomal disorders: abnormality resulting from meiotic errors occurring during the formation of the sperm or egg. It is not hereditary, for example, Down's syndrome.

2.5.2.1 Chromosomal disorders

It is a known, scientific fact that every human cell normally has 22 pairs of chromosomes which govern the broad range of developmental abilities and one pair of sex chromosomes which govern sex characteristics. However, any deviations in the numerical or structural chromosome make-up may produce serious mental and physical defects (Litton 1978:18) and hamper the normal development of the child (Du Toit 1989:349). Down syndrome is the most common of the clinical conditions associated with moderate and severe mental handicap. It is also known as "Mongolism" because of the slanted eyes (like the Mongols from the East), or as "Trisomy 21" because it is caused by the presence of an extra 21st chromosome (Du Toit 1989:350).
According to Carson et al (1988:477) about one in every 600 babies born in the United States of America is diagnosed as having Down’s syndrome. Woods (1975:185) extends this to "one in every 600 born throughout the world, from Greenland to Japan".

This condition has lifelong implications for physical appearance, intellectual achievement and general functioning. "They show their greatest deficit in verbal and language related skills" (Carson et al 1988:479). Children with Down's syndrome are more likely to be born to older mothers (Woods 1975:185) but, in recent decades, the majority of Down's syndrome babies were born to mothers under 35 years - "not a group for whom amniocentesis is routinely done" (Carson et al 1988:477).

The most common chromosomal disorder second to Down's syndrome and which is thought to constitute 40% of all X-linked mental handicap is the Fragile X Syndrome - FRA(X) (Curtis-Rogers & Simenson 1987:445). Other less common syndromes caused by chromosomal deviations are Turner's Syndrome, Klinefelter's Syndrome, Cri-du-chat and so on.

2.5.3 Brain damage

Brain damage is a direct cause of mental handicap (Ingalls 1986:267). There are many kinds of brain damage - ranging from minimal, hardly detectable states, to severe and obvious conditions. Most studies reveal that there is no single cause of brain damage. Each cause may indicate some unique feature, for example, hydrocephaly, microcephaly, cretinism. However, there does seem to be evidence of some form of brain damage, before (prenatal), during (perinatal) or after birth (postnatal).
2.5.3.1 Prenatal

Before birth, infectious diseases, for example rubella (German measles) can attack the nervous system which is just beginning to develop (Ingalls 1986:105; Kirk & Gallagher 1989:143). Some of the other causes may be:

* incompatibility of parents' blood
* overexposure to radiation
* malnutrition
* pathological condition of the mother
* excessive drinking of alcohol/drug-taking
* toxic agents
* syphilis and other viruses.

In all investigations, prenatal etiologies, including chromosomal disorders, is shown to be more common than perinatal or postnatal factors combined (McLaren & Bryson 1987:249).

2.5.3.2 Perinatal

During birth various complications can occur. These include birth trauma and physical injuries. The baby's brain may be injured as a result of a loss of oxygen (anoxia) during birth (Ingalls 1986:110) or incorrect method of delivery (McLaren & Bryson 1987:249). These perinatal factors are consistently found to account for about 11% of those with severe mental handicap (McLaren & Bryson 1987:249).

2.5.3.3 Postnatal

Postnatal causes of brain damage can be attributed to infections, for example, meningitis, or physical injuries from an accident or deliberate aggression, for example, child abuse.
However, in their studies of causal factors, McLaren and Bryson (1987:249) discovered less consistent findings. There were differences. They mention Hagberg and Kyllerman's (1983) review of Swedish studies which show that postnatal causes of mental handicap are four times as likely in urban areas as in rural areas. This suggests that city populations are at a greater risk for accidents, child abuse and severe infections. On the other hand, Ingalls (1986:11) states that the importance of postnatal physical injury, as a cause of mental handicap, is uncertain because parents often deny inflicting wounds on their children or of being negligent in caring for their young.

Interesting research points to large numbers of children in urban areas suffering from TBI (traumatic brain injury) caused by being run over by motor vehicles.

The very latest prediction which gives cause for great concern is the one made by Gray (1989:199) which states that "within 5 years, Human Immunodeficiency Virus (HIV) infection is projected to become the largest infectious cause of mental handicap and brain damage in children".

2.6 PHYSICAL CHARACTERISTICS

The most frequent condition accompanied by mental handicap is Down's syndrome, which was mentioned as a genetic disorder. It has about fifty physical signs characterising the condition (May 1988:17). Although the number of signs differ from one case to another, the overall physical appearance of these individuals is strikingly similar. According to Robinson and Robinson (1976:84), they have slanted eyes, which may have fine opacities of the lens, refractive errors or crossed eyes. The skin of the eyelids are abnormally thick. The face and nose are often "broad and flat" (Carson et al 1988:477). Their noses are small, with a low bridge. The physical features
considered important for this study are their small mouth cavities, thick slack lips and large fissured, protruding tongues. This could lead to difficulty with articulation.

According to Hallas et al (1982:69) these children are usually "mouth breathers and are prone to respiratory infections and common colds".

The SMH child is physically weaker than a normal child of similar chronological age. Very often the motor development is commensurate with his mental age (Griffiths & Russell 1985:186).

It was often thought that the terms "mental handicap and multiple handicap are synonymous" (Griffiths & Russell 1985:232). This is not the case. However, when mental handicap is present, it has a profound effect on the child's ability to cope with sensory, physical or other handicapping conditions.

2.6.1 Visual handicap

Very often these SMH children have a visual problem as well. Surveys in the United Kingdom suggested that 28% to 35% of visually handicapped children have severe intellectual retardation (Griffiths & Russell 1985:228). However, it is difficult to determine to what extent the visual handicap contributes to the general retardation.

2.6.2 Auditory handicap

Some of the SMH also experience auditory problems, and may have a hearing loss as a normal child, which would then need similar assessment and treatment.
2.6.3 Other handicapping conditions

The "other handicapping conditions" mentioned above refers to those conditions associated with brain damage, such as, epilepsy, cerebral palsy and autism (in varying degrees and in any combination). Therefore no two SMH individuals are handicapped in precisely the same manner. Each is an unique individual.

2.7 GENERAL CHARACTERISTICS OF THE SMH

There are distinct characteristics of mentally handicapped children which distinguishes them from their age-mates. Kirk and Gallagher (1989:150) maintain that by observing or interacting with these children, marked differences are found in several dimensions. Some of these are in: cognitive processes, physical and motor abilities, attention span, language acquisition and use and the affective domain.

Kirman (1975:137) found that a girl of 12 years, with a mental age of 6, may be bigger in size than her 6 year old sister, although smaller than an average, normal 12 year old. She may also be near puberty and show breast enlargement. She may be a little more self conscious than a 6 year old and a little more aware of boys and interested in dress and cosmetics. A big difference between this child and a normal 6 year old will be her speed of learning. She will take about twice as long to learn anything than the ordinary 6 year old, although she may have a good memory.

Having lived twice as long as the normal child, she may find her way about. However, in order to do a chore, she must be told repeatedly and she must be allowed to repeat an action many times till she has mastered it.
An attempt will be made to give a brief resume of these characteristics which may affect the communicative abilities of the SMH. However, before discussing the characteristics of the SMH, it is important to note that not all mentally retarded persons necessarily show the same characteristics (Du Toit 1989:354). It is logical to assume that because of the great variety of causal factors, there would be a correspondingly great variety of characteristics in these children. Even those children who are retarded because of the same cause, may differ totally, from one another. There would also be a qualitative difference between the characteristics of the mildly handicapped and those who are severely handicapped.

2.7.1 Cognitive development

The most obvious characteristic of the SMH is their limited cognitive ability. They display weaknesses in almost all aspects of cognitive functioning. Piaget's disciple, Barbel Inhelder (1943) applied aspects of his cognitive developmental theory to mental retardation (Ingalls 1986: 252). She found that retarded children progress through the same cognitive phases (sensori-motor, pre-operational and concrete operations) as normal children but that their rate of development is slower. However, she did note that the mildly mentally handicapped progressed no further than the concrete operational stage. The SMH remained in the pre-operational stage and the profoundly mentally handicapped remained in the sensori-motor stage (Inhelder 1968:324/325).

Ingalls (1986:225) found that no retarded child showed evidence of formal thought. Some of these retarded children greatly oscillated between the various stages. According to this developmental theory, if one wishes to describe the functioning of a particular retarded child, the child's mental age (M.A.) is generally a reasonable estimate of his capabilities, for
example, a 5 year old (M.A.) child is likely to perform at roughly the 5 year level in most areas of functioning. On the contrary, one has to be wary of adopting this system because, although these children may have a general impairment of intelligence, they may have "unevenness in the development of individual skills" (Myers 1989:85).

An important longitudinal survey undertaken by Stevens in 1974, on normal and retarded individuals, revealed that the cognitive development of retarded people begins to "level off sooner than in non-retarded people" (Ingalls 1986:255). This research also supported Inhelder's conclusion that no retarded child showed evidence of "formal thought". They showed deficiencies in tasks involving grouping, flexibility and reversibility which are necessary for concrete operational thought. She maintained that the SMH remained in the "pre-operational stage" (Inhelder 1968:324). Their thinking will be characterised by ego-centrism, transductive reasoning, irreversibility, realism and animism.

On the other hand, there are researchers who do not follow or mention Piaget's developmental theory. Kirk and Gallagher (1989:151) concentrate on understanding the elements which prevent the retarded from learning effectively by noting their "information processing". If the biological make-up of mentally retarded children is defective then their information processing will be impeded (Burack & Zigler 1990:538).

Information processing occurs in three major steps:

* what a child pays attention to (perceives), that is, visual reception;

* what problem-solving strategies are used in central processing;
what is his choice of action-expression.

In normal development, information from the environment (for example, objects, noises, experiences) are received and coded so that it can be kept in memory. Information about objects and relations between objects are coded as schemas, and these schemas influence the child's encounter with new and different events (Bloom & Lahey 1978:73). Piaget calls this "assimilation and accommodation" (Van den Aardweg & Van den Aardweg 1988:8). Thus infants interpret the world around them, form mental representations and categorise objects and events before they utter their first words. According to Mussen et al (1990:246) "they identify regularities in the environment and construct a system of meanings before they have acquired productive language". Although this processing of information begins at birth, just how children gradually represent the information in memory is still an unanswered question. According to Bloom and Lahey (1978:74) "it has everything to do with language".

Many retarded children have problems in processing the information they received (Kirk & Gallagher 1989:153). Beveridge and Conti-Ramsden (1987:101) state that such children cannot classify, organise and integrate information effectively. They are less able to group objects together whereas non-retarded children quickly learn to cluster events or objects into useful classes, for example, apples, pears and oranges become "fruit". Retarded children also have difficulty in showing how things are similar or different.

Throughout history, clinicians and linguists have attempted to understand "the processing disruptions" (Aram & Nation 1982:25) in language-disordered children. They have searched for neurological, sensory, perceptual, linguistic and cognitive processes as explanations for the processing events underlying
language behaviour. According to Ingalls (1986:208) one of the reasons could be that the retarded subjects have a defect in their short term memory.

In the following pages some specific cognitive defects which could have an influence on language acquisition will be looked into.

2.7.1.1 Cognition and rigidity

Researchers have found that rigidity is a specific defect of cognition in the mentally handicapped child. The SMH was found to be cognitively rigid as early as 1936, in an investigation conducted by Kurt Lewin (1936:210). This means that the SMH cannot think of new solutions or even form new associations. They tend to repeat the old cognitive actions continually. On the other hand, Kreitler et al (1990:558) discovered that retarded individuals are not "inherently rigid". They behave rigidly only when tasks are too difficult for them and not because of a quasi-organismic defect. A similar claim was made in the framework of motivational approach to rigidity by Zigler and Balla in 1982 (Kreitler et al 1990:558). They claimed that the SMH preferred to stay with their well-tried and previously successful ways of solving problems rather than to try a new solution for fear of failure. They would therefore "rely on other people rather than on their own thought processes" (Ingalls 1986:269).

Together with rigidity is their lack of originality. The SMH lack originality and creativity. They find it difficult to think of solutions themselves or to think of something new.
2.7.1.2 Cognition and memory

Another common characteristic of the cognition of the SMH is their poor short-term memory. Bernstein and Tiegerman (1985:183) state that the SMH exhibit significant forgetting of learned behaviour within only a short interval. This short-term memory deficiency may affect discriminative abilities. According to Ellis (1963:154), short-term memory of SMH shows a specific defect and the lower the intelligence, the poorer the individual's short-term memory.

Some researchers feel that this short-term memory defect can be attributed to the poor quality of the central nervous system (Ingalls 1986:208). Memory traces fail more rapidly because it is not intact. Another opinion is that the poor short-term memory could be related to perceptual deficits because they did not initially perceive something clearly or used poor judgement in applying previously stored information relevant to the situation (Kirk & Gallagher 1989:153). The quality of the impressions to be stored are poor right from the start. Ellis (1963:155) ascribed this limitation to the fact that the SMH's "sensory impressions are briefer and less intense" than those of normal people. It is more a neurophysiological defect. Later (in 1970) he gave a modified reason. This being: the SMH do not retain information by rehearsing it spontaneously (Ellis 1970:29). Bernstein and Tiegerman (1985:183) are of the opinion that information is transferred to long-term memory through rehearsal and repetition. This is supported by several researchers who have found short-term memory deficits in the SMH (Burack & Zigler 1990:533). Whereas non-retarded children use the strategy of rehearsal to memorise, these children do not. They find difficulty in selecting strategies to organise and control the flow of information through the memory system. The teacher must help the SMH to learn these strategies and apply them.
Furthermore, Lombaard (1982:40) explains that an attentive, active attitude towards the subject matter and the ability to arrange and systematise it are necessary to memorise this subject-matter. For the SMH who rarely attain the mental age (M.A.) of 6 years, this ability to arrange and systematise is rarely realised on a level higher than the affective. Berry and Eisonson (1970:395) are of the opinion that memory becomes defective because of "verbal difficulty". This view is supported by Ellis (1970:29) who calls it "inadequate language skills".

The researcher agrees with this view and maintains that without adequate verbalisation the situation attended to cannot be properly recorded or recalled. Furthermore, this limitation of the SMH may be regarded as one of his most significant learning problems.

The reasons for this short-term memory defect problem could therefore be manifold. In many cases it still remains only speculation. However, at present, the commonly accepted theory is that the SMH have short-term memory problems because they do not rehearse spontaneously. But it was found that when the handicapped were shown how to rehearse and asked to do it aloud - their performance improved (Ingalls 1986:211).

On the other hand, it was found that the long-term memory of the handicapped subjects do not differ dramatically from non-handicapped subjects (Ingalls 1986:212), and show no "significant limitation" (Ellis 1963:155). Once the SMH have succeeded in transferring information to the long-term memory, it is retained (Du Toit 1989:363).
Once an item is stored, no rehearsal or other organisational strategy is necessary to maintain it. The little research done in this area confirms the prediction that the SMH show no deficit in long-term memory relative to non-retarded subjects (Ingalls 1986:212). They do, however, experience problems in the retrieval or recalling of such stored information from long-term memory. This could be because of inefficient organization of information. As Yelon and Weinstein (1977:164) maintain that "the way in which information is organised for storage has a great deal to do with the ease with which the information is later retrieved". It is common knowledge, to people working with the SMH, that new information tends to confuse the child, perhaps because of the rigidity of his cognitive structure.

2.7.1.3 Cognition and transfer

Transfer is the ability to apply knowledge or insights gained from learning in one situation to another. Since transfer is closely correlated with intelligence (Du Toit 1989:364), the mentally handicapped child experiences problems in transfer. According to Wehman and McLaughlin (1981:93) transfer may be negative, where learning in the first situation hinders learning in the second situation, or positive, where learning in the first situation facilitates learning in the second situation.

Robinson and Robinson (1976:284) found that when these children learn new tasks they do not consider the outcomes of previous attempts. Therefore what the SMH has learned in one situation does not serve him in subsequent situations. He seems to only apply what he has learned to the very situations in which he initially learned them. This has implications for the language development in the SMH, for example, the SMH find difficulty in transferring and using the vocabulary they have learnt to new
situations. One of the reasons for this could be rigidity (cf. 2.7.1.1).

2.7.1.4 Cognition and attention

Attention includes awareness of a learning situation and active cognitive processing. According to Bernstein and Tiegerman (1985:179) SMH individuals appear to be deficient in their abilities to scan and attend selectively. Kirk and Gallagher (1989:152) found that the SMH "cannot pay attention to relevant aspects" of a problem.

The SMH often exhibit difficulties in identifying and maintaining attention to the relevant stimulus dimension. Thus reducing the individual's ability to compare new information with stored information from previous learning.

A further problem of these children is a characteristic also known as "distractibility" (Bowley & Gardner 1985:105).

This is a neurological dysfunction. In psychiatric terms it is referred to as ADD (Attention Deficit Disorder) or ADHD (Attention Deficit and Hyperactivity Disorder). Children experiencing this disorder tend to respond to too many stimuli at the same time, whether it be visual, auditory or tactile stimulation. Bowley and Gardner (1985:105), state that such children find it difficult to ignore irrelevant stimuli and therefore seem over attentive - but, to too many stimuli. According to Lombaard (1982:39) their concentration is easily disturbed by irrelevant perceptions which they are powerless to ignore. This is also referred to as "disinhibition", that is, the inability to inhibit irrelevant stimuli (Perry 1974:23).
Sometimes, this distractibility lies "within the child" (Berry & Eisonson 1970:395), as a symptom of some disorder (damage to the cortex) or it could lie "within the situation" (Bowley & Gardner 1985:106), which is either meaningless to the child, or confusing, because of the many background stimuli. At times the child is distracted by things which he can comprehend.

Studies by Zeaman (Routh 1973:3) have shown that the SMH have a very limited attention span. Attention only becomes involved attention when there are personal experiences involved, and there is an awareness of the environment (Sadler 1974:65). The SMH’s comprehension of the situation must be taken into account because only meaningful items or events will evoke their attention. If the situation is meaningless it may result in withdrawal of attentive attention.

The stunted awareness of the SMH could be a result of their "inability to interpret and organise" (Beveridge & Conti-Ramsden 1987:101). Sometimes this neurological dysfunction or trauma can cause the SMH to be attracted to the details of the object rather than its wholeness (gestalt). Therefore if the SMH is asked to describe a picture (shown to him), he may pick some irrelevant detail rather than describe the picture as a whole.

However, as the child develops, his attention to relevant stimuli increases. This can bring one to the conclusion that deficits in attention are closely tied to the developmental level, and that the SMH’s attentional capacity may be due to developmental immaturity, lack of understanding of the situation, neurological dysfunction or distractibility.
2.7.2 Perceptual development

Perception, according to Van den Aardweg and Van den Aardweg (1988:167) is the act of receiving information through the senses, that is, sight, sound, touch, smell and taste. It is also seen as a cognitive process (Thurman & Widerstrom 1985:34) because it provides meaning of the world to the individual perceiver.

However, sensation is the basis for perception, which in turn, is the first step in the information - processing model. Through one's perceptual processes one derives meaning from one's sensory experiences. As early as 1947, Strauss and Lehtinen stated that children with brain injuries incurred before, during or after birth are subject to major disorders in perception (Kirk & Gallagher 1989:212).

According to Lombaard (1982:40) the perceptions of the SMH are "superficial, incomplete and of a vague global nature". They have a particular difficulty in "figure-ground perception" (Ingalls 1986:153), that is, the ability to distinguish an object from its background. Thus when shown a picture, some SMH seem to attend to irrelevant details rather than concentrate on the main object.

Zigler and Balla (1982:102), maintain that the SMH prefer to use the visual rather than the auditory modality because the visual stimulus is more concrete than the auditory one, which has already been transferred to a less concrete code. Kirk and Gallagher (1989:189) found that these children may be able to identify objects by sight but fail to respond when the same stimuli are presented orally. However, as dysfunction in the visual perceptual sphere is associated with pathological brain conditions, many of these children would experience disordered visual perceptions. They may have difficulty in left-right
inversion, mistaking a "b" for a "d" or understanding "directional arrows or visual symbols, for example, grasping the meaning of pictures or numbers" (Ingalls 1986:153).

The SMH also have difficulty with auditory perception. Here too, the perceptions are brief and superficial. The poor quality of their perceptions is illustrated in the fact that they "do not easily distinguish between sounds that sound alike" (Du Toit 1989:358). These children may not be able to "understand or interpret spoken language" (Kirk & Gallagher 1989:189). This inability to interpret spoken language, for example, an oral description of an object, is considered a serious problem because so much learning is based on oral discussions. Aram and Nation (1982:42) emphasise that perception is important in the language development of the child.

Perceptually disordered children cannot cope with many factors in their environment, for example, an awareness of objects and their relationships to them. This can affect their body image, spatial orientation and visual closure, that is, seeing the whole picture from a presentation of a part.

2.7.3 Motor development

Researchers have found a correlation between the rate of motor development and intelligence. Kirk and Gallagher (1989:155) point out that these children score lower in motor proficiency than children of normal intelligence. This affects the quality of both gross and fine motor activities. Because, although there is a correlation between intelligence and motor development, meaning, that the same skills can be expected of the SMH child and the normal, younger child with the same mental age, the motor image of the SMH may be "qualitatively poorer" than that of the younger child (Du Toit 1986:85).
The movements of the SMH are often disharmonious and undirected and they display specific difficulties in both gross motor and fine motor activities.

2.7.3.1 Gross motor abilities

The gross motor development of the SMH seems to follow the same pattern as that of the normal child but at a much slower rate. He often reaches the developmental milestones (for example, sitting, crawling, walking) later than the normal child (Du Toit 1989:359). This retardation in motor functions continues throughout life. Many perceptual motor theorists believe that the SMH "may not have gone through the usual motor developmental stages" (Ingalls 1986:354).

The SMH child's gross motor movements are less well coordinated than those of the normal child. They appear to be awkward and clumsy (Du Toit 1989:359) and walk "with a stiff, robot-like gait" (Kirk & Gallagher 1989:156). They have slack muscles as well as low levels of fitness as most of them tend to be overweight. Perry (1974:20) states that they have less strength and become tired more easily. They move and act more slowly than normal children, especially when a quick reaction is expected from them. This was also mentioned by Ellis (1963:153) who maintained that their reaction was slow and that, according to the EEG, they have reduced activity of the central nervous system. Perry (1974:26) also points out that they do not learn motor skills incidentally. Everything has to be taught to them. This will impede exploration of the environment which normally enhances their language.
2.7.3.2 Fine motor skills

The SMH is especially handicapped in the area of fine motor development. This is especially seen in Down's syndrome children (Cratty 1974:51). Their hands are broad and clumsy-looking. In most Down's children, the little finger is curved and ends midway between the last and middle phalangeal joints of the third finger (Hallas et al 1982:68). Understandably they would experience problems in fine motor skills. This has serious implications for the non-verbal SMH who would have to learn sign language. Furthermore, if the SMH cannot manipulate objects with his hands, then, according to Bowley and Gardner (1985:108) it would reduce the information he could gain through manipulation.

It was found that with the SMH, the more complicated the skill that is required, the more pronounced is the child's inability (Du Toit 1989:359). This could have relevance for repeating difficult words and articulation in the development of communicative skills.

2.7.3.3 Understanding verbal directions

The SMH "lack the ability to understand verbal directions" when learning games or when performing tests (Cratty 1974:50). This is clearly observed in activities requiring co-ordination and understanding. Even those children who seem free of motor disability will display deficiencies in complex motor activities (Ingalls 1986:354).

2.7.3.4 Motor ability

Motor ability plays an important role in the total development of the child. Various motor activities help a child to become aware of his environment and gain a perceptual understanding of
it. Kephart (Perry 1974:19) emphasises the close relationship between motor and perceptual learning. He feels that through movement one learns about direction. Jeffree et al (1977:69) maintain that a lack of mobility would adversely affect other areas of development.

However, it was found that the overall motor activity of the SMH could improve with the correct type of training and exercises (Du Toit 1989:359).

2.7.4 Affective development of the SMH

A child's affect (feelings, emotions) has a tremendous influence on his whole person. The affect can be stable (positive feelings like happiness, self confidence) or unstable (negative feelings like fear and anxiety). When a child cannot cope with an unstable affect, he can unconsciously make use of defence mechanisms, such as aggression, regression or withdrawal. The SMH are less able to control their impulses and more prone to outbursts of emotion or aggression (Levy-Shiff et al 1990:547). The reason for this could be a defective ego. There is a correlation between a positive affect and self-concept. According to Freud, the normal function of the ego is to learn about reality, understand the result of one's actions, learn to delay gratification, and to control impulses so that tension may be released in a socially acceptable manner (Ingalls 1986:273).

The SMH would gradually gain an impression of his worth by the help of approval and praise of others. This builds up his positive self concept. Ingalls (1986:271) maintains that the SMH is deficient in all the above processes and thereby has a defective ego.
There is also a close relation between the affective development and the cognitive development of the SMH. Therefore, just as their cognitive development is low, their affect is on a much lower level than children of their own age.

Emotions of the SMH are more simple, less differentiated and more difficult to control. According to Jelgersma (Du Toit 1989:359) their emotions are "transient and easily changed". Many of the SMH are found to be emotionally labile, that is, they move rapidly from one emotional state to another with no apparent cause, that is, the SMH child may cry then suddenly start laughing (Ingalls 1986:267). This is similar behaviour to a young non-retarded child who is on the same level of development (that is, mental age).

It was observed that many children who were diagnosed as mentally retarded also have emotional problems (Ingalls 1986:270). At least 84% of the young retarded persons studied by Zetlin and Turner in 1985 (Levy-Shiff et al 1990:547) has some type of emotional or behavioural reaction that became apparent during adolescence.

There are a number of possible reasons for the SMH to experience affective/emotional problems.

2.7.4.1 Possible reasons for affective problems

1. Cognitive development

Cognitively, the SMH children perform at a very "concrete level" (Thurman & Widerstrom 1985:56). They have difficulty with perceiving concepts spontaneously.
The perceptions of the SMH are qualitatively poor and they cannot cope with many factors in their environment (cf 2.7.2). Furthermore, these SMH are also less able to perceive the incongruities in the environment, or to feel threatened. This was revealed in a study in 1981 (Levy-Shiff et al 1990:541 et seq), conducted on 42 Down’s syndrome children who were confronted by a stranger. It was found that there was an absence of outright fear in response to the stranger. This signified a higher threshold of arousal as compared with non-retarded children.

However, on the contrary, it was also found that these children have a low threshold to external sensory stimulation, for example, once these children are aroused it is very difficult to soothe them, for example, mother’s departure from a situation. Conrad-Wrzesinski (Levy-Shiff et al 1990:541 et seq) found that they feel anxiety and stress at fairly minor changes of routine, for example, if their regular school bus has broken down and they use another bus, the child may refuse to board the bus and start crying.

According to Bowley and Gardner (1985:114) this is partly the result of their neurological condition - such as a basic weakness in controlling their feelings under certain conditions of stress. It was found that children with brain damage experience five times as many tension-related problems as normal children (Robinson & Robinson 1976:238).

2. Parental reactions

Another reason could be the reaction of parents who often found it difficult to accept a handicapped child. According to Thurman and Widerstrom (1985:105) it is difficult for some parents to accept or provide trust to a child who is developmentally delayed. Because the child does not meet the
parent’s expectations, it would cause frustration and a sense of failure in the child.

This leads to deficits in the child’s self-concept and overall social and emotional development. Furthermore, very often parents are unsure how to handle their handicapped child (Du Toit 1989:360) and they could adversely affect the child’s affective development. The child feels rejected, not only by the parents, but by others whom the child comes in contact with, for example, by his peers in school, siblings and the neighbourhood children.

2.7.4.2 Personality traits

It has been found that SMH children tend to develop certain personality traits such as the following:

1. Poor self concept

The way an individual will feel about himself later in life will depend on his interaction with his parents and other social beings. Very often retarded children are not able to accomplish many of the tasks that are demanded by society. This leads to experiences of frustration and failure. Furthermore they are "isolated by their peers" (Ingalls 1986:264), rejected by friends in the neighbourhood either because they are too slow or that they do not understand the rules of the games they play.

To add to this, the SMH’s level of development is disproportionate, for example, his physical growth may be the same as non-retarded peers of the same mental age (M.A.) but his motor development may lag behind, causing his movements to be clumsy (Lombaard 1982:42). This further leads to rejection by his age group. Thus, this history of rejection
and failure causes the SMH to develop a negative self-concept. Du Toit (1989:360) maintains that having failed so often in the past, they accept in advance that they are unable to execute a task successfully on their own. They, therefore avoid undertaking new projects because they "expect to fail" (Levy-Shiff et al. 1990:54).

One can conclude that the SMH are failure-avoidant because they are afraid to try when they are confronted with a new situation. As Ingalls (1986:271) aptly states that they are less likely to "take the initiative to improve their lives". Many researchers believe that this constant fear of failure may reduce the level of successful problem-solving in the SMH (Kreitler et al. 1990:559). These factors lead the SMH to act in a manner less effective than those dictated by his potential. This lack of exploration on the part of the SMH, prevents a depth of experience and the child is then unable to grow intellectually, emotionally and socially.

2. Outer directedness

The SMH children "reveal little daring and easily fall into a peaceful passivity" (Lombaard 1982:41). They distrust their own abilities, perhaps because of a fear of failure, and become continually dependent on adult assistance and support for action from others in his immediate surroundings. Zigler and Balla (1982:33) referred to this as "outer-directedness".

3. Physical self

The SMH adolescents have difficulty in establishing a clear sense of their physical self. This could be, because of their inadequate perceptual and intellectual abilities. Their identity profiles "neither reflects a simple developmental lag nor parallels that of younger children, but rather displays a
unique profile of identity" (Levy-Shiff et al 1990:548).

It seems that because the SMH cannot plan ahead, they remain at the mercy of the situation in which they find themselves. They therefore become unduly influenced by their environmental forces which they cannot control. Levy-Shiff et al (1990:547) state that this can lead to behaviour problems.

4. Behavioural problems

Behavioural problems of various dimensions often occur in these children. The continual rejection, isolation and sense of failure are likely to result in "anxiety reactions and defence mechanisms" (Ingalls 1978:267). These tensions may be expressed in the form of serious behaviour problems, such as extreme aggression, withdrawal, regression and masturbation (Du Toit 1989:359). During adolescence, as in the non-retarded adolescent, the behaviour problems of the SMH are noticeably intensified. However, because of the dysfunctioning of the central nervous system (CNS), the SMH cannot control or overcome their feelings of tension and anxiety.

The abnormal CNS of the SMH also leads to perseveration. Sometimes, when a task is difficult, the SMH tend to "perseverate" (repetition of one action continuously) even though they want to co-operate (Kreitler et al 1990:559). In the same way a child may repeat a series of words repeatedly in a meaningless way, even though his original utterance made sense and was appropriate (Thurman & Widerstrom 1985:57). Although this problem is related to abnormal functioning of the CNS, it manifests itself as a behaviour problem.
5. Stereotyped behaviour

Stereotyped behaviour is characteristic of the SMH (Ingalls 1986:278; Schwartz et al 1986:625). This is any repetitious behaviour which has no apparent adaptive purpose, for example rocking, head-rolling, twirling fingers in front of eyes, jumping up and down, arm flapping or any form of self-destructive behaviour (that is, face-slapping, banging the head against a wall, chewing the fingers). According to Ingalls (1986:278) such behaviour seems to reduce tension in the SMH as it is known to increase when they are frustrated or aroused. According to some researchers, stereotyped behaviour has also been observed and documented in young non-handicapped infants (Schwartz et al 1986:626). This behaviour acts as stimulation for children living in basically unstimulating environments. Ingalls (1986:279) maintains that when stimulation increased, stereotyped behaviour reduces.

6. Hyperactivity

Hyperactive behaviour has been attributed by many to central nervous system damage (Perry 1974:22; Ingalls 1986:150). These SMH children move about at inappropriate times and usually cannot sit still for more than a few minutes. Although all children (including the non-handicapped) are active, these children’s activity "lacks direction" (Perry 1974:22) and is "aimless" (Ingalls 1986:151). The child flits from one thing to another on an apparently random basis and seems to have very little control over his behaviour. Cruickshank’s theory (Bowley & Gardner 1985:103) is that, in the normal brain, one of the functions of the cortex is to inhibit immediate motor reactions to a stimulus (partly to give us time to think before acting). In the brain damaged child this inhibitory function of the cortex seems to be reduced, "thus compelling the child to make immediate physical responses to what he sees and hears"
(Bowley & Gardner 1985:103). Thus his behaviour is regarded as impulsive and overactive.

In addition to this, these hyperactive children seem to have a very short attention span and they are easily distracted (Ingalls 1986:151). They continuously focus on irrelevant stimuli in the room rather than on one task.

Furthermore, they rarely sit or stand still long enough to attend sufficiently to learn very much about a particular toy or object in the room (Bowley & Gardner 1985:104). However attention disorders also occur in children who are not hyperactive.

7. Other behavioural problems

The SMH tend to have a very low tolerance level. Ingalls (1986:151) maintains that they overrespond emotionally to everyday situations, for example, either crying inappropriately, being excessively elated or becoming violent for no apparent reason. They are "not capable of logical reasoning and objective judgement" (Du Toit 1986:109).

According to Thurman and Widerstrom (1985:111), children work through their frustration by being aggressive towards others and thus aggression is related to frustration.

This aggressive behaviour of the SMH child causes social rejection by adults and peers. But this often leads to further aggressive behaviour as the SMH child seeks attention and recognition. It becomes a vicious circle and negatively affects the child's social development and may cause injury to others.
On the other extreme, some SMH children tend to withdraw and isolate themselves from others. Their experience of frustration and failure at not "managing to do what others do or what they themselves try to do" (Du Toit 1986:109) causes this disinclination to try and a tendency to withdraw into themselves.

Although these children experience various behavioural problems Hutt and Gibby (1976:247) explain that "these are not the result of the mental retardation per se, but of the emotional trauma that may be encountered as a result of it".

The SMH children find the world confusing. They do not always understand what is going on and cannot keep pace with the rate at which others live and act. They also fail to see the connection between cause and effect. Thus they become increasingly uncertain and afraid.

As a result, the mentally handicapped child's abilities are often rated lower than what they actually are. According to Du Toit (1989:360) this "passivity, disinterest and helplessness may so mask or conceal his abilities that he could be totally underestimated".

2.7.5 Social development of the mentally handicapped child

A child is part of a social milieu. However, according to Ingalls (1986:264), the mentally handicapped child is likely to have different social experiences than a non-retarded child. There is considerable evidence that the SMH tend to be isolated by their peers (Wiig & Semel 1976:3; Ingalls 1986:264; Beveridge & Conti-Ramsden 1987:101). The main cause of this rejection could be that the SMH is unable to learn many of the social skills that lead to acceptance and popularity, for example carrying on a conversation or playing games according
to rules with peers. Beveridge and Conti-Ramsden (1987:101) refer to these social skills as the "ground rules of social situation". This rejection could be because the SMH fails to understand the rules of a game, or because the SMH is usually too slow and too clumsy in his movements.

They are also prone to impulsive behaviour because they make an immediate physical response to what they see and hear, without reasoning or perceiving the implications of their response.

Some of the children talk excessively and fail to recognise social cues to stop. This behaviour may prevent peers from verbally interacting with them. On the other hand, some researchers have found that mentally handicapped children are non-assertive and differential with their non-handicapped peers (Beveridge & Conti-Ramsden 1987:101). These children also display a high incidence of solitary play (egocentric) and a general absence of social interaction among other children. They do not initiate interaction and have little success in influencing the behaviour of others.

Contrary to this, Beveridge and Conti-Ramsden (1987:101) found that when these SMH were observed in the classroom or outdoor recreational studies, they were found to be "verbally aggressive and hostile to their peers". These differences in behaviours may be attributed to the social linguistic demands of the particular situations in which they are engaged. Very often these children find difficulty in understanding the social demands of various situations.

One needs to be able to recognise the other's facial expression to receive the correct message. When the retarded are deficient in expressing their feelings or interpreting the feelings of others, perhaps because of their poor perceptual abilities, they will also often misinterpret the feelings of
others. This causes them to be frequently misunderstood and socially rejected. According to Ingalls (1986:265) the more a child is rejected by his peers the more he develops inappropriate strategies to overcome this problem, for example, aggression to get attention.

This becomes a vicious cycle because aggressive behaviour leads to more rejection and isolation. The isolation can lead to deviant personality and adjustment problems or to withdraw into themselves because they decide they are worthless.

Mental retardation is being recognised more and more as a "social problem". Ingalls (1986:265) maintain that it affects the individuals, their families and their communities. Furthermore, the label "mentally retarded" is stigmatising (Taylor 1989:5), both for the parents and the affected individual. Goffman (1963) feels that this stigma devalues the person and makes him feel less worthy than other people (Ingalls 1986:265).

2.7.5.1 Assets commonly not acknowledged

It is interesting to note the observations of Professor Wolf Wolfenberger (1988:63). He maintains that although most retarded people are deficient in many qualities valued by society, including all intellectual processes, they have certain "assets", that is, virtues, strengths, capacities, resources and prosocial resources. Some of these assets are: heart qualities, physical and spontaneous demonstration of their love, relating positively to people regardless of appearance or disability, trust and enjoyment of simple pleasures of life.
The phenomenon of mental handicap is multifaceted. It can be viewed from various perspectives. Various disciplines and organisations use their own criteria to define mental handicap to suit their needs. This therefore leads to variations in the definition, classification and prevalence of mental handicap.

The concept of mental handicap has changed drastically over the past few decades. It is no longer regarded as an inherited condition which is permanent but rather as a condition which may be caused by a number of adverse circumstances. Traditional attempts to define mental handicap can be roughly placed into three categories of definition, that is, on intelligence test scores, failure of social performance and on the cause or nature of the handicap. The most universally accepted definition is that of the American Association of Mental Retardation (cf 2.2.5).

For educational purposes the SMH are classified as educable (mildly) handicapped with IQ 50-75, trainable (severely) handicapped with IQ 25-49 and custodial (profoundly) handicapped with IQ 0-24.

There are two qualitatively different kinds of mental handicap which are distinguished by two distinct causal factors. These are the non-organic causes, and the specific organic causes.

Severe mental handicap can be considered an organical condition associated with brain damage due to detrimental factors operating in the pre-, peri- or postnatal phases. This leads to physical defects as well as developmental problems.
This investigation revealed that in most spheres of development, the mentally handicapped lagged behind their normal peers in both rate and quality of development. These mentally handicapped children are characterised by poor intellectual functioning. The most obvious characteristic of the SMH is their limited cognitive ability. They remain in the pre-operational stage (cf. 2.7.1). Furthermore, since their biological make-up is defective they experience difficulty in processing information received from the environment (cf. 2.7.1). Their lack of originality and rigidity causes their inability to solve problems because they cannot think in abstract terms.

They have a poor short-term memory (STM) which can be attributed to the poor quality of their central nervous system. It could also be attributed to their inability to rehearse information spontaneously. Added to this, they find difficulty in selecting strategies to organise and control the flow of information through their memory systems. This would cause their recall to be poor because they fail to store material systematically. They also find difficulty in transferring what they have learnt in one situation to another (cf. 2.7.1.3).

Since perception is dependent on cognitive development the perception of the SMH is superficial and incomplete, more especially their visual perception (cf. 2.7.2). The poor quality of their auditory perception causes difficulty in distinguishing sounds that are similar, thereby making it difficult to interpret spoken language. This has serious implication for learning language because so much of learning is based on oral language.

The motor development of the SMH reveals that their movements are disharmonious and undirected, displaying specific difficulties in gross and fine motor abilities. This impedes
the child’s exploration of his environment or manipulation of objects with his hands to gain information for his receptive repertoire (cf. 2.7.3.2).

The SMH are emotionally immature. Their emotions are transient and easily changed with no apparent cause. There are a number of reasons for this (cf. 2.7.4.1). Socially the mentally handicapped children are isolated and rejected by their peers. This is mainly because they are unable to learn many of the social skills that lead to acceptance and popularity. Furthermore, these children tend to prefer egocentric play and fail to initiate interaction whether in play or in communication.

Before the language of the SMH can be considered in detail, it would be necessary and appropriate to describe the nature of language and the manner in which it develops.
3.1 INTRODUCTION

A detailed study of the SMH reveals that these children are different from other children, and have distinctive needs and problems. Their development is seen to be retarded in most spheres, for example, social, cognitive, language and the affective. However, since this study is concerned with the language assessment of the SMH, special attention will be given to the language development of the SMH.

In order to facilitate an understanding of the language development and language problems experienced by the SMH, it would be appropriate to investigate what language is and how it normally develops. This would give one a frame of reference to understand the problems which SMH children usually experience in the area of language.

For this purpose, the following aspects of language have to be discussed:

* the components of language;
* the various theories of language;
* the factors affecting normal language development and normal language development.
3.2 EXPLANATION OF TERMINOLOGY

The terminology used in this chapter needs to be defined to facilitate an understanding of this chapter.

3.2.1 Communication

Communication is "a sharing, verbally and/or non-verbally, of experiences, happenings, knowledge, opinions and ideas" (Van den Aardweg & Van den Aardweg 1988:45). Jones and Cregan (1986:23) view it as the "intentional conveying of a message with or without spoken language".

Experience has taught that a child communicates with his family before he can talk. Communication involves at least two persons:

* one to present the idea/thought by speaking, writing or signing (that is, using gestures, body or manual signs);

* the other to receive the idea/thought by means of listening, reading or looking (at body language or manual signs).

It is common knowledge that communication is impacted on almost every aspect of our daily living. Bryen and Joyce (1985:9) maintain that communication is "usually self-initiated and spontaneous". It is used for various purposes, for example, to obtain such items as bus tickets, food and clothing, to give or obtain information, and, more important, for social interaction. The Grahams suggest that everyone, whether retarded or not, is judged by those he meets on the basis of his oral communicative abilities (Mussen et al 1990:187).
3.2.2 Language

Language refers to a system of conventionally acknowledged codes, and system of rules, by which thoughts are translated into a series of sound waves in order to communicate information. As was seen in Chapter One (cf. 1.2.1), the Van den Aardwegs (1988:131) refer to language as a "body of words and the ways of combining them so that man can express himself and communicate".

The importance of language cannot be underestimated. Currently, the most obvious function of language is to communicate ideas. Swanson and Watson (1982:172) describe it as the "main vehicle of communication" and, according to Van Schalkwyk (1982:1), language can be regarded as the basic instrument by which man, throughout the ages, has communicated with his fellow beings.

Because language is such a broad concept, distinctions are made between its various aspects. However, not all authors assign the same terms for the various aspects in their literature. For the purpose of this study, the following terms will be used:

* expressive language - recently referred to as "spoken" language (Papalia & Olds 1975:228) which means the ability to express ideas verbally or non-verbally by manual signs, body language, facial expression;

* receptive language - also referred to as "language comprehension" (Aram & Nation 1982:48) is the person’s ability to understand the language they hear.
Jones and Cregan (1986:23) maintain that language and communication are closely inter-connected. Van Etten et al (1980:234-235) believe that "acquisition of language ensures that the SMH will have greater opportunities to interact with siblings, neighbours and non-handicapped children at play".

3.2.3 **Speech**

Speech refers to the motor skill of pronouncing sounds or words. Mandell and Gold (1984:186) refer to speech as a physical process of transmitting the language orally. However, one must bear in mind that without language, speech would have no meaning and thus serve no purpose of enabling the speaker to communicate information to the listener.

Speech, which is a physical process of articulation, requires the normal development of muscles of the face, lips, chin, soft palate, tongue and larynx. Speech is also a mental process, and as such, is dependent on the learning of sounds, then words followed by language as a whole.

Apart from the above-mentioned physical and mental requirements, Ashton (1977:133) adds that speech is also dependent on adequate learning, adequate seeing and the interpretation of perceived stimuli. This is normally provided in two ways:

* by environmental stimuli;

* by the stimulation of the society in which the child develops.

Speech, which enables expressive language, requires the combination of particular sounds to create symbols (words). These are part of the spoken linguistic code agreed upon by the
society concerned. However, as Bryen and Joyce (1985:9) explain, both speech and language are means to the goal of communication, they are "not goals or ends unto themselves".

3.2.4 Non-verbal communication

According to the Van den Aardwegs (1988:155) non-verbal communication is communication through means other than words. These include gestures, facial expressions or general body movements. Throughout the world, one is aware that from birth a child communicates with his mother/caregiver, even before he can engage into the motor skills of speech. Furthermore, even the child who has learnt to talk often uses non-verbal means of communication, together with speech.

However, since this dissertation is concerned with the assessment of language, non-verbal communication will not be dealt with in great detail.

3.3 COMPONENTS OF LANGUAGE

There are five major components of language which are also referred to as "language subskills". These are described in the following five points. This is then followed by a model of language subskills which form the channels of communication.

3.3.1 Phonology

Phonology is the system of rules for combining speech sounds. It is also referred to as the "sound system of a language" (Du Toit 1986:43). The smallest unit of sound is called a phoneme. These phonemes are combined according to set rules to form morphemes, which are the smallest units of meaning in a language.
3.3.2 Morphology

Mandell and Gold (1984:187) define morphology as the "system of rules combining meaningful units (morphemes) into words". In the English language, the basic sounds (phonemes) which are combined to make words, correspond roughly to the sounds of the spoken letters of the alphabet. As mentioned already, the smallest meaningful unit of a language is the morpheme.

There are two types of morphemes. These are:

* the bound morpheme - this cannot stand on its own and is always a part of a word, for example, prefixes, suffixes, plurals and possessives;

* the unbound morpheme - this is a word that can stand alone, for example, cat, milk.

Words can be composed of one or many morphemes.

3.3.3 Syntactics

The word "syntactics" refers to a system of rules for meaningful combination of words into grammatical structure which is the structure of language. The morphemes are combined to form words which are then combined to form sentences. Rules of grammar are gained by studying the syntax of a language.

The sentence is the primary unit of communication. The ability to form grammatically correct sentences and the knowledge of how to express various relationships is referred to as language competence. Bloom and Lahey (1978:22) refer to language competence as a knowledge of language which guides the behaviour of speaking and understanding.
3.3.4 Semantics

This refers to the meaning of words and sentences. It is common knowledge that when one wishes to determine the meaning of a sentence, one does not only look at the meaning of each word, but one considers the context in which the words are used.

According to Aram and Nation (1982:22) the meaning of the words is largely determined by individual experience and what each person abstracts from that experience.

3.3.5 Pragmatics

Pragmatics is the way in which language is used in the environment (Lerner et al 1987:192). Aram and Nation (1982:23) describe it as "the intentions of the speaker during communication or the functions that language serves ........ how one modifies language according to contextual considerations, such as the age and relationship of the listener, the situation and so forth".

3.3.6 A model of language subskills for communication

The various components of language are represented in the following model by Salvia and Ysseldyke (1981:388).
### A model of language subskills for communication

<table>
<thead>
<tr>
<th>Reception</th>
<th>Phonology</th>
<th>Morphology and Syntax</th>
<th>Semantics</th>
<th>Ultimate Language Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hearing and discrimination of speech sounds</td>
<td>Understanding grammatical structure of language</td>
<td>Understanding vocabulary meaning concepts.</td>
<td>Understanding spoken language Reading.</td>
</tr>
<tr>
<td>Expression</td>
<td>Articulation of speech sounds</td>
<td>Using the grammatical structure of language</td>
<td>Using vocabulary meaning concepts.</td>
<td>Talking Writing (spelling).</td>
</tr>
</tbody>
</table>
3.4 THEORIES OF LANGUAGE ACQUISITION

In reviewing the available literature on language, it becomes evident that a number of theories of language acquisition can be distinguished. No single theory provides a sufficient or adequate explanation of all the processes underlying the acquisition of language. Mussen and his co-workers (1990:240) concede that each theory represents a different approach to the concerned issues and each basically deals with a different aspect of language development.

The following are the most important of these theories:

3.4.1 Behaviourist theory

The behaviourist theory of language acquisition was developed in the U.S.A. by John Watson (Safford 1978:6). This theory proposes that language is learned according to the same principles that hold true for the learning of other kinds of behaviour. They believe that reinforcement (reward) and imitation of models, are the basic mechanisms for the acquisition of language. These learning theorists are also of the opinion that an infant is not born with an intrinsic (innate) knowledge of language but gradually acquires language skills through reinforced imitation of models (parents and caregivers). They therefore stress "nurture rather than nature" as the most powerful influence on language development (Mussen et al 1990:240).

According to Aram and Nation (1982:78), the environment, and most importantly, the people in that environment, especially parents, determine the amount, quality and kind of learning experiences made available to the child.
These theorists also believe that since language is an observable behaviour, it can be taught (Mandell & Gold 1984:198). Therefore when environmental input is not optimal, language processing will be decreased because the child may have less to process and less to talk about.

Behaviourist theories concentrate on measurable language production rather than on explaining the child’s underlying capacities that enable him to acquire linguistic knowledge and skills. Critics of this theory argue that reinforcement alone cannot account for the astonishing rate of language development in young children, although it can have a considerable effect on language performance and language competence.

Modern linguistic theorists de-emphasise the role of imitation because some of the child’s first two-word utterances are "unique and they use language forms that they are unlikely to have heard from adults" (Mussen et al 1990:243). Although imitation and observations of others play a role in language production it cannot be the principle means of acquiring language. This was revealed in a survey done by Sternberg et al (1987:13). They emphasised the futility of teaching children to imitate merely one word or master one specific linguistic rule by using an isolated type of behavioural mode. They rather supported the idea of using children’s cognitive competence for providing meaning to linguistic or symbolic functions. Fromkin and Rodman (1978:251) aptly state:

"The reinforcement theory fails along with the imitation theory because neither of these views account for the fact that children are constructing their own rules as their language develops".
3.4.2 Nativist theory

The nativist theory of language acquisition, also called the Psycholinguistic Theory (Lerner 1985:263), was developed by Chomsky in the 1960's (Aram & Nation 1982:19). Proponents of this theory stress the influence of "nature rather than nurture" (Mussen et al 1990:243).

This view is concerned with explaining a child's competence or ability to understand (semantics) and use language. The child is regarded biologically as predisposed both to learn and to use language (Ingalls 1986:224). Much of the child's vocal apparatus - lungs, larynx and mouth seem to be designed specifically for speech.

As early as 1965, Noam Chomsky believed that the child could master the complexity of grammar because he is born with an innate knowledge of certain grammatical structures.

Chomsky further stated that all languages have the same basic logical structure and that a child will follow these logical rules even if he has never heard anyone speak in this way. He used an example from a child's language: "I goed to the store" (Chomsky 1965:59). In 1966 McNeill suggested that knowledge of the subject-predicate relationship, the verb-object relationship and the modifier-noun relationship might be pre-wired into the nervous system (Ingalls 1986:224).

Mussen et al (1990:244) maintain that the human brain mechanism is specialised for the job of acquiring language. Chomsky called this the Language Acquisition Device (LAD) (Mussen et al 1990:244). It was found that universally, all children learn their native language at roughly the same age, going through the same steps at roughly the same rate. This makes formal teaching unnecessary (Ingalls 1986:224; Lerner 1985:264).
Mussen et al (1990:244) report that some theorists believe that the brain is especially "ready" for language acquisition between the ages of eighteen months and twelve years. They call this the "sensitive period" for language acquisition. Within this period of development, language can be acquired normally, but outside this period, language acquisition is difficult, "if not impossible" (Elliott 1981:23). This is evident in the observation of people who have moved to a new culture where a different language is spoken. The young children learn the new language quickly, make few errors and speak without an accent, but the adults find learning the language difficult and they always retain their foreign accent (Mussen et al 1990:244).

Psycholinguists have also focused their attention on the mystery of the acquisition of language. Chomsky believes that the child does not learn a string of words but rather, "transformational rules" that enable him to generate an infinite variety of novel sentences and, accordingly, enable the listener to understand this variety of sentences (Lerner 1985:264). He called this "the theory of generative-transformational grammar" (Bloom & Lahey 1978:55). This is explained by Bloom and Lahey (1978:55) who maintain that Chomsky uses the word "generative":

* because it deals with the origin of sentences, that is, the rules that speakers and listeners are familiar with for deriving sentence structures;

* "transformational", because it transforms the underlying structure of a sentence, that is, the sentences that are possible in a language are related to one another according to their meaning and in terms of an underlying system of rules.
Essentially, Chomsky proposed that the grammar of a language is more than just a taxonomy of structures of sentence types. The psycholinguist's tasks is to analyse the process of language learning and production. The transition in language learning, from the simple stages of comprehension and expression to the stage where the child uses complex mechanisms of language, is very rapid (Lerner 1985:265). In that brief period of time, the child suddenly learns to use the mechanism of grammar. This led Chomsky to believe that the task of learning language is so complex that some aspects cannot be learnt but are innate within the child's brain. Mussen et al (1990:239) found that before normal children enter proper school they learn to understand the verbalisation of others and to respond in a meaningful way by internalising these language systems. This is revealed in the manner in which the child uses different tones and words when speaking to his peers and to adults. He further states that there is evidence that children think about grammatical rules. This is seen in instances in which a child makes a speech error, recognises it and spontaneously corrects it.

3.4.3 Cognitive theory

The cognitive theorists such as Piaget maintain another kind of nativist view. They believe that language development is dependent on certain cognitive, information-processing and motivational predispositions that are inborn (Mussen et al 1990:246). These theorists assume that children are inherently active and constructive and that the internal forces, rather than forces in the external environment, are chiefly responsible for these children acquiring language in the "absence of direct language instruction" (Mandell & Gold 1984:199).

Children identify rules (regularities) in the speech they hear around them. Dan Sloben proposed that children in all societies are equipped with certain information-processing
strategies that they use in learning the structure of language, which is then used in the process of learning to speak and understand (Mussen et al 1990:246). This is an amazing feat because no one painstakingly teaches a child these rules. According to Fromkin and Rodman (1978:254) they just "pick them up".

Children often surprise their adult caregivers or parents when they say the words or phrases which they could not have heard before. Furthermore, adults rarely repeat their sentences, especially when they are engaged in conversation. Therefore the child will seldom hear the same sentence more than once. One cannot, then, state that children learn language by imitating adult speech.

The development of meaningful language cannot occur in isolation. Adequate language development depends on a "nurturing environment" to give meaning and purpose to verbal interaction (Mandell & Gold 1984:186). It also depends on cognitive development because "cognitive development guides language acquisition" (Mussen et al 1990:248).

Pueschel and his co-authors (1987:235) refer to recent surveys which suggest a correlational relation in which language development proceeds generally at the rate of cognitive development but is nevertheless dependent on environmental events. Language may be slightly behind or ahead of cognitive skills. This view recognises the central role that the child's environment must play in language acquisition.

Sharing this view, Mandell and Gold (1984:199) emphasise the need of natural language settings with appropriate opportunities for the child to extract language structure and function. In the cognitive theory, in contrast to the behaviourist theory, the child's ability to use language is
considered to be of prime importance, therefore the emphasis is on semantics. For this reason Holliday, in 1975, described the development of language as a process through which the child gradually "learns how to mean" (Mandell & Gold 1984:199).

Authors such as Bloom and Lahey (1978:556) who also support this cognitively-orientated approach to language development, emphasise the functional aspects of learning. They maintain that form or structure of language is relevant only in its relationship to function. This view has implications for language intervention. They therefore do not recommend any language intervention in a highly structured setting which is isolated from real life experiences.

Another aspect of the cognitive theory, propounded by Piaget, (Mussen et al 1990:246) is that cognitive development directs language acquisition, that is, the development of language depends on the development of thought.

Piaget further maintains that thought originates independently of language. Therefore young children are observed using non-verbal symbols as in symbolic play. Here the child represents something without words. Furthermore, infants interpret the world around them even before they utter their first words. Many of Piaget's followers (Sinclair 1971, Bowerman 1981, Greenfield 1979) maintain that language acquisition does not begin until a number of important cognitive abilities have emerged in the child (Mussen et al 1990:246). This can be seen in children whose earliest utterances pertain to things they already know and understand.
3.4.4 Social interaction theory

One of the proponents of the social interaction theory was Bruner, who, in 1975, stated that very early in life the movements of young infants are synchronised with adult speech, thus laying the foundation for interactional participation and language acquisition (Aram & Nation 1982:55). This social interaction theory emphasises that interaction between children and adults is absolutely necessary if language skills are to develop. Children learn the language in social settings, by communicating with other people, usually the parents, siblings and other adult caregivers. This would also be the ideal place to informally assess these children's language ability.

These theorists argue that the structure or human language probably arose from the fact that language plays an important role in human social interaction (Mussen et al 1990:247). As Beveridge and Conti-Ramsden (1987:129) aptly state, that, however sophisticated a child's expressive language skills may be, they are unlikely to be of much effective use to him if for some reason he does not place himself in the social role of interaction.

Aram and Nation (1982:23) refer to this phenomenon as "the pragmatics of communication". The study of pragmatics concerns the intentions of the speaker during communication, as well as how one modifies language according to the context, the situation, the age and the relationship of the listener (Aram & Nation 1982:23). Children have to learn the social rules of communication, that is, using appropriate language according to the situation. This was termed "communicative competence" by Hymes in 1971 (Aram & Nation 1982:23). For example, the type of behaviour that occurs at a party may be very different from the type of verbal behaviour that occurs in a classroom.
Mussen et al (1990:253) refer to verbal behaviour as "the ability to say the appropriate thing at the appropriate time and place to the appropriate listeners and in relation to the appropriate topics".

Learning social rules of communication is as important to language as is syntactic or semantic achievements. In the process of learning, children give their parents clues that provoke them to supply the language experience the child needs. The social interaction theorists regard the adult-child dyad as a "dynamic system, in which each party requires the other" (Mussen et al 1990:248). These theorists stress the importance of the manner in which parents speak to their children. This includes the non-verbal information, like gestures or frowning, in order to help the child to understand what they are saying (Mussen et al 1990:248).

Proponents of this theory, claim that "innate mechanisms" alone cannot explain the child's mastery of language (Mussen et al 1990:248) but other factors also play a part, such as role of experience, role of biology and the specific environment of the child. When one considers the "wild boy of Aveyron", who was discovered in 1978 in a forest in France, one finds enough evidence to support this theory. He displayed all the mannerisms of an animal, even making the guttural sounds of an animal (Du Toit 1985:42). The physician, Jean Itard, worked with him and thereby proved that the child's intelligence could be developed with "the right kind and the right quantity of sensory stimuli" (Lieberman 1982:566-568).

### 3.4.5 A theoretical framework for language development

From the above theory, the following conclusion is drawn and this will serve as a theoretical framework for the study of language development. The various theories of language
reveals that no single theory could be entirely correct in its explanation. However, aspects of the various theories discussed, are more conducive to the purpose of this study.

Linguistic development seems to be a combination of viewpoints, that is, children do enter the world with an inborn capacity to acquire language, which is then activated by learning the language from adults in their environment.

The following aspects of the various theories can be extracted:

* from the behaviourist theory (cf. 3.4.1) - that the environment and especially the people, whom the child observes and imitates, play a role in language development;

* from the nativist theory (cf. 3.4.2) - that the child is born with an innate knowledge of certain grammatical structures and that language learning only occurs at a certain phase in the development of the child;

* from the cognitive theory (cf. 3.4.3) - that nature rather than nurture makes children acquire language, in the absence of direct language instruction. Their inborn cognitive, information-processing predispositions enhance their ability to understand what they hear, that is, receptive language (cf. 3.2.2);

* from the social-interaction theory - social interaction between children and adults is necessary for developing language skills, especially language production, that is, expressive language (cf. 3.2.2).
If there has to be meaningful development of language, the child must have the opportunity to hear the spoken language, be active in exploring so as to learn about the environment, and to socially interact both with parents/caregivers and the people around him.

3.5 FACTORS WHICH CONTRIBUTE TO NORMAL LANGUAGE DEVELOPMENT

As noted above, language development is not an automatic process, instead, it is shaped by the development of aspects which are interactive. These are:

* intrinsic (within the child) - the biological and neurological lines of development (based on the nativist theory);

* extrinsic (external) - the environmental interactions (based on both the behaviourist and social interactionist theories).

In the ensuing pages, an attempt will be made to describe these factors in greater detail. This will be based on information gained from the following authors: Griffiths and Russell (1985); Du Toit (1989); Mussen et al (1990); Aram and Nation (1982) and a few others.

3.5.1 Intrinsic factors

3.5.1.1 Physical factors

Normal speech requires well-formed and sound hearing and speech organs. As noted in 3.4.2 the child is born with vocal apparatus which are specially designed for speech. These are the tongue, lips, mouth muscles and vocal cords. Any defective speech organs will seriously impede the development of expressive language. As Griffiths and Russell (1985:144) aptly state, the actual production of
expressive language involves a complicated and co-ordinated series of physical events which are programmed by the central nervous system. The physical process involves the expiration of air from the lungs. This air vibrates the vocal cords in the larynx. Thus the ensuing sound created is amplified in the mouth and given the characteristic articulatory patterns by the movements of the tongue and lips. Defective speech organs will naturally impede the development of expressive language.

3.5.1.2 Neurological factors

In normal language development, children require a specialised organisation of higher brain structures. The brain is an incredibly complex and flexible organ, because both hemispheres of the brain share many functions and either can take over functions if an emergency arises, for example, an injury to one hemisphere of the brain.

However, according to Aram and Nation (1982:55) these hemispheres are not equal in their ability to process language. After the age of twelve, the brain loses this flexibility (cf. 3.4.2). Thus the age at which cerebral disturbance or injury to the brain occurs, will affect the ability of the remaining intact hemisphere of taking over the function of the damaged area.

Furthermore, the rate of neurological maturation will also influence the child’s language development. Thus boys seem slower than girls in the process of language development. In Chapter Two (cf. 2.4.5) it was seen that the myelination of the neurons take longer to mature in boys than girls. This could be the reason for the delay. However, according to Aram and Nation (1982:598), the delay found among boys could be accounted for on "the basis of differences in the neurologic organisation between the sexes".
As a rule, the left side of the brain is dominant in right-handed persons. However, approximately 98% of the people have their language and speech centres localised in the dominant hemisphere of the brain (Noback & Demarest 1975:474). The area of Broca, at the side of the frontal lobe is implicated in the production of speech sounds (expressive language) (Botha 1989:268). Researchers who studied head injuries on soldiers found that an injury to the left speech area almost invariably developed expressive aphasia, that is, an inability to utter speech (Russell & Dewar 1975:7).

A German neurologist, Wernicke, identified, in 1871, an area at the side of the temporal lobe as being responsible for decoding the spoken language heard (for receptive language) (Botha 1989:269). The two areas are connected by subcortical fibres called the arcuate fascicules. Understandably, inadequate functioning of this area could lead to reduced ability to discriminate between various sounds and serious damage could lead to receptive aphasia (the inability to interpret spoken language).

3.5.1.3 Cognitive development

Cognitive development has a direct influence on children's language development. According to Garrard (1989:11) children's cognitive development (or intelligence) plays an important role especially in making the learning of language possible. Piaget and other cognitive psychologists maintain that language development is "an aspect of cognitive development and hence reflects rather than directs cognitive progress" (Mussen et al 1990:248). For them, language is not a fore-runner of cognitive development, it is only one manifestation of a more general symbolic system whose development causes constraints and paces the major events of early language acquisition (Thal et al 1989:489).
Although Wilkinson (1982:78) maintains that it is commonly agreed that there is a "close relationship between language and thought (cognition)", Piaget states that thought (cognition) originates independently of language (cf. 3.4.3). They identify regularities in the environment and construct a system of meaning before they have acquired productive language. Thus Mussen et al (1990:200) concurs that language is "mapped" onto the child's existing cognitive categories and knowledge. Piaget firmly believed that thought preceded language and that language was only one means of symbolising (Wilkinson 1982:79).

Language acquisition does not begin until important cognitive abilities such as object-permanence, have emerged. This is illustrated in a young child who cannot master the meaning of the word "gone" until he has first grasped the concept of object permanence, together with the understanding of the disappearance of the object (Mussen et al 1990:249).

There is evidence that language and cognitive skills tend to appear within the same period, although not necessarily in a cognition-first sequence (Rice 1983:347). As cognitive competence increases, between infancy and the age of four, the child's language abilities also expand enormously. According to Miller and Chapman (1984:538), the cognitive level is a useful predictor of linguistic goals when chronological age is useless.

The fact that a child can repeat a well-formed, multi-word utterance of a mature language user, does not necessarily mean he had "internalised its abstract, underlying, syntactic structures" (Gollin 1984:212). Learning a form for coding ideas of the world, and learning how to use symbols to represent these ideas, are interrelated and dependent on a child's cognitive ability in general.
This cognitive ability will enable the child to transfer knowledge gained from learning in one situation to another. Ezell and Goldstein (1989:49) call the ability to transfer acquired linguistic rules which are needed to comprehend and formulate novel utterances - generative language. In their study they found that teaching receptive responses by verbal rehearsal or imitation facilitated transfer to the expressive modality.

3.5.1.4 Motor abilities

The motor abilities of a child could affect the development of his language. He must have good motor co-ordination. Kephart (Perry 1974:19) emphasised that through movement one learns about direction. Furthermore, since the child learns by experience, he needs to be physically mobile. This would facilitate active involvement in his environment. Children learn by doing, seeing and hearing things themselves. They learn by experience. The child must be able to reach out and grasp things, investigating them by handling and/or tasting them. This practical involvement is more conducive to language development than being passive or remaining in one area of the environment. Motor ability plays an important role in the total development of the child. Various motor activities help him to become aware of his environment and gain a perceptual understanding of it.

3.5.2 Extrinsic factors
3.5.2.1 Environmental influences

A child does not develop in isolation but instead he grows within a framework of a multidimensional environment. He is in continuous interaction with his environment which also provides the communicative context to which he must respond. As noted in 3.4, the various theorists of language development noted the importance of environmental influences on children's language development. The modern view of
language development sees the child as an active seeker and processor of new information, as he selectively pays attention to the environment. According to Bloom and Lahey (1978:267), language learning is largely determined by the ways in which individuals in the environment respond and react to what children say and do. This view is supported by Aram and Nation (1982:53), who state that children learn the language spoken in their environment, that is, they grow up to speak the language they hear. Mussen et al (1990:205) continue in the same vein by stating that children learn language in social settings when they communicate with other people. This view led theorists to believe that it is the mother who shapes the child’s early linguistic environment.

Mussen et al (1990:251) cite an experiment where a comparison was made of the speech of mothers. Two groups of children, where, one group were, and the other group were not, making normal progress in language, were used. It was found that although the sentences used by these two groups of mothers did not differ in simplicity or length, the mothers of children whose language was accelerated, spoke clearly, made fewer ambiguous statements, responded to their utterances and allowed their children to lead in conversation. This supports the learning theory and the social interactionist’s view that environmental input is important in language development.

According to Lerner et al (1987:196) to learn language one must have sufficient experiences, stimulation and feedback. Among the environmental factors known to impede language development are multiple births and crowded living conditions. Therefore, one can assume that a large family provides more communicative stimulation than a small family. The more language the child hears and the more he is encouraged to participate in his environment, the quicker will he learn. Encouraging feedbacks and rewards, such as praise and love will enhance language development.
This learning or processing of information about the environment begins at birth. The more experience infants have, the more their attention is drawn to the constancies and inconstancies in the environment. Child language is eventually formed by the child representing his experiences (schema) in his cognition. According to Bloom and Lahey (1978:74), "language is a form of coding represented information (schema) into messages". Children learn to understand language and to use language that makes reference to what they know about objects and events in the world. This begins at birth.

Children are constantly moving in respect to their backgrounds, for example, child is picked up/put down, rocked and carried around - by an adult or older child. These movements in space result in the child beginning a mental representation of his spatial context. Other objects also move, for example, mother comes and goes from view, the blanket/pyjamas is only brought out at a certain time.

Bloom and Lahey (1978:75) mention several studies which reveal that the earliest words children say and understand, refer to moving objects. These experiences contribute to the process whereby information about objects and events is represented or coded in memory. Learning about object permanence enables the child not only to recall the object when learning a word but also to use the word to talk about the object.

3.5.2.2 Socio-economic status

The socio-economic status of the family from which a child hails, will determine the type of experience he may have, and the environment he is exposed to. This socio-economic factor is closely related to environmental influences on language development. When children have learnt the words, they grow up to speak the language they hear. Since
children imitate the language of their caregivers, if they hear a poor quality of the spoken language, they will automatically learn the language in this way.

Children from middle-class, well-educated families generally score higher than those children whose parents did not complete high school on, practically, all standard measures of linguistic abilities, that is, vocabulary, sentence structure, sound discrimination and articulation (Mussen et al 1990:252).

One reason for this might be the different types of speech used by mothers in these social-class groups. According to Mussen et al (1990:252) lower class mothers typically use a restricted language code, talking to their children in short simple, easily understood sentences that refer primarily to the here and now events. Middle class mothers on the other hand, use more complex sentences. These complex codes enable older children to be more orientated towards abstraction, generalisations and social relationships. Lower-class children might think in more concrete and less conceptual terms and be more likely to have difficulty in school and in tests of cognitive ability.

Mussen et al (1990:358) also found that children from economically disadvantaged minority groups in both the United States of America and Europe obtain lower IQ scores and perform less well at school than the average child from the majority group in the same country.

This could be because of lack of experiences or negative experiences in their families, neighbourhood, schools, events associated with economic disadvantage and racial discrimination. These children also have fewer toys to play with, are seldom taken out or exposed to stimulating environments.
However, it was found that children who were born of low class parents but were adopted by middle class parents, scored higher than their biological siblings who were left behind in their original environment (Mussen et al 1990:358).

3.5.2.3 Parenting styles

According to Mussen et al (1990:363) parenting styles can be authoritative or authoritarian. They explain this as follows:

1. Authoritative parents are moderately affectionate enforcing rules firmly (sometimes using punishment) but they explain the reasons for rules and involve their children in decision-making, about these rules. They encourage their children to enter into a healthy discussion, a verbal give-and-take. Most of the affluent or upper and middle class parents fall in this group, although there are exceptions. Hess and Shipman (1965:870) add that middle class mothers who were authoritative tended to use more rational and person-orientated means of control. They used 60% more verbal instruction, longer and more complex sentences and less criticism of the child.

2. The authoritarian parents, by contrast, are strict and emphasise unquestioning obedience and respect for authority. They discourage verbal give-and-take, and are not very affectionate. Lower class mothers tend to discipline by appealing to authority rather than by logical explanations, for example, "Do as I tell you to do". They use less language and are restrictive and discouraging. Nicholas (1986:174) maintains that parents who gave a great many commands and who were very intrusive had children who learned language slower than others. It is often stated that overt correction
by adults play no role in the acquisition of language. Later these children are also likely to have language disorders. Dornbusch et al (1987:124) maintain that children of these parents usually show very low grades in schools, are usually more hostile and resistant to authority and showed poor competence in language.

As mentioned in 3.5.2.2 parents' speech to children provide a model for their children's speech and language development.

Children grow up to speak whatever language they hear, for example, a "German-born child will learn German, a French-born child will learn French" (Aram & Nation 1982:53). Numerous studies have confirmed that "motherese" or child-directed language (Bloom & Lahey 1978; Nicholas 1986; Mussen et al 1990), spoken by the mother to her baby, may facilitate early language development. Papalia and Olds (1975:228-229) cited one study of women, both mothers and non-mothers. They found that these women spoke differently to two-year olds and ten-year olds, in their choice of words, the speed of speech, the pitch and intonation, together with the number of repetitions.

A facilitating mother would not correct or insist on the child’s accuracy of pronunciation but would rather correct the accurate use of the word and the meaning of the word. This could be justified when one considers the claim made by Nicholas (1986:175) that "phonemes are acquired in a rather fixed sequence". Therefore one should not demand accurate production of words before the maturation of the physiological speech mechanisms. This could lead to emotional distress in the child concerned.

However, all considered, learning does take place. Over a period of time, children adjust their production of words so that their speech resembles that of their parents and peers.
3.6 NORMAL DEVELOPMENT OF LANGUAGE

3.6.1 Normal language development

In normal language development, a pattern can be distinguished in which there is both a horizontal and vertical development, as the child grows older. According to Papalia and Olds (1975:188) researchers have discovered that all children, of all nations, and all cultures reveal this pattern in their language development. A description of the various stages of language development follows.

3.6.2 Language developmental milestones

Although theorists may differ on the acquisition of language, most linguists agree on the sequence of language development during the first five years of life.

3.6.2.1 The first year

The baby's first cry after birth is usually regarded as the "initial precursor to language" (Polloway & Smith 1982:21). However, the child does not appear to progress in a neat, stage-by-stage manner, mastering one language skill before proceeding to the next. According to Van Hattum (1979:25) the child expressively produces the skills he has mastered while receptively learning new skills. Therefore although developmental milestones are presented, one must bear in mind that there is a wide variation in individual development.

Initially the baby's crying is fairly monotonous and is regarded as "non-purposeful crying behaviour" (Van Hattum 1979:25). At this stage too, the child begins random vocalising which is other than crying, like small throaty noises. He would also react to sudden, loud noises, but is quietened by the sound of a familiar, friendly voice.
During the second month, the child's repertoire of sounds increases rapidly. He begins to cry in response to the environment. His cries soon become differentiated so that parents begin to distinguish between crying from hunger, from pain or from temper. The child begins giving direct attention to the speaking voice, appearing to listen by looking and smiling. He begins to babble (that is, where syllable-like sounds are made). These early sounds can also be viewed as the child exercising the phonological aspect of language or as the child's earliest communication attempts with his caregiver/mother to gain attention.

During the third and fourth month the child may initiate social crying to gain attention. She recognizes most of his needs by the manner in which he cries. Polloway and Smith (1982:21) maintain that the child learns that language is the vehicle for controlling his environment. This early interactive stage is of considerable importance and talking to the child during feeding, bathing or dressing is a powerful environmental factor for promoting linguistic development in the child. He becomes increasingly aware of the sights and sounds of the environment. By hearing sounds in his home the infant begins to match his own production of sounds to them. In this way he is also beginning to learn the language he hears which is most often the language of his culture (cf. 3.5.2.3).

At first the infant plays with sounds just as much as he plays with his fingers. According to Hallas et al (1982:123) these sounds or babble, is produced by the child, for the child, largely because it is enjoyable.

Infants cannot produce any basic sounds (phonemes) which are necessary for true speech. The reason for this, according to Mussen et al (1990:223), is that the speech areas of the brain and their connections to the vocal cords are not sufficiently maturated yet to produce the phonemes.
However, even though they cannot produce phonemes, according to Berko-Gleason (1985:2), there is data available which reveals that infants are physiologically equipped to process incoming speech signals and make fine distinctions among speech sounds. This echoes Hallas et al.'s (1982:122) view that the child displays a sensitivity to the intonational patterns of the caregiver's/mother's voice. Thus by three to four months of age the child responds to angry vocal tones by crying, and to pleasant tones by cooing. He also laughs aloud when played with.

He begins to combine vowel and consonant sounds which resemble those of the child's language environment. Adults interacting with the child reinforce these sounds because they interpret these combined sounds as speech, "ma-ma" (as mother), "da-da" (as father), and have incorporated them as words in their language. The caregivers associate these sounds with particular objects and people in the child's environment. Their understanding and use of verbal symbols is built on this foundation. At this stage the adult plays a stimulating role in encouraging the infant's vocalisation, although, according to Mussen et al (1990:220), such babbling has no symbolic meaning, because it is essentially a practice activity, not a communication activity. A clear rhythm and melody is noticeable in this babble. Hurlock (1978:167) refers to this form of babbling as "real babbling or lalling". According to Polloway and Smith (1982:21), cooing, babbling or lalling are interrelated events which are a function of maturation but are eventually influenced by the reactions they elicit from others.

However, it is important, in order to continue vocalisation, that infants need to hear themselves babbling as well as receive feedback from other people. Defective hearing will affect a child's language development. Firstly, he will not hear himself babbling, so he will not continue to repeat the sound because he cannot also hear the feedback from
caregivers. This explains why deaf children cease to babble earlier than normal children. As mentioned in 3.5 the development and maturation of both the neurological and physiological features of the child plays an important part in developing linguistic vocal skills. Babbling increases in frequency and the entire process of hearing and seeing continues.

By six months of age there is an increase in the child's awareness of and response to the environment. He appears to recognise words like "daddy" and "mama". The Indian child would recognise the equivalent of this in the vernacular, if the vernacular is spoken at home, especially by the elders. By ten months of age, the child responds to simple requests with appropriate gestures, understands the inhibitory word "no", responds vocally when called by name and initiates non-speech sounds like coughing, lip-smacking and tongue-clicking.

Towards the end of the first year, his "lalling" or "babbling" changes to word-like sounds called "jargon". These are mainly two-syllable meaningless "words" created by the child himself. He imitates the tone of voice, and voice inflections of the adults in his immediate environment. Thus his babbling almost sounds like sentences in a foreign language.

At approximately the same time they take their first steps, many infants produce their first words. According to Berko-Gleason (1985:3) this occurs all over the world in any linguistic group. These first words are often "mama" "dada" or the name of a pet or a toy. The first meaningful sound is usually in the form of a single syllable word (morpheme). Initially the first word the child may learn is the name that the parent/caregiver has given an object which the child comes to know through activity, such as, "ball", "dog". These words are strongly linked to actions and are
ambiguous in their meaning. Linguists refer to these first meaningful sounds as "single word sentences" because the single word could represent a whole sentence and can be used with different meanings (Nicholas 1986:165).

These first words contain all the attributes of the object—its shape, size, colour, action and location. These words are usually simple in pronunciation and concrete in meaning. At first these words may confuse the listener because very often the adult listener would not know what the child means when he says a single word because it can "stand for one word (object) or a whole sentence" (Griffiths & Russell 1985:151).

Furthermore, just as one word represents others, so the restricted number of sounds which the child uses meaningfully results in one sound representing a range of others too, like the sound "t" may serve for "s, st, k" and "ch"—so the word "sun" may be "tun". The Indian child may also present problems because of the influence of his vernacular. However, these difficulties in articulation, in the English language, usually corrects itself by the time the child is seven years old.

The meaning of these first, single, spoken words are found only in the context in which the word is produced (Nicholas 1986:167). Caregivers/parents have to play a guessing game to guess what the infant is saying, for example, when he says "ball", a number of meanings could be conveyed—such as: "I want the ball", "Where is the ball?" or "Throw me the ball" (Nicholas 1986:167).

According to Van Hattum (1979:26) these first words are largely manipulative and do not involve the process of semantic realization, that is, the infant is only aware that making certain sound combinations produces manipulation of the environment. He also maintains that learning is not
intentional but is a natural process in the acquisition of neuro-muscular skills used in respiration and feeding. Almost echoing this viewpoint Hallas et al (1982:113) state that it is common to try to teach children to understand words before they produce them but the first word which children produce are not necessarily the words the adults had been teaching them to understand.

According to Van Hattum (1979:26) at approximately 15 months a child develops semantic realisation when he becomes aware that verbal symbols represent specific objects.

3.6.2.2 Second year

By twelve to eighteen months the child’s use of true words increases and he acquires ten to twenty word vocabulary - fifty percent of which are nouns. He clearly recognises names of various body parts. According to Van Hattum (1979:26) at approximately fifteen months the child develops semantic realisation when he becomes aware that verbal symbols represent specific objects. Although his expressive language develops fairly slowly, he begins using words consistently, rather than only gestures. He also uses consonants like "t", "d", "w", "n" or "h" more frequently. According to Ingalls (1986:222) the SMH learns to speak about two to four new words a month but he will not combine them until eighteen months of age. The child also begins to repeat words overheard in adult conversation although he does not understand them.

At around eighteen to nineteen months of age, the normal child crosses a language watershed. He starts to link words together. This is also the period when the child links objects and ideas together, after he has developed the idea of object permanence. These two word utterances usually consist of a pivot word (an action word) and an open word (which is often a new noun he has learned). This period is
also seen as a "transitional stage into syntactical competence" (Polloway & Smith 1982:22) because it shows that the child is beginning to string together modified phrases in grammatically appropriate form.

However, these are still words only from the child's experiential world. The two word combinations can mean different things, for example, "Mommy sue" can mean "That's mommy's shoe" or "Mommy put on my shoe". At this time too, the child begins to use negatives "no bath" and quantity, "more milk" and adjectives or modifiers, "bad doggie" (Kirk & Gallagher 1989:253).

Initially these words have a telegraphic style. Berko-Gleason (1985:145) called this "telegraphic speech" because only the keys words of a sentence are used, making it resemble a telegram. All unnecessary words are eliminated but the words are used logically and in grammatically correct sequences. It is interesting to note that from the time children first combine words, they do not do so randomly but appear to have a primitive knowledge of grammar. Their speech preserves the correct word order in acceptable word combinations. This is learnt with little help from parents. Mussen et al (1990:231) maintains that parents generally spend more time correcting the word rather than the grammatical mistake. Therefore one finds that children are not directly imitating what they hear because they say things that they could not possibly have heard before.

This is actually one of the justifications for the nativistic theorists who maintain that all children have an inborn language ability and are "biologically programmed to learn language" (Ingalls 1986:223). The anatomy and physiology of the human nervous system are such that normal children will spontaneously acquire the language system of their culture when they reach a certain stage in
Lenneberg (Ingalls 1986:224) demonstrated that much of the vocal apparatus such as lungs, larynx and mouth seem to be specifically designed so that words can be spoken in a certain way.

When children combine two words, that is, a verb and an object, leaving out the subject, for example, "eat lunch" they are expressing basic meanings but they cannot use the language forms indicating number, gender and tense. Towards the end of the second year the child's sentences increase in length and small linking words (prepositions) such as "in, or" and articles such as "an, the" appear. Children who acquire a given language do so in essentially the same order, for example, in English, children learn "in" and "on" before other prepositions such as "under" (Gleason 1985:4; Kirk & Gallagher 1989:254). They also start using personal pronouns usually in the order of "my, me, you and I". The child regularly uses two and three word sentences though grammar and sentence structure differ from those of adult speech. It is at this time too, that the toddler begins to talk to himself. Piaget calls this "egocentric speech".

3.6.2.3 Third year

Between the third and fourth birthdays children refine their oral language abilities. Lenneberg (Polloway & Smith 1982:22) maintains that the central focus of this stage is the mastery of sentence structure. Simple, grammatically accurate sentences are likely to increase. They begin to master the grammatical morphemes of their language in a particular order, for example, adding "-ing" to a verb or "s" to a noun to form the plural.

These are produced early because the sounds are perceptually distinctive. Children learn general rules for syntactic morphemes rather than specific endings for words, for example, a child may say "feets" to indicate plural because
he has learned to add "s" for plurals. According to Van Hattum (1979:26) the child uses this simple process in expression while noting and implanting more complex structures through the auditory processes. Thus the child spends much time developing a higher level of verbal functioning while he is using a lower level of functioning.

By the end of the third year he learns by listening and by asking "how", "why" and "what" questions. He also begins to use conjunctions like "but, so, or, if". At this stage he is able to pronounce "p, b, m, w, h" sounds, as he matures physiologically and neurologically. He develops an understanding of the basic subject-verb-object sentence arrangement, such as "I love mommy". At this stage too he can carry on a long conversation and is able to criticize others. His expressive vocabulary increases to 900-1 500 words and he can complete analogies such as "brother is a boy, sister is .....".

3.6.2.4 Fourth year

At four years of age, after they have learned regular plurals and tenses, they create regularised forms of their own words, like "mouses, comed, shooted". These show that children are not just imitating vocabulary or learning fragments of an adult language system, but that they have learned to generate language according to the rules that govern meaning in a cohesive linguistic system (Kirk & Gallagher 1989:254). Wood (Polloway & Smith 1982:22) maintains that a four-year old child will be able to convert the simple declarative sentence into a question or statement of demand, using short demand sentences, for example, "Can I have a candy? Give me some candy".

Their acquisition of grammar is remarkably rapid (Ingalls 1986:223). Before the age of five, children learn most of the intricate system, called, the grammar of language. Yet
they are not taught language (grammar) as they are taught mathematics.

According to Hallas et al (1982:126) the normal child is a "pattern learner". At first he over-regularises rules, for example, "one sheep - two sheeps". These mistakes vanish by the time the child is in his first or second grade in school. The child carries out more complex commands and understands "if, because, when and why". He begins to use "because" to join sentences thus lengthening his sentences. By the end of the fourth year his language is fairly complete in structure and form although he continues to make grammatical mistakes, but less frequently.

3.6.2.5 Fifth year

During the fifth and sixth years, language development becomes increasingly synonymous with school readiness and academic skills. He has mastered the basic rules of grammar. Initial reading skills appear at this stage when he recognises his written name and letters of the alphabet. He can answer the telephone and carry on a conversation. His expressive vocabulary increases to about 2 500 words. He consistently and correctly uses all pronouns, and even begins to use comparative adjectives such as "big - bigger, loud - louder". 

Towards the end of the fifth year, the older nursery school child begins to pay more attention to content. At this stage too, he develops a concept of time, becomes interested in colours, sequence of events and counting in sequence. With stimulation, he will be able to tell a story about himself or the environment, or a familiar story he has heard before. However, his language knowledge is still tied to the concrete. According to Cohen and Rudolf (1977:72) he "cannot yet formulate more abstract things such as his own feelings". He learns new words only in a particular
situation and his language is still largely emotional because words that sound interesting and pleasant appeals to him. As he grows older, he would be able to dissociate himself sufficiently from his language so that he is able to learn new words and their meaning in isolation.

Mussen et al (1990:239) found that before the child enters proper school for the first time, the child uses different tones and words when speaking to his peers, younger siblings and to his parents. This indicates that he recognises the fact that there are social and cultural rules for the content and tone of speech which varies with the social context.

3.6.2.6 Sixth year

The child understands a vocabulary of 2 500 - 2 800 words. However, the child’s language development is far from complete by the time he normally enters first grade. The majority of children are able to achieve the complicated process of speaking meaningfully, conveying thoughts, wishes and instructions within the first few years of life. Thereafter there is an on-going process of enrichment of both receptive and expressive vocabularies. This enrichment is dependent, to some extent, on interaction with others. It also depends on the inherent capacities of his central nervous system, the models available to him, the experiences he has, and the desire or motivation he has to increase his linguistic development. This would facilitate enlargement of vocabulary and an opportunity to develop the use of the language.

3.6.2.7 Primary and high school phase

During the primary and high school phases, the child progresses rapidly in using higher levels of language functions. The language becomes increasingly abstract, the
vocabulary steadily expands and the structure becomes more complex.

According to Kirk and Gallagher (1989:254), the child becomes skilled in creating the mood, adjusting his speaking style to listeners and situations, uses sarcasm and creates poems. He also uses gestures to enhance his meaning. The teenage child would respond to fads in language. As Berko-Gleason (1985:6) maintains that, part of being a successful teenager is knowing how to talk like one.

3.7 SYNTHESIS

In order to understand the development of language in the SMH, and to investigate the language problems experienced by the SMH, it would be appropriate to first understand the "normal" development of language.

Language is composed of five different aspects. These being: phonology, morphology, syntactics, semantics and pragmatics. There are various theories on the acquisition of these aspects of language. The theories used for the purpose of this study are: the behaviourist theory, the nativist theory, cognitive theory and the social-interactionist theory.

An investigation of the various theories revealed that no single theory could be entirely correct in its explanation. However, for the purpose of this study, various aspects of the above theories are extracted to form the theoretical framework of language development.

As language development is not an automatic process, it is shaped by the development of factors which are interactive. These being:
* intrinsic factors (within the child)
* extrinsic factors (environmental factors).

The intrinsic factors are the physical, neurological, motor and cognitive development of the child. These have serious implications for both the receptive and expressive language abilities of the child. It may promote or restrict the child's progress in language acquisition (cf. 3.5.1). The extrinsic factors are the environmental influences, socio-economic status of the family and parenting styles.

The matrix of language is laid down during the early years of life. As mentioned in 3.6, normal language develops in a fixed pattern. Children all over the world, "regardless of race, colour or creed, learn their native language at roughly the same age. They proceed through the same stages at roughly the same time and at roughly the same rate" (Ingalls 1978:224). Milestones of language development can be identified.

With the knowledge on language and normal language development as background, the language of SMH children can now be investigated in detail. This will be done in the next chapter.
CHAPTER FOUR

THE LANGUAGE OF THE MENTALLY HANDICAPPED

4.1 INTRODUCTION

Although most children learn their native language in a relatively short period and without deliberate instruction (as was noted in the previous chapter), there are other children who have considerable difficulty. One such a group is the SMH, who are also noted for their low cognitive skills. Due to the relationship between language and thinking (cognition), communication skills are generally delayed in varying degrees with this group. It was noted that the greater the degree of mental retardation, the greater will be the degree of language and speech disability (Lerner et al 1987:197-198). In this chapter, an attempt will first be made to define language disorders before investigating the reasons for language deficiencies in the SMH. Following this the language problems as experienced by the SMH would be discussed in detail. Since English is the second language for a great number of Indians in the Durban area (cf. Chapter One) it is expected that the SMH Indian child will experience language and speech problems in acquiring the standard English language as taught in special schools. It is important to remember that information regarding the SMH pupil in this dissertation is pertinent to the SMH Indian child in the Durban area.

4.2 LANGUAGE DISORDERS IN PUPILS

It is important for trainable SMH pupils to make their wants known and to understand and reply to other people's questions and requests. They can also learn about their environment and
the people whom they meet, only if they comprehend spoken language. However, these SMH children are often delayed in their language development as they do not begin to talk at the normal age; others do not follow an orderly pattern when they learn the language code or their articulation is so poor that their language is unintelligible.

4.2.1 **Explanation of language disorder**

The term "language disorders" encompasses the spectrum of disruptions in the learning of language; difficulties in learning the language; developmental delays in acquiring language and central nervous system dysfunction. This language difficulty, or language acquisitional delay, will be referred to as a language disorder. This is purely a descriptive label that refers to a description of behaviour but will not refer to a diagnostic entity that could explain the behaviour. A pupil experiencing a language disorder would be identified by the person interacting with him in many situations that demand talking and understanding.

4.2.2 **Forms of language disorders**

There are various forms of language disorders which may be distinguished. Lombaard (1982:35) and Lerner et al (1987:199) maintain that there are two types of disorders. These are:

* language disorder or receptive language disorder (difficulty in understanding language);

* speech disorder or expressive language disorder (difficulty in producing and using language).
4.2.2.1 Language disorders

A language disorder involves a deficit in the individual's knowledge of the system of language. Lerner et al (1987:199) maintain that a language disorder is the inability to relate linguistic symbols to experiences because of central nervous system dysfunction. It includes an inability to use or understand complex syntax, a very limited vocabulary or an inability to use language appropriately. In 1982 Aram and Nation (p.36) discussed the delayed - deviant issue in the developmental theory where there are two groups of children regarded as having disordered-speech. One group is delayed in the development of language but is developing according to expected patterns of language development. The other group develops a deviant pattern of language and do not follow the normal development. They maintain that since there are no standardized categories of language disorders in children, the above two distinctions serve as referrents for language disorders. Ingalls (1986:230) seems to echo this developmental theory where a delay in language development, when compared to children of the same chronological age, displayed a developmental language deficit.

With regard to mentally handicapped children it seems as though a deficit in language skills is perhaps the single most important characteristic that distinguishes them from non-retarded children. This is clearly evident when comparing children of the same mental age. Normal children have mastered their language by the age of five or six years (cf. 3.6.2.5) but the majority of moderately retarded individuals as well as the severely retarded have a good deal of functional speech but present a great many more deviations from normal children (Ingalls 1986:231).
The language disorder may involve all, one or some of the phonologic, morphologic, semantic, syntactic or pragmatic components of the linguistic system (cf. 3.3).

Asha (1980:317-318) maintains that individuals with language disorders frequently have problems in sentence-processing or in abstracting information meaningfully, for storage and retrieval from short and long term memory. According to this explanation, the impairment is in language comprehension (understanding).

Another language problem could be disorders of semantics. Lerner et al (1987:199) describe this as a meagre understanding of vocabulary (receptive language disorder) and poor ability to produce and use words (expressive language disorder). They go on to mention disorders of syntax and morphology which is the inability to comprehend connected discourse, awkward sentence construction, improper sequencing of words, omission of words and incorrect use of morphological rules. The very young Indian child who is exposed to the vernacular at home may also present this type of language problem.

Child language disorders are varied. Aram and Nation (1982:32) aptly state that to consider all children with language disorders as a homogenous group is "an exercise in unreality". What can be said for one language disordered child may not hold true for another, although each displays deficits in language.

4.2.2.2 Speech disorders

A speech disorder in a pupil involves a difficulty in speaking but does not imply any defect in the pupil’s knowledge of language. It includes problems with articulation of sounds and words, stuttering and voice disorder. Lerner et al (1987:201) view speech disorders as "involving difficulties in the
formation and production of the sounds" needed in using oral language when speaking. One must be wary of assuming that the articulation problems presented by the Indian SMH are speech defects. He may find difficulty in articulating because the language taught at school is different from the vernacular spoken in his home.

Speech problems of the SMH will be discussed in great detail later in this chapter. However, consideration will now be given to the reasons for language deficiencies in the SMH.

4.3 REASONS FOR LANGUAGE DEFICIENCIES IN THE SMH

In considering the possible reasons for language deficiencies in the SMH the following seem to be the most important ones and will be discussed subsequently:

4.3.1 Physical characteristics

As mentioned in Chapter Two (cf. 2.6) the most frequent condition accompanied by mental handicap is Down's syndrome. The physical characteristics of these children are distinctly different from non-retarded children. They have deformities of the tongue, mouth-cavity, teeth and lips. These defective speech organs may influence speech. In Chapter Three (cf. 3.5.1.1) the importance of sound, well-formed speech organs were emphasised for the development of speech. On the other hand, many of the "other" SMH (other than Down's syndrome or multiple handicap) look physically "normal". It is only when one interacts and communicates with them that one realises that they are "different" from normal children of the same chronological age.
In addition to certain "distinct" physical characteristics, well-formed auditory (hearing) organs are also important requisites for normal language development. The SMH child with defective hearing organs will not be able to receive sound signals clearly, thus his receptive language may be affected. This in turn could retard his total language development.

Furthermore, some SMH have limitations in peripheral sensory development, for example, visual-acuity problems and reduced tactile-kinesthetic sensitivity. According to Aram and Nation (1982:56) peripheral, visual problems not only appears to limit language acquisition but, whatever caused the visual impairment may also further damage the CNS providing an additional basis for language disorder.

In a similar manner, tactile-kinesthetic problems add to the severity of the language disorder. Griffiths and Russell (1985:143) maintain that kinesthesis is the sense by which we recognise our own movements. Children who have impaired hearing have to rely very much upon this when they are learning to speak. Understandably, problems in this tactile-kinesthetic area complicates their physical disorder of hearing impairment.

Another physical characteristic which affects the development of language is a limitation in motor development (cf. 3.5.1.4). According to Cruickshank (1980:55) these problems could include poor motor co-ordination, a poor body image and poor orientation in space, including laterality and directionality problems.

To concur with the view that motor problems affect language, Aram and Nation (1982:57) state that some of these SMH children's motor problems may completely interfere with or prevent any oral expression. SMH children experience any number of problems in the area of motor co-ordination (cf.
3.5.1.4). Those of them who are cerebral palsied as well as the SMH could be so severely handicapped that they would find it difficult to develop any spoken language skills.

4.3.2 Disorders of input

In 1985 Coplan (Kirk & Gallagher 1989:276) suggested that speech and language delay may result from disorders of input, that is, impairment in auditory and visual perception.

If the child cannot hear as a baby he would not continue with the babbling stage of language (cf. 3.6.2.1) because he would not be able to hear his voice or that of his caregivers. One can assume that this poor auditory modality may possibly be the reason for the child's poor language acquisition.

The SMH was found to have difficulty in processing verbal stimuli, that is, auditory perception. According to Lamberts (1981:301) cognitive theorists predict that the recognition of auditory signs would recede, or at least be concurrent with, recognition of the corresponding linguistic symbols. The impaired ability to recognise auditory signs may underline the language problems of at least some percentage of the SMH, for example, the ability to infer an event (a door being closed), from the realistic auditory impression that typically accompanies the event. The SMH do not easily distinguish between sounds that sound alike (Du Toit 1969:358), or identify differing stimuli from a field of similar stimuli, for example, selecting a different pitch tone from a series of pitch tones (Bernstein & Tiegerman 1985:180). Therefore one can assume that if this foundation of perception is poor then the quality of perceptions will also be poor. This also applies to visual perception.
In 1982 Zigler and Balla (p.102) found that the SMH child preferred to use his visual rather than his auditory modality. Vision plays an important role in the development of verbal communication. According to Lerner et al (1987:196) the eyes verify what is heard, relate objects with their verbal symbols, study faces, receive feedback and develop a sense of space, distance and proportion. Therefore before diagnosing language deficiency in the SMH, his visual ability must be ascertained.

Aram and Nation (1982:56) discovered that whatever caused the visual impairment (for example, rubella) may also cause further central nervous system damage, thus "providing an additional basis for a language disorder".

Tactile-kinesthetic problems complicate language acquisition because the child receives reduced information as to touch and position in space. According to Bowley and Gardner (1985:111) in brain-damaged children, there is a considerable delay in the development of inter-sensori integration. This could seriously limit their use of information from various channels, leading to confusion and educational retardation.

4.3.3 Neurological reasons

As noted in Chapter Three (cf. 3.5.1.2), in normal language development, children require a specialised organisation of higher brain structures. According to Aram and Nation (1982:58) both anatomic and functional studies indicate that language processing is organised predominantly in the left cerebral hemisphere. Many SMH children are brain damaged therefore their language development could or may be affected.
An important conclusion reached by researchers Dennis and Whitaker in 1975; Hecaen in 1976 and Rasmussen and Milner in 1977 (Aram & Nation 1982:59) is that if the cerebral hemisphere is damaged, the remaining structure allows for anatomic and functional reorganisation. This ability to reorganise is referred to as the plasticity of brain function. They proceed to state that the immature cerebral hemispheres have greater plasticity of function than the more mature cerebral hemispheres. However, there may be less complete and less efficient language processing because, when cerebral structures, which are not destined for language processing, take over the language processing function, it will be done at the expense of other functions such as visuo-spatial processing. The reason for this being, that although both hemispheres have the capability to assume language processing functions, they are not equal in their ability to do so.

Related to this, the rate of neurological maturation will also influence the child's language development. Any delays in the process of neurological maturation inevitably delays the child's language development. As seen in Chapter Two (cf. 2.4.5) the incidence of SMH in boys is greater than among girls. The reason being that myelinization of the neurons take longer to mature in boys than in girls. To add to this, Aram and Nation (1982:59) state that the higher incidence of language disorders in boys than in girls may be accounted for on the "basis of differences in neurological organisation between the sexes".

However, Nicholas (1986:175) warned that to demand accurate production before physical and neurological maturation takes place, leads to emotional distress and potential pathology.
4.3.4 Language and cognition

As noted in Chapter Three (cf. 3.5.1.3), language depends on the child's level of cognitive development. Thal, and his co-authors (1989:489) have revealed that in studies of language and cognitive development of SMH children, the majority of cases showed that the levels of language abilities are "at or below the same child's level of functioning in other cognitive domains".

Studies have also indicated that, in mentally handicapped and non-mentally handicapped children, over a wide chronological age (C.A.) range, non-linguistic cognitive maturity is a factor that limits linguistic maturity. On the other hand, linguistic maturity has no effect on non-linguistic cognitive status (Gollin 1984:337). This supports Safford's (1978:47) view that the general cognitive retardation of the SMH is reflected in deficient or delayed language functioning, because there seems to be a direct correlation between the rate of language acquisition and intelligence.

Bloom and Lahey (1978:512) concur that there is an overall relationship between language and intelligence, for example, between sentence length and mental age (M.A.), and between M.A. and the size of the vocabulary.

Very often they learn new words without understanding the meaning of them. Furthermore, as noted in 2.7.1.3, the mentally handicapped child experiences problems in transferring what he has learned in one situation to subsequent situations. Therefore the onus is on the teacher to devise means to help the child transfer what he is learning. This does not come spontaneously to the SMH. Therefore, the cognitive level of the SMH becomes a reasonable baseline for identifying specific language delays in the SMH.
However, there is data to indicate that the cognitive level is not the sole determinant of language performance. This supports the interaction theory stated by Kahmi and Johnston (1982:436). A number of other factors have been discovered. These factors when inter-related, contribute to the development of language. These will be discussed.

Kahmi and Johnston (1982:436) also cited studies which revealed that the SMH are heterogeneous in respect to language skills. Three major types of language patterns relative to cognitive performance can be identified. These are:

* delayed language production;
* delayed comprehension and production;
* language comprehension and production equivalent to the cognitive level.

These three patterns were found at every cognitive level, from sensori-motor to late sensori-motor. These language patterns will be discussed in greater detail later in this chapter.

4.3.5 Memory

Short-term memory deficiencies are very evident in the SMH population. As noted in the characteristics of SMH (Chapter Two cf. 2.7.1.2), difficulty in recalling information is one of the noticeable characteristic of the SMH. This is probably because of his poor organisation of information at the input stage. According to Aram and Nation (1982:102) numerous investigators implicated memory functions as causal basis for disordered language. In a study using sixty-six trainable pupils, results revealed that, generally, the SMH’s memory ability is less impaired than their memory for abstract symbols (Lamberts 1981:306). When the SMH are exposed to auditory signals for several distinct events, they may retain them in
their memory only if the signals have become meaningful to them through sensory experiences. However, if the symbols are words (that is, abstract symbols superimposed on experiences) then the SMH may not be able to retain them as well as the non-retarded children can. This reveals that perceptual stimuli, which are associated with significant experiences, are more distinctive than the association of abstract linguistic symbols to experience.

One can assume that because of this verbal difficulty, memory becomes defective. According to Berry and Eisonson (1970:395) without adequate verbalisation, situations attended to cannot be properly recorded. Remote events cannot be easily recalled. Lombaard (1982:40) maintains that the ability to arrange and systematize subject-matter is necessary to memorize subject-matter before recall take place. Since the SMH has a low IQ there is bound to be some deficit in intellectual functioning therefore the ability to distinguish, arrange and systematize is rarely realised on a level higher than the affective. The SMH still classifies, compares and discriminates "in a primitive way" (Du Toit 1986:58).

As is known, information is retained and/or transferred to long-term memory through rehearsal or repetition. The SMH do not rehearse information spontaneously. The information has to be repeated a number of times. These SMH also have an attention problem as seen in Chapter Two (cf. 2.7.1.3) which prevents them from focussing on the learning situation.

4.3.6 Environmental deprivation

As was noted (cf. 3.5.2.2), the processing of information about the environment begins at birth. The more experiences an infant has, the more his attention is drawn to the constancies and inconstancies of his environment. Experiential deprivation
can impede language development because, according to Lerner et al (1987:196) language learning needs "sufficient experiences, stimulation and feedback". The effects of experiential deprivation is clearly seen in Indian SMH who hail from the lower economic groups. It is also evident in some of the Indian SMH from the higher income group whose parents avoid the public and keep their SMH indoors because of embarrassment. Fortunately as the incidence of mental handicap is being highlighted in the media every so often parents are beginning to allow their SMH to accompany them on their outings.

Mentally handicapped individuals are generally found in two types of environments: home-centred or residential (institution). Studies have shown that the SMH confined to institutions are even poorer in communication than their counterparts who are at home with their parents. This is partly because these institutions usually do not offer opportunities to acquire language. Sometimes, because these institutions are so large, the caregivers have too large a number to contend with. This gives them very little time to socially interact with the SMH or to stimulate and encourage conversation. Furthermore, because these institutions are too large, the noise-to-signal ratio is lost and the focus cannot be on language symbol (Hallas et al 1982:128). Thus it would be safe to conclude that the SMH would benefit from a home-centred social organisation.

The child's environment offers him the opportunity to discover his own language possibility. If the child does not hear language there will be shortcomings in his discovery of language. According to Kirk and Gallagher (1989:276) there are case studies to prove that environmental deprivation is a factor that inhibits language acquisition. Lerner et al (1987:196) adds that some children, even with normal hearing and vision, may not learn language properly because of "social,
cultural and/or economic limitations". This may be based on a lack of opportunities which characterise the early home environment and even educational conditions.

4.3.7 Socio-economic conditions

In many homes it is an accepted fact that both parents work to supplement the family income. Bernthal and Bankson (1988:76) found that greater numbers of children with articulation disorders tend to live in lower-socio-economic groups. The working mother has very little time to have "quality-time" interaction with her children. It is true that the adults in the child’s environment have a great impact on the child’s language learning ability. As was noted already, the early mother-infant interactions are crucial for the development of later language. This will be discussed in greater detail next.

4.3.8 Parenting styles

The social-interactionist view of language acquisition, as noted in Chapter Three (3.4.4) stresses the contributions of both adult and child in children’s language learning. It is obvious that since children are great imitators, good language models and good language stimulation help children to expand their vocabulary and to practice a variety of sentences. However, Beveridge and Conti-Ramsden (1987:100) have cited several studies which reveal that interactions between parents and young mentally handicapped children can present potential difficulties.

Since SMH children are more passive and make few initiations, they respond less frequently to their caregivers. Many mothers have described their infant who is language disordered as "unusually quiet or as not responding to attempts at vocal interaction" (Aram & Nation 1982:55). This causes speech
feedbacks to become increasingly poor. Where a mother should be speaking to a child of one year at a "mother-distance" (Hallas et al 1982:128), mothers of SMH are likely to speak to them at a great distance. The mother's speech is irritable, shouted and not adapted to the child's M.A. because she does not understand her child or perhaps has not accepted the fact that there is something wrong with her child. This is especially so if the child's M.A. is one year, his chronological age (C.A.) is four years and he is overactive. Parents of the SMH are "unable to judge the level of comprehension of their child or to modify their speech appropriately" (Aram and Nation 1982:55). Even though the language of the parents of the SMH may be quite normal, the fact that the child has a language disorder affects the interpersonal context of the communication that takes place (cf. 2.7.4.1 (2)). This would consequently affect the nature of the language input provided in these and in subsequent communications. The parents of these SMH children are at a disadvantage because they do not know what form of communication will be best. Aram and Nation (1982:56) quite correctly state that "communicating with a non-communicating child can become frustrating". Researchers found notable differences in the speech of mothers of mentally handicapped children to those mother who have normal children (Garrard 1989:11). Mothers of handicapped children are "more directive and didactic" (Hodapp et al 1989:388), provide fewer opportunities for their children to use language and are less verbally responsive (Bernstein & Tiegerman 1985:191). This lack of maternal responsiveness can result in the infant's withdrawal. Bernstein and Tiegerman (1985:191) have cited studies that have shown that mothers of handicapped children use more primitive forms of speech thus inhibiting their growth of language.
Very often parents/caregivers correct children's speech and language (cf. 3.5.2.3). Quite often the pronunciation rather than the syntax is corrected. In 1985 Bernstein reported the results of his studies on the effect of parents as correctors of children's speech and language (Kirk & Gallagher 1989:76). It was also found that parental correction does not help the children to learn complex structures of the adult language. Those children whose mothers constantly correct them, develop more slowly than those whose mothers are more accepting of pronunciation and vocabulary without constant correction. According to Gearheart and Litton (1979:102), correction of speech defects should not be attempted before the child can communicate such information as his name, the need to go to the bathroom or a desire for a drink.

Kirk and Gallagher (1989:276) insist that "laziness" plays no role in the delayed emergence of language. Yet those responsible for the child's care and education are still being advised not to give things to the child until he asks for them by name. However, by the same token, parents should not anticipate the child's needs and desires, and immediately provide the child with objects or activities without requiring any responses. Wulz et al (1983:7) maintain that they should create a situation in which the child will communicate.

4.3.9 Emotional cause of language deficiency

The emotional (affective) life of the human focuses and stimulates his thought and language. This interaction between language and affect will create a problem in any learning situation for the SMH because language is the basis for most learning. However, the SMH child will reveal his shortcomings in his affective development because his vocabulary is still concrete-bound.
Emotional problems (cf. 2.7.4.1) can inhibit the quality of language production. "Traumatic events are known to interrupt language" (Lerner et al 1987:45). According to Du Toit (1989:359), the diminished use of speech in interpersonal communication often indicates the presence of underlying anxiety and tension (cf. 2.7.4.2). Some children, often coming from deprived environments, may sit passively for long periods, never engaging in activities that surround them. Others, on the other hand, may show over-affection, like kissing or hugging anyone, showing no stranger-anxiety or appropriate attachment to family members. Aram and Nation (1982:57) claim that these deficits in behavioural control affect and complicate the child's language disorder.

4.3.10 Syndrome related causes

In some cases, the causes of the language delay may be directly related to the specific syndrome. In Down's syndrome children, the area of acquisition which is most significantly retarded is the area of language (Aparico 1989:51). Bloom and Lahey (1978:513) state that research on the language of children with Down's syndrome concluded that there is no consistent relationship between Down's syndrome and a unique language pathology.

The language development in this population is similar to that of normal children at a younger age. However, researchers Mahoney et al (1981:25) found that Down's syndrome children are more delayed in their rate of language acquisition than might be predicted from their mental age alone, although the course of language development is the same in both the Down's syndrome and the non-retarded children.
Peuschel et al (1987:237) mention that there are several characteristics associated with Down's syndrome that put these children at particular risk for language deficits beyond their cognitive deficits. Some of these characteristics, endorsed by Muller (1989:233) are:

* frequent middle-ear infections which lead to hearing loss-associated with language problems;

* deficits in their motor co-ordination adversely affects the synchrony of the motor movements required of the speech production system which results in deficits in speech intelligibility;

* there may be specific cognitive deficits associated with language learning;

* physical defects such as a thick, slack tongue, thick lips, deformed mouth cavity, would affect the production of speech.

All these characteristics will affect language interaction patterns, stimulation and responsivity. Furthermore, the Down's syndrome child shows no interaction with his parents until he is five or six months old. His first word only appears at twenty-four months. According to Aparico (1989:52) studies also revealed that the mothers of Down's syndrome babies used language that was more imperative, less complex semantically and was dominating in mother-child interaction, thus reducing the chances of the child taking the initiative in verbal exchange. It was observed that mothers of Down's syndrome children have difficulties in visual interactions with their children, in detecting their needs, attracting their attention and working with them, because they have a lower degree of response. These may "reflect different maternal
perceptions of the child's needs and of the purposes of parent-child interaction itself" (Hodapp & Zigler 1986:388).

Autism, another syndrome associated with the SMH (cf. 2.5.3) is characterised by a "severe developmental disorder of language" (Landry & Loveland 1988:621). According to Aram and Nation (1982:140) autistic children present serious difficulties in the comprehension of language. This failure to comprehend and extract the meaning and structure of the language code is reflected in their echolalia. They echo, ad verbatim, whatever is said to them, showing little evidence of comprehension.

Other language characteristics of the autistic child are:

* reversal of first and second person pronouns;
* poor functional use of language;
* inappropriate intonation and primitive syntax

(Landry & Loveland 1988:621).

These autistic children made few spontaneous remarks, more inappropriate, delayed repetitions and less use of gestures. Although their speech is grammatically correct it fails to function normally. Their speech is often described as "stereotyped and parrot-like, often being directed to no-one ..." (Bloom & Lahey 1978:576). They are found to be poor at interpreting words and gestures, and poor at using indicating gestures such as pointing and showing (Landry & Loveland 1988:635). On the contrary, Gaines et al (1988:281) discovered that although non-verbal autistic SMH failed to benefit from vocal speech training, they were able to learn signs successfully once their attention was gained.
4.3.11 **Impaired motor development**

SMH children usually experience some motor problems (cf. 2.7.3). Some of them present overt motor problems, for example, cerebral palsy (Aram & Nation 1982:57) which may completely interfere with or prevent any oral expression. Some SMH children are lethargic in the way they interact with the world, presenting limited activity and behavioural response to people in their environment. These children are "overly cautious and non-exploratory" (Aram & Nation 1982:57), and they show a "lack of child-like curiosity and interest" (Du Toit 1986:66).

At the other extreme, are the hyperactive children who are in constant motion, darting from one thing to another, never engaging in any one activity long enough for experiential learning to take place (Aram & Nation 1982:57). Lombaard (1982:39) found that their concentration is easily disturbed by irrelevant perceptions that they are powerless to ignore. This may impede the development of language in these children.

4.4 **LANGUAGE PROBLEMS OF THE SMH**

The SMH's language and communication problems are widespread. It is not simply a problem of not knowing enough words, or having poor articulation. But because of the various degrees and various combinations, according to the degree, of mental handicap and additional handicaps, all SMH children do not have the same language problems or the same degree of the language problem. Even the same disability do not affect all children in the same manner. From various investigations comparing the language of the SMH with that of the normal child, the following deductions concerning the language development of the handicapped children are made.
4.4.1 General language problems of the SMH

The condition of mental retardation has long been associated with "poor language and speech performance" (Van Hattum 1979:6). Adding to this view, Polloway and Smith (1982:36) maintain that it is safe to assume that language problems are prevalent in the retarded. Furthermore, the language of the SMH is both "quantitatively and qualitatively different from that of the normal child of the same M.A." (Spreen 1965:482).

4.4.1.1 Delayed developmental patterns

The language of the SMH generally follows the same developmental pattern as that of all other normal children. The stages of language development are the same as normal children of the same mental age (Perry 1974:35; Ingalls 1986:230). They therefore reach the various milestones in the same sequence as other children. However, the difference in the development of language in the SMH, when compared to that of the normal child, is that their language development is much slower than that of the normal child.

Although language begins and develops in the same pattern as in normal children, it may be "arrested" at any stage of the development process (Hallas et al 1982:128). Consequently they may remain in the various language stages much longer than normal children. Some SMH may remain at the babbling stage for a longer period, others may use jargon speech (that is, nonsensical utterances resembling speech) to a greater extent and for a longer period. Yet other SMH children may cease to babble prematurely and lapse into stereotyped vocalisation and echolalia (that is, repeating words spoken by others).
Although SMH children do not display the same language behaviour as normal children of the same C.A., they use normal linguistic forms, not bizarre language patterns such as, unique-word combinations, or invented word meanings (Yoder & Miller 1972:235; Pueschel et al 1987:234). Thurman and Widerstrom (1985:84) also maintain that the SMH are not deviant in their acquisition, merely delayed. Perry (1974:35) found that some trainable children do not go through the normal sequence of language development because of some injury of a certain kind or in a particular location of the brain. Thus they may show unusual developmental patterns. Nevertheless it is impressive that despite a variety of brain syndromes, children with severe mental handicap learn the standard form of their native language. However, they do display specific defects in their language. The language of the SMH is qualitatively different from the language of a normal child of the same mental age. Thus their language reveals that they are different from normal children of the same C.A.

4.4.1.2 Delayed rate of language development in the SMH

The most common problem displayed by the SMH is that he shows "slow motion" development in reaching linguistic milestones (Hallas et al 1982:45), although the "course and sequence of language development is the same" (Yoder & Miller 1972:235).

This delay is seen when comparing normal speech and language development with that of the SMH. Normally speech and language development tend to commence at one or two years of age (cf. 3.6.2). However, a large number of SMH children are chronologically five or six years old before they develop two-year old language skills. Furthermore, since normal children master their native language by the time they are five or six years old, it could be predicted that SMH reaching the mental age of eight to eleven years should, at adulthood, have some
language competence. Amongst the profoundly handicapped, however, there are a number of individuals with no functional language at all (Ingalls 1986:231). However, some researchers found that the SMH made no significant progress in language development after the age of fourteen years (puberty) (Ingalls 1986:231). Hallas et al (1982:128) maintain that it is difficult to "pick up" a language effortlessly because there are language "deadlines", for example, after one year it is too late to acquire prosody, after twelve years to acquire language proper, but the backward person can still develop his vocabulary well into adult life. Therefore the SMH seldom attains the language facility of the mature adult person. However, Lenneberg (Ingalls 1986:230) found in his study of 54 Down's syndrome children that although their rate of language development was slowed down tremendously, it correlated well with other milestones of development such as gait and fine motor co-ordination.

4.4.1.3 Quantitative and qualitative differences

Mentally retarded children have a general language deficit and specific problems using interpretative language even though their language development follows the same developmental sequence as normal children.

According to Hallas et al (1982:128) one seldom hears of a SMH who has acquired skills of what are called "locutionary acts".

In one study by Naremore and Denver in 1985 it was found that there was a "rate difference in language development" during the early years of life and a "qualitative difference" at later ages (Kirk & Gallagher 1989:154). In this study, Naremore and Denver collected five-minute speech samples of retarded children and non-retarded children at each age level from six to ten years. The retarded children were found to be most
deficient in using complex clauses and subject elaboration. This deficit limits the kind and amount of information the SMH can communicate to others especially when sequences of activities are called for.

Bernstein and Tiegerman (1985:186) found that even at equivalent M.A. levels, individuals with mental handicap appear to use shorter, less complex sentences than their non-retarded peers.

The qualitative differences in their language can be seen in their poor grammar and their inability to manage social interaction. They seldom initiate conversations, make requests or ask for a repetition of what was said. The topics in which they are competent in are limited.

Thus one finds that although developmentally, the language of the SMH of twelve years is more or less the same as that of the four year old normal child, the quality of the language of the four year old normal child is better than that of the SMH. As noted already, the language of the SMH remains stereotyped and concrete. However, qualitative differences are seen more clearly in the specific language problems of the SMH.

4.4.2 Specific language problems of the SMH

Before considering the specific language problems it is important to remember Jordon’s (1976) observation in Gearheart and Litton (1979:72) that retarded children vary too greatly in speech and syntax to permit an all-encompassing statement of their language problems. The SMH manifests serious deviations in his language, such as, gross articulatory problems, inadequate vocabulary, poor symbolic concepts and weak syntactic structures, amongst others. In the following paragraphs a number of specific language problems of the SMH
will be discussed. These problems illustrate, practically, the general characteristics already mentioned above.

4.4.2.1 The expressive language of the SMH

The SMH children begin to talk much later than normal children (cf. 4.4.1.2). Researchers have documented that the prevalence of speech defects is greater among the mentally retarded than it is in the general population (Ingalls 1986:227). Although the types of speech problems are generally the same as those found in the normal population, they occur more frequently in the SMH. Furthermore, these speech problems generally corrects itself by the time the normal child is seven or eight years old (cf. 3.6.4) but because the SMH have lower mental ages, these speech problems tend to persist. As Ingalls (1986:227) aptly states: "the lower one proceeds on the IQ scale, the more one is likely to find more frequent and more severe speech difficulties".

Besides experiencing speech problems (that is, difficulty in producing language verbally) they also experience problems in using language. These problems are distinctly seen in each of the various components of language.

(a) Components of language

(i) Problems regarding phonological development

The role of phonology is considered to be paramount in intelligible communication (Aram & Nation 1982:146). However, in the SMH, phonemes are more than six months late in appearing, according to the normal developmental sequence (Lerner et al 1987:202). When phonemes do appear, the SMH display problems in articulating phonology, usually involving consonants rather than vowels. Among the most common phonological problems are:
omissions, which are incomplete pronunciation of words characterised by weak syllable deletion such as: "at" for "cat" or "bella" for "umbrella";

reduplication of syllables, such as "pupu" for "pudding" - this is a normal process in early phonological development but tends to disappear with physiological maturity;

distortions - where distinctions between sounds are not observed, and are generally represented by a muffled quality to the correct pronunciation, for example, "p and b" or "s and z";

substitutions - where a child replaces the correct phoneme with an incorrect phoneme, for example, "thilly" for "silly".

These phonological errors affect speech intelligibility which remain a "consistent problem among individuals with Down’s syndrome" (Pueschel et al 1987:243). Concurring with this, Paul Berry (1984) reported in his research that the majority of his five and six year old Down’s syndrome children were unintelligible (Pueschel et al 1987:243). The intelligibility problems can be directly attributed to the oral and facial anomalies associated with the Down’s syndrome condition which affects the jaws, tongue, teeth and mucosal structures and the speech motor control of these structures, not forgetting the large thick tongue (cf. 4.3.1).

There are some SMH infants who remain in the babbling stage for a long period, that is, their speech development becomes "arrested" at this stage (cf. 4.4.1.1). According to Lerner et al (1987:202) the child may mainly use vowels in babbling after twelve months of age.
(ii) Problems in morphological development

A number of studies described the morphological development of the SMH. Studies conducted by Newfield in 1966 (Bernstein & Tiegerman 1985:186) reported the same order of morphological development for both the non-retarded and the SMH children, but the performance of the SMH was poorer than the non-retarded matched for mental age. This was especially noted when children were asked to apply morphological inflections, such as adding 's' to form the plural or possessive, either to nonsense words or to familiar words (Bloom & Lahey 1978:512; Ingalls 1986:233). Although morphological inflections were learned in the same sequence by both retarded and the normal population, the performance of the retarded was poorer than normals matched for age. One explanation could be that retarded children may learn inflected words as individual items instead of learning a rule to apply to new situations, such as, learning the words "hat" and "hats" as two separate words instead of a single stem word "hat" to which the morpheme -s can be added. This explanation is also in keeping with the problem of transfer of learning, which the SMH experiences (cf. 2.7.1.3).

A number of researchers also discovered that the language of the SMH tends to be more concrete (Ingalls 1986:232; Perry 1974:36). They use many more nouns than their normal M.A. - matched counterparts who used more adjectives, prepositions and pronouns. Their vocabulary is therefore very limited and shows less variety, for example, everything is judged in accordance with simple categories, such as good or bad, pretty or ugly, good or naughty, without any finer distinctions. Baun (Du Toit 1986:63) pointed out that these children did not make use of descriptive words in their speech.
Furthermore, his language content is simple because one of the characteristics of the SMH is that he prefers to deal with concrete situations which are close at hand and which have some importance to him. Thus Berry and Eisonson (1970:390) maintain that he may adjust to living with things within his grasp. Added to this, the SMH child's severe mental impairment inhibits the possibility of discovering verbal language. This would cause his capacity and rate of discovering new words to be very limited.

Since the SMH's intellectual capacity always "lags behind his vocabulary" (Lombaard 1982:37), he would often recognise words but is only able to interpret them on the concrete level. Sometimes he would learn new words but would not know the meaning of them. According to Lombaard (1982:37) words would only acquire meaning when they are discovered as symbols representing an entity.

Regarding the Indian SMH, he may experience confusion in acquiring his vocabulary for standard English especially if the vernacular is spoken at home. Very often, the teachers at the Indian special schools experience having their pupils name an object in the vernacular rather than in the standard English spoken at schools.

(iii) Problems in syntactical development

According to Bernstein and Tiegerman (1985:186) several studies show that the syntactical development of the SMH lags behind their mental age. The SMH may show poor rules generalisation, but not an inability to learn language rules. Their findings also revealed that the SMH learn and use rules but rely more on primitive word-rules than their language peers. In 1982 McLeavy and colleagues showed that syntactic lag among the SMH represented a dependence upon older syntactic forms for a
longer period (Bernstein & Tiegerman 1985:186). Furthermore, they also found that the more advanced syntactic forms are learned but are used less frequently. Bloom and Lahey (1978:513) cited studies conducted by Lackner in 1968 which found that the rules used by the retarded were the same as those found in adult models and that grammar became more complex as M.A. increased. However, the language behaviours of normal and retarded children are not qualitatively different and that both groups follow similar developmental trends.

The grammar of the SMH does differ in some respect from that of the normal child (Hallas et al 1982:128). In 1984 Leifer and Lewis (p.616) found that their studies revealed that the SMH may follow a somewhat different sequence regarding the order of emerging syntactical skills. They also found that the SMH remained at one of the following stages: telegraphic, one-word or two-word utterances for a far longer period than non-retarded children.

Many investigators use the mean length of utterance (MLU) score to match the non-retarded and the SMH's level of syntactic ability (Leifer & Lewis 1984:611). According to Pueschel et al (1987:241) the MLU is the "calculation of the child's average spoken utterance length in words or morphemes". This is an index of general syntactic development. They cited Harris's (1983) study of MLU of ten Down's syndrome and ten normal children. He found that the language of the younger Down's syndrome children closely resembled the language of normal children of the same MLU stage. But there was a difference among the older children at the more advanced language level. This is probably because the SMH have particular difficulty in acquiring the more complicated grammatical rules such as the rule of inflection.
However, in his studies, Rondal (Leifer & Lewis 1984:611) found that the SMH have poor linguistic skills when compared with MLU - matched non-retarded children. He also reported less advanced syntactic abilities in the SMH, for example, they produced fewer secondary words, advanced indefinite pronouns and subject-auxiliary inversions in interrogatives than did non-retarded children. Kahmi and Johnston (1982:436) found that the SMH asked very few questions when compared to non-retarded children.

Furthermore, these SMH children were found to be "most deficient in using complex clauses and subject elaboration" (Kirk & Gallagher 1989:154). These are important communicative deficits because it limits the kind of information the SMH can communicate to others, particularly when sequences of activities are called for.

(iv) Problems in semantic development

The SMH display a poor ability to produce and use words. As mentioned in (ii) these children have an inclination to use concrete words because they have less difficulty with them. However, they have difficulty in "understanding abstract meaning or psychological uses of nouns and verbs especially when used in metaphors and similes" (Nicholas 1986:179).

Some of the SMH are inclined to make use of stereotyped expressions, for example, words or expressions repeatedly used without any meaning (cf. 2.7.1.1). Very often these expressions become habits. Therefore, sometimes, even though it will be raining, the SMH will say: "It is a sunny day". This rigidity in expression could be a result of rigidity in the child’s cognitive structure or because of perseveration.
Perseveration (cf. 2.7.4.2 (5)) may cause the child to continue repeating a response, for example, if the child recites the letters of the alphabet, he would find it difficult to immediately count up to twenty after that. He may persist in reciting the alphabet even though he knows how to count. The teachers at the Indian special schools find this situation of perseveration arising very often. One reason for this could be the one mentioned by Berry and Eisonson (1970:391) which states that if the SMH finds the situation too much for him to cope with, because of inherent difficulties in the situation or because of the quick succession of the changing situation, then he perseverates.

Another semantic problem experienced by the SMH is one of echolalia. This is the echoing back of sounds that the child hears but does not understand—like a parrot. It is usually the last part of a sentence, or the last word or two said to them. This, according to Aparico (1989:52) is often regarded as a "sign of the child’s non-comprehension". This is also experienced by normal children but disappears by three or four years. Very often SMH children find it difficult to remember the complete sentence heard but would repeat endings or important words. This was also found with autistic children (cf. 4.3.10).

As early as 1943, Kanner (Aram & Nation 1982:140) described two types of echolalia. These are:

* immediate echolalia, which occurs at the time the child hears the stimulus;
* delayed echolalia, in which the child seems to store the information heard and repeat it at a later time.
Very often the SMH can imitate at a level far exceeding their ability to comprehend. For example, a SMH child may imitate a television advertisement correctly (the words and the song) but will not know the meaning of these words.

(b) Affective or emotional aspect of the language of the SMH

According to Du Toit (1986:63) the SMH learn words with an emotional quality more easily than others, for example, they frequently use interjection such as "Oh Gosh!". However, these children are "inept in the social use of words" (Aram & Nation 1982:120). They are unable to take into account the other person’s perspective when speaking. Aram and Nation (1982:120) refer to this as a failure to "grasp the subtleties of the communicative context". They cannot adapt what they want to say to the demands of the situation they are in.

Landry and Loveland (1988:632) have particularly noticed this in autistic children who are "unable to understand the complexities of the social environment", this gives rise to a social communication deficit.

One finds that the more impaired the child, the more obvious is his failure to adapt his language to his listeners and the context in which he finds himself. Very often the SMH is known to say things which are socially not acceptable, for example, "Why are you so fat?" to a fat person in a crowd. Hallas et al (1982:45) maintain that the SMH child also breaks the rules of cohesion. They jump from one topic to another without adequate textual link.
4.4.2.2 Receptive language problems of the SMH

In studies conducted with M.A. - matched retarded and non-retarded children it was found that the retarded demonstrated significantly poorer receptive language abilities than the non-retarded (Kahmi & Johnston 1982:436). These children do not understand language at a high level. They often understand only key words (Du Toit 1989:357). This is seen as a "qualitative difference" between the SMH and the normal child of comparable age. Some SMH may only produce concrete words while others may produce a number of "relational words", for example, tomorrow, yesterday (Bernstein & Tiegerman 1985:113).

Many SMH find it difficult to understand sentences in the negative. According to Hallas et al (1982:129) there is evidence that Down’s syndrome children are particularly slow in understanding negation. This is of particular importance to language teachers in a special school. As far as possible, instructions/directives to the SMH must not be given in the negative.

Another problem experienced by the SMH is distinguishing between speech sounds. In order to understand speech it is necessary, according to Griffiths and Russell (1985:143), to make rapid on-going discriminations between sounds within words so that they may be recognised. For example, the words "pat" and "bat" differ only fractionally from each other and yet have totally different connotations. The SMH are usually very poor at distinguishing between speech sounds. This adversely affects their receptive language, especially if their teacher does not articulate clearly.
4.4.2.3 Problems in speech

Speech impairments involve difficulties in the formation and production of the sounds needed in using oral language and speaking.

There are generally three types of speech problems. These are:

* articulation problems
* voice errors
* fluency (stuttering)

(i) Articulation problems

It is estimated that 60% of all defective speech disorders are articulation disorders (Safford 1978:4). Most investigators report substantial articulation disorders in individuals with Down’s syndrome (Pueschel et al 1987:263). A recent study by Dodd in 1976 (Pueschel et al 1987:263) found that children with Down’s syndrome made over twice as many articulation errors as MA-matched children with other types of mental retardation (cf. 4.4.2.1 a (i)). Lerner et al (1987:201) consider this to be the least serious of the speech disorders because they are most responsive to treatment. Since articulation improves with maturity (as the physiological development advances), some articulation problems disappear as the child develops. The Indian child’s pronunciation of certain words may be termed "deviant or disordered" by those who do not understand the vernacular dialect (cf. 4.2.2.2).

(ii) Voice disorders or voice errors

Voice disorders/errors are common among the SMH. Litton (1978:128) maintains that very often the tone of the voice is either too high or too low, the quality of the voice too gruff
or nasalised and the intensity too loud or too soft. These are usually associated with imperfect vocal cord structures. Excessive persistent hoarseness in a child's voice must be investigated because it is "often related to nodules on the vocal cords which require surgical removal" (Thurman & Widerstrom 1985:89). According to Hallas et al (1982:121) the Down's syndrome children tend to have low pitched and hoarse voices.

(iii) Fluency (stuttering)

Stuttering (stammering or cluttering) are disorders of rhythm. This is excessive disfluency in speech and is characterised by no meaningful repetition of sounds, words or phrases while speaking. It may also be characterised by repeated and frequent hesitation during speech.

This is sometimes considered a normal characteristic and should be ignored unless it persists after age of five or six, or if it is severe enough to interfere with the child's effective communication.

According to Eisonson (1972:18) one is likely to find that the SMH child is proficient in articulation consistent with or somewhat below his M.A. rather than with his C.A.

4.4.2.4 Non-verbal communication

Romski et al (1989:366) focussed much attention on the communicative abilities prior to the onset of the first words of SMH children. He found that although this group was largely regarded as "non-speaking" because they do not spontaneously initiate communication, they were found to "have developed and/or used a range of ways to communicate within familiar environs". He concluded that these children possess "a natural
communicative ability" when he observed a group of SMH in a non-structured situation (Romski et al 1989:366). In this dissertation non-verbal communication is divided into gestures and augmented communication.

(a) Gestures

In tests carried out by Gaines et al (1988:282) it was found that although non-verbal children (without hearing loss) could be taught to speak vocally, they neither used the "learned" words to communicate nor to respond to requests. On the other hand, those non-verbal autistic and SMH children who failed to benefit from vocal speech training, learned sign language successfully.

The young Down's syndrome children prefer to use gestures rather than vocal, verbal expression. This was reported in a research conducted by Greenwald and Leonard in 1979 (Pueschel et al 1987:242). This was also found in studies conducted by Smith and Tetzchner in 1986 (p.58).

Hallas et al (1982:127) maintains that the SMH are often poor at signalling non-verbally, either in intonation or with their faces, or by manual gestures. Furthermore, both the use and understanding of non-verbal communication devices is "peculiar and slow to develop in autistic children" (Attwood et al 1988:243). They rarely use gestures spontaneously and had great difficulty in producing expressions of sadness and happiness on request.

In contrast, Down's syndrome children have superior social competence. They are able to take account of mental states, and therefore they are able to adequately use and understand both expressive and instrumental gestures.
In an experiment exploring the spontaneous use of gestures, children were observed in their special schools in two situations: one in the school playground and the other at the dinner table. Autistic children were found to have specific problems with expressive gestures but not with instrumental gestures, and, in the absence of spontaneous gestures, used instrumental gestures to serve the purposes of reducing or terminating social context (for example, "go away" and "be quiet"). The Down's syndrome, on the other hand, showed a wider variety of gestures and looked at or spoke to their peers more frequently (Attwood et al 1988:243).

(b) Augmented communication

It was found that literature on augmented communication patterns of the physically disabled who also have some degree of mental handicap, provided information as to the role non-linguistic skills play, after augmentation has been introduced. One striking finding was that the augmented symbol communication, introduced to the subjects was only "one of multiple modes that are employed to convey messages to others" (Romski et al 1989:367). To support this, in 1982, Calculator and Dollagahan studied 7 SMH children ranging in C.A. from 8.1 to 25.8, and functioning at the pre-operational stage of cognitive development. They found that these children offered minimal content cues to their partners when conveying messages and relied on natural pointing gestures, often combined with idiosyncratic vocalisations, rather than using the graphic symbols available on their communication boards.

Light and her partners confirmed the use of natural forms of communication, that is, eye-gaze and vocalisation rather than symbol-use in her study. These subjects relied on the non-linguistic communicative skills they had apparently developed in familiar situations to express their intents (Romski et al
1989:367). Thus augmentative communication systems will augment natural communicative patterns which already exists.

4.5 **SYNTHESIS**

Although the SMH do not demonstrate the same language behaviour as normal children of the same C.A., they usually follow the same pattern of language development. Some children, such as brain damaged children, may show different developmental patterns. However, their rate of development is considerably slower and they subsequently reach language developmental milestones much later than their normal counterparts (cf. 4.4.1.2). In spite of their delayed language development, they use normal linguistic forms and not bizarre language patterns, unique word combinations or invented word meanings (cf. 4.4.1.1).

It is important to remember that the development of language may be "arrested" at any stage of development. All SMH children do not have the same stage of development "arrested". Some SMH children may remain in the various stages of development much longer than normal children, for example, some SMH may remain longer in the babbling stage, others may use jargon speech to a greater extent while yet others may cease to babble prematurely and lapse into stereotyped vocalisations and echolalia. Therefore one can safely say that most of them are delayed and not deviant in their acquisition of language.

This delay is noted when comparing normal language development with that of the SMH. A large number of SMH are five or six years old before they develop two-year old language skills. Furthermore, since normal children master their native language by six years of age, the SMH, reaching the mental age of eight to eleven years, should have some language competence but at a lower ceiling. They will never reach the normal adult language
level. Although the SMH would still be able to develop his vocabulary well into adult life if he is motivated, his language development will make no significant progress after the age of fourteen years.

The SMH displays specific deficits in the four components of language (cf. 4.4.2). His language problems which involve both receptive and expressive language are widespread. It involves more than just not knowing enough words. He has speech problems which involves late phonological development, poor articulation of phonology including omissions, reduplication of syllables, distortions and substitutions. With regards to his morphology, his vocabulary is very limited, concrete-bound and lacks variety. Adjectives, pronouns and prepositions are markedly absent in his spontaneous speech.

His grammar or syntax is backward and he shows poor rules generalisation, but relies on primitive word rules. He remains at either the "telegraphic"; one or two-word stage for a longer period than the non-retarded. He displays difficulty in acquiring complicated grammatical rules.

Semantically, he has a poor ability to produce and use words or to understand abstract meanings, especially when used in metaphors and similes. He tends to perseverate in some situations or becomes rigid and uses stereotype expressions. There are also some SMH who become echolalic, repeating sounds or words without understanding them.

The SMH are poor at decoding other people's non-verbal gestures and cannot adapt what they want to say to the demands of the situation. Therefore, they sometimes say things which are not socially acceptable. Furthermore, they find difficulty in understanding negatives or sentences in the passive voice. Added to this, the SMH are found to be poor at distinguishing
between speech sounds. This could affect their receptive language. Many SMH experience voice disorders (cf. 4.4.2.3). The intensity of their voices are too loud or too soft, their tone of voice is too high or too low and the quality of their voice is gruff or nasalized. Some SMH experience disfluency in speech which is characterised either by no meaningful repetition of sounds, words or phrases while speaking, or by repeated and frequent hesitation.

Regarding non-verbal communication, these SMH were found to use a range of ways to communicate within a familiar environment with familiar people. Many of the Down’s syndrome children preferred to use gestures rather than vocal expression. But most of the SMH are often poor at signalling non-verbally, either in intonation or with their faces or spontaneous use of manual gestures.

There are a number of reasons for this language deficiency in the SMH. These include:

* physical characteristics of the SMH which seriously impede language development (cf. 4.3.1);

* disorders of input, that is, auditory and visual impairment. Brain damaged children have a considerable delay in the development of inter-sensory integration (cf. 4.3.2). This seriously limits their use of information from various channels leading to confusion and educational retardation;

* neurological reasons. As SMH may be brain damaged, their language development would be affected;
limited cognitive skills. Language depends on the child’s level of cognitive development (cf. 3.5.1.3) and the majority of the SMH children showed that their level of language ability is at or below their own level of functioning in other cognitive domains;

memory problems. The short-term memory deficiency is one of the noticeable characteristic of the SMH which causes language deficiency. Since the SMH has verbal difficulty, he inadequately records situations attended to, making recall more difficult;

impaired motor development can completely interfere with or prevent speech.

environmental deprivation. This together with experiential deprivation can impede language development. The child will learn language if he has the opportunity to acquire language;

socio-economic conditions are closely associated with the environment that the child is exposed to and the quality of language that he hears spoken around him;

parenting affects language development in the SMH. Children whose mothers constantly correct them, develop more slowly than those children whose mothers are more accepting of pronunciation and vocabulary without constant correction. Parents should encourage verbal responses and create a communicative situation;

emotional immaturity of the SMH inhibits the quality of language production;
syndrome related causes where the language deficiency can be directly related to the specific syndrome, for example, Down's syndrome children have a number of distinct physical characteristics which impede speech production.

Considering these causes and the language problems (which are also pertinent to the Indian SMH), one can assume that the SMH will never reach the normal adult language level. Indian SMH children may experience greater problems in language than the average SMH child. The different sentence structures, double meanings for words (ambiguity) and different pronunciations would confuse them much more than it would an Indian child who has normal intellectual abilities. However, one must remember that each individual SMH may not display all the characteristics of language deficiency but may have them in different combinations. Therefore each SMH child must be treated as an individual and helped to reach his optimum level of development in language proficiency.

The following chapter would explore the assessment of language.
CHAPTER FIVE

GUIDELINES FOR THE LANGUAGE ASSESSMENT OF SEVERELY MENTALLY HANDICAPPED INDIAN PUPILS

5.1 INTRODUCTION

This research endeavours to provide guidelines for the assessment of language in the education of the SMH Indian child, in the absence of prescribed assessment guidelines for the teacher of the SMH. Chapters Two, Three and Four delved into the problem through the study of the SMH, his language problems, the possible causes of the language problems and the normal development of language. This was attempted by the study and review of literature. In Chapter One it was postulated that the class teacher of the SMH has the burden of assessing the language functioning of the SMH in order to devise suitable, individual, language-intervention programmes of instruction. As noted in 1.3.3. the class teacher, without the assistance of other professionals, is ill-equipped to make such important assessments.

To commence with, the researcher will attempt to give general guidelines based on the research completed in the previous chapters, which the teacher can use as the basis for language assessment of his pupils. This will be followed by a few specific guidelines which he could put into practice in class.
5.2 GUIDELINES FOR THE LANGUAGE ASSESSMENT

5.2.1 Introduction

The following guidelines are suggested for the language assessment of the SMH Indian pupil. These guidelines are based on research completed in the previous chapters and may therefore be regarded as scientifically justifiable. These guidelines were carefully selected from an investigation into the phenomenon of mental handicap with its related characteristics, the normal development of language and the specific language problems of the SMH children. These will be seen against the background of the education of the SMH in South Africa and more specifically, the class teacher's problem regarding language assessment of the SMH.

The guidelines which will be proposed will be classified as general guidelines and specific guidelines. The general guidelines may be regarded as basic rules or principles which should be taken into account in all aspects of language assessment. There are, however, still theoretical and serve mainly to direct the assessment procedures. In making any decisions regarding assessments, these general guidelines could be applied as criteria in order to evaluate the accountability of the proposed procedure. The second set of guidelines are more specific and practical in nature. They can guide the class teacher as to when and how to assess the language abilities of each SMH child in his class.

5.2.2 General guidelines

Guideline 1: It should be teaching-directed

The first guideline is that assessments should be teaching-directed and give the teacher direct cues as to the individual teaching objectives he should include in a
particular child's programme of instruction (cf. 1.1) which emphasises that instruction should cater for the child's individual needs. This form of assessment should therefore have prescriptive value and point directly to those skills which should be included in the educational programme. It should also facilitate the choice of instructional methods (appropriate for that child) and instructional aids (which will assist that specific child to learn).

In order to be teaching-directed, the assessment procedures should be developed from the curriculum goals. These goals should be analysed into small teachable units and ordered in sequence of difficulty. Assessment of each of these units will give the teacher directions as to which skills have been mastered and which not. This, in turn, will indicate clearly which skills should be included in the teaching programme. However, not only the educational goals have relevance for the teaching programme but the individual needs of each child should also be taken into account.

Guideline 2: It should be individualised

Since the SMH population has unique characteristics and no two SMH develop in exactly the same rate in all aspects (cf. 4.4.1.2.), they require an individualised approach in both their assessments and instructional strategies. Any and all relevant information about an individual SMH should be gathered because, according to McCormick and Schiefelbusch (1990:128), no one procedure will fit all children equally well or apply across all settings and all problems. Such individualised assessments should accommodate both the interindividual and intraindividual differences of a child (cf. 1.3.4); the level of development of the child; specific language defects such as gross articulatory defects, inadequate vocabulary, poor symbolic concepts (cf. 4.4.2). Specific factors which could
affect his language, for example, intrinsic factors such as physical factors, neurological factors, motor abilities and cognitive development (cf. 3.5.1) and extrinsic factors such as environmental influences, socio-economic status, parenting styles (cf. 3.5.2) should also be noted.

**Guideline 3:** It should be informal

In Chapter One (cf. 1.2.2) the difference between formal and informal assessment procedures have been pointed out, and in 1.3.3 the problems regarding the use of formal and standardized tests have been described. Not only are there a number of disadvantages in using this type of standardised test on the SMH (cf. 1.3.3), but, according to Griffiths and Russell (1985:150), the standardised assessment procedures provide only a very limited representation of language disability, and are therefore not useful for instructional or teaching purposes (Swanson & Watson 1982:4). Most of the test administrators may furthermore not understand exceptional children or they may lack the ability to elicit an ability level of performance that reflects the child's true ability.

In schools for SMH where teachers have to assess the language abilities of the children in their class, the assessment procedures will have to be informal as they are not trained to administer the formal tests. The informal assessment procedures could include criterion-referenced tests, observation, checklists, questionnaires, inventories and interviews. These procedures do not compare an individual’s score to other people’s scores. In fact, a criterion-referenced test reveals specifically what a person knows, instead of how much a person knows, compared to others. However, the disadvantages of these tests are that there are no comparative information and it takes time to develop.
This study suggests the use of other informal assessment procedures besides criterion-referenced-tests, to gain information of the SMH. Although the sources of such information are limitless, several specific sources may be used in assessing the SMH. They can be divided into two categories.

These being:

* sources that directly involve the person being assessed, for example, checklists, inventories and observations;

* sources that do not actively involve the person in the assessment for example, school records, discussion with parents and previous teachers, analysis of home and academic environments and medical and developmental histories.

These sources contribute information about a pupil’s general and current level of functioning in class.

**Guideline 4:** It should be comprehensive

The assessment should cover all aspects of language to prevent the omission of important language areas.

Language has various components (cf. 3.3). Each of these components (phonology, morphology, syntactics, semantics and pragmatics) should be assessed to determine which deficits exist. Each of these components is mediated through two channels of communication.

These being:
reception - the input of information from another person or environment;

expression - the output or what is communicated to another person.

The model of language sub-skills in 3.3.6. indicates how the components of language cross the channels of communication when individuals engage in verbal interaction.

A comprehensive assessment of the various components of language would help to establish the child's current level of language functioning. It would also reveal the extent of the child's receptive and expressive language skills. Information from an assessment of the child's phonological functioning will indicate how well the child discriminates and produces the basic sounds of speech, that is, aural discrimination. His receptive language will depend on his ability to discriminate sounds. Gordon et al (1979:15) maintain that this auditory discrimination is one of the most important stages in the language development process because it helps in identifying words.

When assessing expressive phonology, that is, the production or articulation of sound, the teacher has the responsibility of surveying a child's ability to produce all these sounds by using a number of methods, for example, imitating adult speech, naming pictures whose labels contain target sounds, and listening to conversational speech. However, it is important to bear in mind that articulation is developmental in nature. Young children do exhibit some articulation difficulty as they acquire speech, but this corrects itself by the time the child is seven years old (cf. 3.6.2.4). The teacher must have a working knowledge of the normal development of language to ascertain whether the deficit articulation is age-appropriate.
The teacher must also bear in mind that a hearing impairment may affect the child's phonological development. It could prevent the child from discriminating speech sounds adequately, that is, defective auditory reception. The inability to hear would also affect articulation, that is, an expressive phonological difficulty. Therefore, when in doubt, the teacher of the SMH should informally test the child's hearing ability or refer him to the audiologist.

The assessment of morphology, that is, regarding the child's basic vocabulary, and the assessment of syntax, that is, ways of stringing words together to form meaningful sentences, overlap and together they form the two elements of grammar. McCormick and Schiefelbusch (1990:118) refer to this as the "form" of language, that is, what children talk with: words, phrases and sentences. Children who experience difficulty here would exhibit problems in expression of sentence structure (word-order) and use of grammatical morphemes. Salvia and Ysseldyke (1981:392) mention three components of syntax that must be assessed to determine a child's language competence. These are:

(a) Word classes. The English language has a number of word-types or "parts of speech". The child may leave out a class, for example, "I chair" for "I see the chair"; or incorrectly use a class, for example, "I going to the store". The latter reveals the overlap of morphology and syntax. The child must understand the use of morphemes to change the meaning of it, for example, morpheme "-ed" when added to morpheme "dress" becomes the past tense "dressed".

(b) Word order. A child may correctly know parts of speech, but fail to put words together to conform to rules of English, for example, "I bread am eating" - an
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inappropriate word order.

(c) Transformations. There are rules in English that allow for variations of the basic sentence, as seen in sentences in the passive voice, for example: "The ball was kicked by the boy".

An informal assessment of the above would reveal the child's understanding of morphology and syntax (receptive language). Taylor (1989:297) maintains that although many tests are available, many of these are designed to be used by different professionals for different reasons. Since the class teacher cannot administer these formal tests, he can informally assess the child's understanding of morphology and syntax by engaging him in conversation, perhaps, during mealtime in class.

Semantics, as mentioned in Chapter Three (cf. 3.3.4.), refers to the meanings of words. An assessment of semantics measures a person's receptive and expressive vocabulary skills. The information from an assessment of the semantic component of language would reveal children who exhibit problems in formulating and conceptualising ideas about objects, events and relations. McCormick and Schiefelbusch (1990:118) refer to this as "what the children talk about" - objects, events, relations between people, objects and events in their environment. It reveals the basic understanding of words, the development of meaning and the extension of meaning to varied situations. Therefore, Gerber and Bryen (1981:131) are justified in stating that a full assessment of semantics must include not only the child's understanding of isolated words but how they are used in meaningful sentences.

Vocabulary can be receptive (listening and reading) or expressive (speaking and writing). The child's ability to understand what is said to him and his ability to understand
what he sees in his environment are very important for the child's total language development. The reason being, that, unless the child understands the spoken word or the written word, he would be unable to do the very basic tasks like protecting himself (that is, response to "hot, stop") or the more complicated task of following instructions, answering questions or listening to stories.

The assessment of pragmatics will reveal the child's use of language in various social contexts. Taylor (1989:296) maintains that pragmatics deals with the most important function of language which is communication. He further states that although an individual might have all the necessary skills in the areas of phonology, syntactics and semantics, he may still have difficulty in communicating with others. This is clearly seen in the SMH (cf. 4.2.1). They often talk of things that are out of context, or string words or ideas together with no regard for the listener, or fail to observe turn-taking in conversation, or even maintaining a new topic.

McCormick and Schiefelbusch (1990:120) state that children with a language-use disorder may fail to adjust their language to the cues provided by their conversational partner. As mentioned in Chapter Four (cf. 4.4.2.2) the SMH often have difficulty receiving and/or interpreting conversational cues. Polloway and Smith (1982:174) maintain that the teacher should observe language in, and make brief notations of, the times, places, situations and purposes for which oral language is used by the child (cf. 5.2.3.2) to facilitate an effective language intervention programme.
Guideline 5: It should be practical

Assessment procedures should be practical and applicable in everyday situations, whether in class or outside the classroom. There should be no special testing situation where the testing should take place. Furthermore, the class teacher should not be required to use special testing materials which could prove to be expensive. The focus of a child’s assessment should be whether his use of language in communication is functional, age-appropriate and suited to the needs of his life environments.

Guideline 6: It should not take up too much time

The assessment procedure selected should be the most efficient method of acquiring the needed information. According to McLoughlin and Lewis (1981:118) when the teacher selects an assessment procedure, the most important consideration should be the time required to administer, score and interpret the test. The assessment should be easy to administer and interpret since more difficult procedures may not only require more time but may also introduce the possibility of errors.

Furthermore, because of his serious limitations, the SMH learns at a very slow rate (cf. 2.7.). He takes a longer period of time learning a few skills. Therefore Snell (1987:64) stresses the importance of spending instructional time only on those skills which will be of maximum benefit to the student. She further states that since all people with severe handicaps can learn, instructional time must not be wasted if the teacher intends to help them attain the highest level of self-sufficiency. This implies that teachers should not spend too much of their valuable teaching time on assessment activities.
**Guideline 7:** It should show progress

The effectiveness of the teaching programme must be assessed on the basis of progress shown in the pupil. This evaluation would reveal the suitability of particular teaching strategies as well as the suitability of the chosen goals and objectives, and the particular programme of intervention.

The frequency of evaluation is controlled by the need for feedback. Luftig (1989:33) and Van Etten et al (1980:368) mention two methods of evaluation. These are: summative and formative evaluation.

* Summative evaluation occurs after a unit of instruction has been completed and the pupils move on to the next unit of instruction. An example of this is the evaluation of short term goals. This needs to be conducted on a monthly or bi-monthly basis because the short-term objectives are projected for expected achievement over a period of a few weeks. This type of evaluation occurs less frequently than evaluation of specific teaching strategies.

* Formative evaluation ascertains whether a pupil has mastered a small unit of instruction before allowing him to enter the next small instructional sequence. Testing is frequent, occurring after each brief period of instruction. This is seen when a teacher wants to ascertain the effectiveness of both his instructional programme and his instructional strategy. He can evaluate the child daily by observing his performance in class and by informally testing him. Teachers can then modify their instructional methods when it proves to be ineffective. The pupil who has not mastered a unit of learning is not allowed to advance to the next unit. Evaluation of
instructional decisions should be a continuous and on-going procedure.

When goals/objectives are written in measurable terms their evaluation is straightforward. Once mastery is achieved, the teacher records it and begins to focus on the next objective. If the pupil’s mastery is unsatisfactory then teachers can either modify or continue the objective but change the instructional strategy. Therefore, Polloway and Smith (1982:93) maintain that evaluation is an integral part of test-teach-test-reteach model.

It is important for teachers to evaluate annual goals each year because the information gained would produce a base for assessing the pupil’s progress over the year and help in formulating new annual goals.

Guideline 8: It should provide a developmental profile

SMH children display interindividual and intraindividual differences (cf. 1.3.4). In order to be able to teach a child according to his individual needs, assessment should begin by profiling the pupil’s abilities and disabilities in language content, form and usage. This would provide an initial diagnosis of the pupil’s strengths and weaknesses in language. Both these strengths and weaknesses in each of the ability areas should be taken into account in designing the individualised curriculum.

Guideline 9: It should include the SMH pupil’s language functioning in specific present environments

A person does not communicate in a vacuum, but in a specific environment. In each case the environment could positively or negatively influence a child’s ability to communicate.
Therefore it is important that the interaction between pupil and the people in the pupil's many environments should also be assessed. SMH children have very poor abilities to generalize or transfer information from one situation to another (cf. 2.7.1.3). Words learnt and used in one environment, will not necessarily be used in another.

Furthermore, as pointed out by Hawkins and Hawkins (1981:15) a teacher in a school environment does not experience seeing a child imitate his parents' or his siblings' speech; or that the child requires repeated requests to get out of bed in the morning or that the child squeals offensively, sometimes, when entering a restaurant. This type of information would make the teacher aware of many additional skill targets that might otherwise be overlooked. A teacher who wants to assess the language abilities of SMH children should therefore also include the pupil's language functioning in specific environments outside the school.

Another important fact to consider and which is related to the above is that the language used for instruction in the classroom does not often match the language used in less familiar, less formal situations (Gerber & Bryen 1981:117), that is, outside the class situation. This is particularly true in the case of the SMH Indian child in the Durban area.

The teacher must, therefore, bear in mind that learning situations exist outside the classroom, such as, the playground, the home, or even the local grocery store. Snell (1987:48) refers to such environments as the child's life environments. All life environments together constitute the child's ecology.
Guideline 10: It should be directed at the child’s future environments

Closely linked to the preceding guideline is the fact that the teacher must also assess pupils in terms of skills needed to function in various future living and work environments. These will, to a large extent, depend on each student’s individual situation, for example, some students are expected to function in urban settings and others in rural settings, still others in settings with buses and subways. Furthermore, the recreational options in various communities differ. Therefore, when assessing for future environments, the teacher should consider the unique requirements of the pupil’s community, for example, the Indian community’s requirement for the Indian SMH to adapt into its community.

Guideline 11: It should include parents and other care-givers

In order to gather information/data of the child for the purpose of assessment, the teacher has to obtain descriptive information of the child’s communication and language performance at home. However, the teacher cannot gather all this information himself, he has to enlist the assistance of others. The most important source is from parents/care givers or residential staff at a hostel. This information can reveal many potential instructional targets that could enhance the pupil’s independent functioning with non-school environments. The home with its furniture, foods, utensils, toys, activities and family members, provide the earliest vocabulary acquisition of most children.

Parents and care-givers can provide useful information about a child’s responsiveness to particular people in particular settings, because, they are able to observe them in a wider
range of settings than the class teacher. Parents are also in the unique position to affect their child’s use of language because of the nature of their relationships with the child, the amount of time they spend with their child in the course of routine activities, and their intimate knowledge of the child’s skills.

According to McCormick and Schiefelbusch (1990:283), the past decade has seen a broadening of the concept of parent-involvement in their child’s programming, although there are many competing demands for their time and energy, especially as more mothers of young children are returning to work.

**Guideline 12: It should include reports from other professionals**

The class teacher seldom has the time, competence or opportunity to collect all the possible types of information needed to make an overall assessment of the child. In cases where specialised information is needed, the teacher has to rely on the observations, tests and judgements of other professionals who come in contact with the child. These specialists can provide different kinds of specialised information that is important to plan procedures of intervention.

From the child’s personal file in school, the class teacher should acquaint himself with the reports, if any, of the various professionals that the child has come in contact with. The medical and developmental history can be used to identify a possible cause of a language problem: difficult birth, high fevers, convulsions, visual or auditory problems, developmental milestones of talking and walking. If the child has been to an ophthalmologist or an audiologist then their reports would be
valuable to the class teacher.

The psychologist's report would divulge the information on the pupil's level of aptitude and ability, his social-interactional patterns, as well as a prediction of future behaviour based on these tests. This would enable the class teacher to set realistic goals when planning language intervention.

The social worker's report would contain the environmental and cultural background of the child. Since the social worker visits the child's home and interviews parents, this report would provide valuable information on the socio-economic status, parental involvement, attitude and expectancy of parents, the child's behaviour at home and the position of the child in the family.

However, it is important to bear in mind that these reported observations are only useful if the assessor obtains information that is applicable to the purposes of assessment, and if he interprets the accuracy and relevance of the reports of others. Therefore it is very important to ensure that the information solicited is relevant for effective intervention. Taylor (1989:22) justifiably states that: "collect the information if there is a reason, but do not collect it if you are not going to use it or do not know what to do with it".

**Guideline 13:** It should consider the pupil’s cultural background

South Africa, like many other countries, is composed of individuals from widely varied ethnic, racial and linguistic backgrounds. But unlike America’s "melting pot" concept (Polloway & Smith 1982:64), the minority groups in South Africa seem to cling to their traditional language and culture while simultaneously, accepting the standard English and Afrikaans as
the mainstream of languages. In Natal, unlike the other three provinces, the dominant language spoken and taught in Indian schools, seems to be English. To the Indian child in the Durban area, in many cases, especially in the lower socio-economic groups, English still remains the second language (cf. 1.2.4), the ethnic vernacular being the first language.

However, the "westernisation" of the Indians in Durban (cf. 1.2.4) led to more and more Indians of the younger set speaking English socially rather than the vernacular, in functional communication. Educational instruction in school is also in English. However, the influence of the vernacular spoken by elders may cause many children to confuse words or mispronounce words. This cannot be regarded as inferior or deviant English but rather as being different because of the Indian accent.

Luftig (1989:268) maintains that there are currently few language tests that are "culture-fair" for culturally diverse children. Thus assessments for these pupils generally require informal techniques. In 1984 Mattes and Omark (McCormick & Schiefelbusch 1990:489) suggested that the first appropriate step in assessment would be to devise an inventory of communication skills. Various informal procedures have been advocated by professionals interested in "culture-fair" language assessment.

When assessing language it is also important to consider the fact that the socio-economic status of the family would affect the type of language that the child is exposed to (cf. 3.5.2.3). A large part of the Indians are from the middle and lower income group and reside in sprawling townships like Chatsworth and Phoenix (cf. 1.2.5). The form (dialect) of English spoken there, would also be different from the standard English taught at school. Polloway and Smith (1982:65) are justified in stating that "the question to be resolved is
Guideline 14: It should be on-going

Teachers must provide continuous and meaningful evaluations of their individual educational programmes (Snell 1987:42). McLoughlin and Lewis stated in 1981 (p.83) that the "on-going" assessment allows the teacher to measure the progress of pupils towards achieving instructional objectives. The data gained from "on-going" assessment can clarify what and how to teach, for example, if the handicapped pupil makes an error or fails on a specific task, the teacher uses this information to modify his instructional programme or strategy to suit the individual's abilities. Furthermore, regular feedbacks from parents and other persons directly involved with the child, would assist the teacher in his on-going assessment.

The on-going assessment also helps the teacher to communicate the pupil’s progress to parents and other concerned professionals as it provides information about the pupil’s achievement of objectives. It also assists the teacher to make the following instructional decisions:

1. Is progress sufficient to justify continuation of the present instructional procedures?

2. Do progress data indicate that the instructional objective is appropriate or inappropriate for the pupil?

3. Is the criterion level appropriate for the instructional objective?
4. If the objective is reached, what is the appropriate next step?

(Lilly 1977: 28-29)

5.2.3 Specific guidelines

Having considered the general guidelines for language assessment, the following specific guidelines are suggested for the teacher's practical use on his SMH pupils in class.

5.2.3.1 A developmental checklist should be administered

In order to determine a child's developmental profile (guideline 8), which is individualised (guideline 2), comprehensive (guideline 4), and practical (guideline 5) a checklist should be administered.

(i) What is a checklist?

A checklist is a criterion referenced test used to assess the extent to which the SMH child can master a given skill. The checklist consists of a series of skills, which are normally components of projected objectives. These objectives are task analysed into smaller teachable units. According to Du Toit (1986:122) by using a rating scale (normally a five point scale) the teacher is able to determine to what extent the child has or has not, been able to master each skill. By repeating the checklist assessment after a period of time (say six months) it will become clear whether or not a child has progressed in his development and how much progress was made (guideline 6).
(ii) Checklist as a developmental profile

The checklist enables the teacher to quickly and efficiently observe and record the pupil's current language functions. Using this information the teacher should be able to compile a developmental profile which would show the strengths and weaknesses of the SMH child in his language development. It would certainly help, if the teacher has a knowledge of normal language development (cf. 3.6.1), as well as experiences interaction with normally developing children. This would lead to certain language expectations which serve as a standard of normal language development.

Since language is developmental, sounds, linguistic structures, semantic elements, develop only at certain ages (as seen above). Thus Salvia and Ysseldyke (1981:395) stress that when a child is being assessed, his mental age must be considered. The data obtained from the checklist enables the teacher to compare a child to others of the same mental age or to obtain an age-equivalence for a particular child. Furthermore, since the skills in a developmental checklist are listed chronologically, they provide directives for programme planning and they indicate what skills should be taught next.

(iii) The advantages of using a checklist

A checklist is also very practical (guideline 5) because the teacher may administer the test himself since no standard procedures need to be followed. The pupil himself is not put under any stress because the strangeness of the test situation is eliminated. Furthermore, the assessment can be conducted at a time suited to the teacher and the pupil. He does not need to complete the assessment in a stipulated time, he can carry it over a few days. Most important of all, the teacher compiles his own checklist, to suit the needs of the pupils in
his class and to cover all the aspects of language that his pupils should be exposed to at that phase of the curriculum.

The study of the education of the SMH revealed that pupils in a special school are allocated to levels or groups according to their chronological ages. To facilitate instruction the curriculum is drawn up to cater for each level/group. Thus a different checklist should be planned for each of the different levels/groups. This would be less time consuming since a teacher would only have to compile a checklist for his particular level/group of children.

(iv) Components of a checklist

The first step in developing a checklist is to state the instructional or behavioural objectives in a statement form. It is important to describe clearly and precisely each of the specific actions expected to be observed. It is also possible to add statements of variations and deviations of the objectives as they occur. The behaviours/objectives should be listed in some logical order to increase the efficiency of the observation - perhaps a logical sequence of activity, simple to difficult, or a developmental sequence, that is, using a standard list of characteristics of human development at certain ages.

To facilitate recording of objectives in a checklist, the objectives must be task-analysed into smaller skills. The pupil's ability is scored on that list to ascertain at what level of each skill he is functioning. Furthermore, progress on the small components of task analysis provide information that a teacher needs to determine the adequacy of his instructional interventions.
Hints on compiling a checklist on language

The following hints should be borne in mind when compiling a checklist:

* Divide the checklist into sections and subsections corresponding to the teaching area for example, communication (non-verbal, receptive, expressive).

* Arrange the items under the subdivisions in the sequence in which they are acquired (that is, the developmental sequence) or in the sequence in which they must be learnt (that is, from easy to difficult).

* Describe the items as precisely as possible to prevent doubts and questions as to what exactly is being assessed.

* Although all the teaching areas must be covered it must contain sufficient items which are projected for a period of time - it must not be time-consuming.

* Irrelevant items should be omitted. The checklist must contain items pertinent to a particular level or group, for example, communication skills needed for vocational guidance will not be included in the primary level (six years to nine years).

* It is often necessary to compile a special checklist for an individual child to cater for his special needs, for example, he may be too far ahead of his class or too far behind, or he may be non-verbal.
* Rating could be on a four or five point scale (that is 0-4 or 0-5) rather than just "yes" or "no". It would give more accurate results and indicate progress.

* As this is a record of the child's progress it should make provisions for more than one column to allow for assessments to be conducted over an extended period of time. Ideally, the checklist should be incorporated in the child's personal file and accompany him from one class to another as he progresses through school.

* Teachers should attempt to compile a uniform standard of checklist, therefore teachers at a special school should discuss items included in their lists.

(vi) When and how should it be administered

Snell (1987:56) advocates the "direct testing" approach, where the teacher provides the pupil with certain materials or instructions to determine if he can perform the behaviour that is being assessed. This method allows the teacher to observe the child's behaviour and make a direct judgement. However, whenever possible, direct testing should occur in the criterion-environment using the criterion materials. Sometimes this is difficult because some behaviours do not occur in the classroom, for example, assessing pupil's knowledge of monetary concepts during shopping. The criterion-environment is the shop, but the teacher must first test the pupil in a simulated environment in class, to gather information and get a general idea of the pupil's skill. It is important to bear in mind that the pupil's behaviours in class may be different to what it would be in the criterion-environment. This is because, very often, the cues and materials in the classroom are only similar, not the same, as in the natural environment.
However the teacher should make use of aids in both instructing and assessing the SMH child. The reason for this being that a study of the learning characteristics of the SMH, and Piaget's stages of cognitive development revealed that learning takes place in gradual progression. It should be: from the concrete - to the representation of the concrete - to the abstract.

A knowledge of this learning process would give some direction to the teacher when he task analyses an objective for teaching and assessment purposes, especially when compiling a checklist. Furthermore, past training data, of the SMH concerned, can yield useful information about the types of training that have been effective, the expected duration of training for new skills, and more important, the specific skills that have already been taught, and the successful strategies that have been used. Therefore it is important for the teachers in a special school to work as a team towards the best interests of the SMH child concerned.

For the checklist to be most effective there must be on-going evaluation. "On-going" assessments should take place in the classroom throughout the school year. The pupil's performance is frequently measured to assess the suitability of the instructional strategy. This is most important when the serious limitations of the SMH are considered.

vii. Examples of checklists are given below.

The following examples of checklists could be used for the relevant phases in a special school. It must be borne in mind that a checklist for the junior (primary) phase would be different from the senior phase.
(i) Checklist according to the developmental milestone
Checklist for pre-primary SMH.

To assess auditory sensory skills as a prerequisite for language instruction.

**Rating scale**

<table>
<thead>
<tr>
<th></th>
<th>skill mastered (can do independently)</th>
<th>improvement shown (needs verbal assistance)</th>
<th>improvement needed (needs physical assistance)</th>
<th>no improvement (cannot do)</th>
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<table>
<thead>
<tr>
<th><strong>Prerequisite receptive language skills</strong></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Responds to loud noise</td>
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<tr>
<td>2. Responds to human voice by turning</td>
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<td>3. Responds when name is called.</td>
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<td>4. Responds to music by keeping beat.</td>
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<td>5. Responds to outdoor sounds.</td>
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<td>6. Responds to animal sounds.</td>
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<tr>
<td>7. Differentiates voices.</td>
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<tr>
<td>8. Differentiates friendly/angry voices</td>
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(ii) Checklist for the development of functional language in number.

**Long term goal:** to improve expressive and receptive skills in functional literacy.

**Short term goal:** to increase maths vocabulary: learning number
Rating scale

4 - skill mastered (can do independently)
3 - improvement shown (needs verbal assistance)
2 - improvement needed (needs physical assistance)
1 - no improvement (cannot do)

a. Junior phase

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<tbody>
<tr>
<td>a. Counts by rote up to 10.</td>
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<tr>
<td>b. Recognises and names number 1-10.</td>
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<tr>
<td>c. Counts by rote and recognises numbers 10-50.</td>
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<tr>
<td>d. Identifies numerical symbol and number of objects on command.</td>
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<tr>
<td>e. Clearly expresses a given number.</td>
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b. **Senior phase**

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<tbody>
<tr>
<td>a.</td>
<td>Counts and recognises numbers with 3 or more digits.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b.</td>
<td>Recognises and names fractions.</td>
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<td></td>
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<tr>
<td>c.</td>
<td>Has ordinal concept of number.</td>
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<tr>
<td></td>
<td>Knows which of 2 numbers is bigger.</td>
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<td></td>
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<td></td>
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<tr>
<td>d.</td>
<td>Adds or subtracts single digit numbers.</td>
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<tr>
<td>e.</td>
<td>Adds or subtracts numbers with two or more digits.</td>
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<tr>
<td>f.</td>
<td>Can do simple multiplication.</td>
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An item can then be subdivided or task analysed.

(iii) **Checklist to assess vocabulary for future life environment**

Sub-environment: laundry

**Rating scale**

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>4</td>
<td>skill mastered (can do independently)</td>
</tr>
<tr>
<td>3</td>
<td>improvement shown (needs verbal assistance)</td>
</tr>
<tr>
<td>2</td>
<td>improvement needed (needs physical assistance)</td>
</tr>
<tr>
<td>1</td>
<td>no improvement (cannot do)</td>
</tr>
</tbody>
</table>
Vocabulary for sub-environment: laundry

1. Recognises and names electrical appliances found in laundry.
2. Recognises and names detergents.
3. Recognises and names bleaching agents.
4. Identifies and names measures for detergents.
5. Recognises and names items used to dry washing.
6. Identifies instructional words used in laundry.
7. Recognises and names ironing equipment.

5.2.3.2 The teacher should observe language behaviours in various settings

Not all relevant information can be obtained from the checklist. Many important facts can only be gleaned from observing a child. Through observation additional information is gathered and old information can be verified or changed.

(i) What is observation?

Observation is an extremely important aspect of informal assessment. Cartwright and Cartwright (1984:3) define observation as the "process of systematically looking at and recording behaviour for the purposes of making instructional, management and other child services decisions". Hargrove and Poteet (1984:6) add that "looking is not merely watching - it is a visual inquiry conducted through systematic observation". They mention one more aspect of observation, that is,
"diagnostic listening" which is very important when assessing form, content and use of the pupil's oral expression.

Observation can be brief, for example, the teacher can take a few minutes in class to observe the SMH greet his classmates. This would be a source of initial information about the child's ability to express a greeting (that is, functional communication). However, it is best to observe the child in contexts that are familiar and representative of daily life because a highly structured setting (for example, the clinic or the doctor's room) which is isolated from real-life experiences, sometimes, either fails to reveal the child's real ability in communicating with his peers, or causes the teacher to make a wrong assessment of the pupil's level of functioning. Therefore the SMH pupil's language behaviour should be observed in various settings in order to get a true, meaningful assessment of his functional language abilities. After all, the emphasis of education of the SMH is not academic but functional.

(ii) Types of observation

There are two types of observation: the systematic and the unsystematic observation.

(1) Systematic Observation - in systematic observation, the behaviour to be observed is clearly defined, the type of recording to be used is decided upon, and then the observer counts the frequency, duration, magnitude or latency of the behaviour. As Luftig (1989:155) aptly describes it: "systematic observation is a planned non-random method of observing behaviour that uses specialised techniques of specifying, counting and recording behaviour".
Unsystematic Observation - in unsystematic observation, the observations tend to be random or haphazard, taking place when the behaviour catches the teacher's eye. It tends to be anecdotal and subjective, and there is no clear purpose in recording the behaviour observed. According to Cartwright and Cartwright (1984:36) lack of precision in information-gathering will result in lack of precision in decision-making. However, casual observation is not meaningless.

The observational procedure

There are certain requirements to be fulfilled for observations to be meaningful and systematic. The first requirement is to properly define the behaviour to be observed. Teachers are natural observers because a large part of their task is to observe the pupil's performance and behaviour before responding to it. But many teachers are uncertain as to what to observe, therefore it is important for the teacher to determine the focus of language and communicative behaviour. The first requirement is to know what behaviour to observe and for what purpose. This would avoid the tendency to collect large quantities of information without the need or use for it. The information obtained should bear directly on determining the goals and procedures for intervention.

The longer the observation period of the target behaviour, the more reliable the information is likely to be, because there will be more opportunities for the target behaviour to occur. A time span encompassing regular intervals during the day and on various days, provides for systematically gathering information covering a variety of situations and behaviours. For example, if a child says "no juice, no get dressed, no ball" in situations where the child is rejecting these objects
or activities, one can conclude that the child knew a rule for negation. But if the child said "don't do that" on only one occasion, there is less evidence that the child knows negation. Therefore, one instance of a particular behaviour or production of utterance cannot be considered adequate evidence that a child has knowledge of the rules that was responsible for the utterance. However, the teacher must be made aware that systematic observation is the most direct form of informal assessment and the least obtrusive in yielding information that would help in making decisions for language intervention in class.

(iv) When should observation take place

Observations are on-going. However, informal observations can be approached in different ways. Taylor (1989:29) advocates three informal approaches to observation. These being:

a) when the observer is already present in the observation setting, for example, the class teacher;

b) when the observer is an outsider in the setting, for example, the psychologist or other staff members;

c) when the observer uses a one-sided mirror or tape recorder.

Each approach has both advantages and disadvantages.

In the first approach (by far the most practical approach) the disadvantage is that the teacher does not often find the time to collect observational data.

In the second approach, the presence of an outsider can cause distraction to the child, causing a biased result.
The third approach can be time consuming because the apparatus used has to be unobtrusive or concealed so as to reduce reactive behaviour on the part of the child.

Discussion with teachers in various training centres in Durban revealed that the first method was commonly used and was more practical since the class teacher remains with the students for the greater part of the day, while students are experiencing various activities which form part of the curriculum. These factors were in keeping with Cartwright and Cartwright's (1984:43) observation that, for many purposes, this observational approach is still the only way of gathering the necessary information about children in a variety of situations throughout the day. The ideal would be to observe the child's language behaviour with the family (at home), with friends (during play) or with the teacher in the classroom - a structured situation. Children typically interact in everyday situations with persons they know best, therefore, they should not only be observed during the observation session but also in the hallway, cafeteria, on the bus travelling to school and on the playground during recess.

Taylor (1989:29) makes a valid point when he states that the observation of the child in the "natural setting, with no changes in the schedule, routine or environment", would give a true measure of the person's language behaviour. Bloom and Lahey (1978:313) emphasise that the environment must enable the child to "receive input as well as enable him to express himself". This could lead one to assume that non-contrived environmental settings such as lunch breaks on the playground; snack-time in class; free activity period in the class or activities within their homes and neighbourhood, would provide a fairly good range of language behaviour throughout the day. Snell (1987:57) adds that a "classroom environment may not offer the same natural opportunities to demonstrate the
competencies that are needed for skill use in the criterion environment". The class teacher would not be able to make a comprehensive assessment of the child’s knowledge of vocabulary because he may not use all the words he knows, in a classroom situation. This fact alone could lead to the need for observation in a naturalistic setting.

However it is important to bear in mind that observation of both the pupil’s language behaviour and the educational/instructional environment provides valuable information to the teacher for the purpose of making decisions. This information supplements information received from other sources concerning the child. It can bring new knowledge and understanding of the child.

(v) Recording observation

It is important for the teacher to know what type of recording should be used. Observation without record keeping is futile. The human memory cannot be relied on to store accurate details of behaviour. The various types of records are anecdotal records, participation charts, checklists, rating scales and charting procedures. The type of record to be used, depends on the purpose of the observation. Taylor (1989:32) states that to be observable and measurable, the definition of the target behaviour should keep in mind "the student, and situation and the anticipated goal or outcome". When target behaviours are specifically defined they facilitate observation and measurement (of the same behaviour) by other people so that similar results are obtained. This would make observation more reliable and valid. The ultimate goal should be the use of a record that allows the objective gathering of information. One must bear in mind that whatever type of record is selected, certain amount of time and effort is required to develop and use such records. Some are easy to devise and use, others are
more time consuming.

One of the problems in recording is that inaccuracies and subjectivity can be overcome if the observation is recorded immediately after the behaviour occurs. The observer must also ensure that a variety of times and situations are used in gathering information. Care must also be taken to observe all the children, although some "problem" children may warrant more concentrated observation than the others in the class.

Observations should be recorded regularly, for example, weekly or bi-weekly. The teacher must ensure that the report is brief and concise, containing only relevant information on the child’s development in general and also in specific areas. The record should contain regular references to the same developmental areas so that where possible the course of development can be seen.

One very practical suggestion would be for the teacher to keep a notebook on his table and jot down his relevant observations (perhaps in his own understandable shortened form). At the end of the day he could transfer this into the relevant form or record book that he keeps. This would save time and would certainly be more effective than relying on his memory alone.

(vi) Parental input

Since parents/care-givers are in constant contact with the SMH, they are better able to observe them in a variety of non-school settings. Teachers should be in constant contact with them (cf. 5.2.2.11).

Furthermore, parents should be advised as to what behaviours should be observed and noted. Parents could be requested to assist in language assessment. They may report on whether
newly acquired skills could also assist in ecological inventory.

5.2.3.3 The teacher should make an ecological survey of the child’s language needs

A person communicates in a specific environment (cf. guideline 9 and guideline 10). Therefore the diverse needs of the SMH requires him to have an individual educational programme which would allow him to function adequately in his community. Since the emphasis of his education is on "functional" education, neither the teacher alone nor one assessment method would fully document each pupil’s needs. Therefore the teacher would have to rely on various people to assist him in prioritizing intervention goals, and to share in the responsibility of the training programme.

This training programme begins with the requirements of independent adult functioning in various domains: the educational (school); domestic (home, hostel); recreation/leisure; community and vocational (work situation). These form the present and future environments of the SMH. Therefore a functional approach to language training increases the number of settings in which functional skills are needed.

In order to accurately assess the functional skills needed to perform successfully within the domains or skill categories, the teacher must acquire information from a variety of sources. These informants include parents/care-givers, residential staff of hostels; workshop or vocational training staff; teaching staff in the school situation (for example the music teacher, the physical education teacher); multidisciplinary staff (occupational, speech therapists, physiotherapist) and individuals familiar with community programmes for which the pupil is eligible.
However, the teacher would possibly receive a large number of functional activities and skills identified by these "informants", but instruction could not possibly begin simultaneously on all skills. Some choices have to be made. The main guide for prioritizing skills is to select, for immediate instruction, those skills the pupil requires very often to function more independently in his immediate environment.

(i) Phases of ecological inventory
(a) Identify life environments

The life environment for each child must be age-appropriate. Therefore the skills that the child needs to function in his immediate life environment must be selected according to his age. Furthermore, since the SMH requires a longer period of time to acquire skills, it would be best to select skills which will be age-appropriate in the future environment as well.

For most pupils all domains/life environments will be relevant, but the skills that the young child needs to effectively function in his domain will be different to those skills needed by the older pupil, for example, the young child could be trained to perform simple domestic skills like wiping the table or passing a spoon, but the older child's domestic skills training could include vocational training such as housekeeping, cooking or washing clothes.

Similarly, the language skills should be age-appropriate, for example, the young child's life environment centres around school, home (hostel) and immediate community. He will therefore concentrate on naming objects and places, following simple instructions and performing simple action words. The senior pupil's life environment will include school (for a
short period), home (hostel), workshop (vocational training), leisure and recreation (such as parks, cinemas), and community (such as public transport, restaurant). Therefore his language programme will be adapted to suit those needs.

Assessment must consider the unique requirements of each domain which generally consists of two types of routines. These are:

* Daily routines which occur on a daily basis and are integral to the individual's functioning to fulfil the demands of that environment, for example, brushing the teeth, eating, going to school/work and spending leisure time.

* Episodic routine which occur on a more intermittent basis. Although some of these routines do not have to be accomplished everyday they are still important for independent functioning, for example, shopping does not occur everyday but they are important for independent functioning.

(b) Identify sub-environments

These life environments should then be divided into sub-environments. The activities and skills needed to participate in each sub-environment should be identified. It is important to consider the needs of the individual pupil when subdividing the environment, and the appropriateness of the chronological age of the child. The following are examples of sub-environments:

1. sub-environments in the domain of the community:
   The current environment is the grocery store. The sub-environment of this would be:
2. Sub-environments in the domain of education would be:
   * entrance hall
   * principal's office
   * secretary's office
   * pupil's classroom
   * special rooms (for example, kitchen, music room)
   * playground

(c) Identify future environments

When considering the future environment of the child, four major life domains are identified. These domains are the domestic (home, hostel, sheltered residents); vocational (work); recreation and leisure (provided in both their living and work area); community (area and people amongst whom they live). These are then divided into sub-environments. The activities and skills that are needed to participate in each sub-environment are identified for instructional purposes, for example, in the vocational domain, a pupil may be taken to a sheltered workshop to train in performing workshop skills. The room in which the work is performed is the sub-environment. Within this room there may be several activities, for example, folding paper, threading labels, sticking and collating magazines (to name a few). The skills needed to cope with this task might include fine motor skills, and more important, following instructions of the supervisor.
Therefore the teacher who accompanies the children to the workshop, should observe the SMH in this situation, then devise instructional goals for communicative intervention. This would supplement the information gained from parents, about the child’s response to instruction at home.

In order to accurately assess the skills necessary for functioning within these four domains, the teacher must acquire information from a variety of sources. This information should preferably be gathered from other individuals who are familiar with the environment in which the pupil will be involved in the future. Furthermore, those people who will be working with the SMH in the future can also identify skills that they consider most important.

In this way the teacher would be able to focus his instruction on skills that have a high probability of being required at home, at work or in the community.

(d) Make an inventory of all language skills required for functioning effectively in the life environments.

The teacher should identify only those activities necessary for the pupil’s basic acceptable performance. He should not focus on isolating every possible activity. It must be remembered that functional language for communication cannot be taught in isolation, because language is used in almost all spheres of instruction. Therefore functional language teachers should enlist the co-operation and support of colleagues who teach other disciplines to the same pupils, for example, the music or woodwork teacher.

However, once the sub-environment of each of the child’s life environment or domains have been identified, an inventory must be made of all the specific activities within each setting.
(that is, the sub-environment) as well as the communication demands of that setting (that is, all the words that could be used by others within this setting). This inventory would enable the teacher to select the most appropriate communication content for each pupil and target naturally occurring opportunities for training.

The following is an example of such an inventory:

Inventory of language skills needed to function in life environment.

Environment: home
Sub-environment: bedroom
kitchen
bath room
dining room
living room
garage
backyard/garden

Pupils should be able to identify items commonly found in these sub-environments. They should know or understand the various uses of these items, the possible dangers of some of the items (such as the stove and other electric appliances), the need to take care of these items and eventually be able to use these items independently.

Each sub-environment can be task analysed into a sequence of teachable units, for example:

Sub-environment: kitchen

Goal: The pupils should be able to name and identify various items found in the kitchen.
Task one: Attends to kitchen items visually/tactually.
Task two: Imitates use of kitchen item.
Task three: Demonstrates use of kitchen item.
Task four: Matches identical kitchen items.
Task five: Selects a specific kitchen item from group of items.
Task six: Identify kitchen items that are same but not identical.
Task seven: Identify kitchen item on command.
Task eight: Matches kitchen item to picture.
Task nine: Matches picture of item to other pictures of item.
Task ten: Selects picture of item from group of pictures.
Task eleven: Identify picture of item on command.
Task twelve: Clearly expresses name of kitchen item independently.

(e) Parental input

Sometimes, parents may want to be directly involved in teaching their children. The teacher should design an individual home programme and train parents in the appropriate procedures. McCormick and Schiefelbusch (1990:280) suggest two approaches for collecting information from parents to supplement information collected from the teacher’s direct observation of the child.

(i) Interviews

In order to supplement his information on the child, teachers could make use of interviews with parents, care-givers or other persons involved.
An interview is a "face to face purposeful conversation, structured and guided by the teacher" (Luftig 1989:163) Since parents know their children well, the information they provide reflects the pupil's performance in natural settings with naturally occurring cues and consequences. Snell (1987:57) maintains that this is also the most "direct method" of ascertaining what types of activities the family engages in, the pupil's likes and dislikes and parent's preferences for particular activities.

In the interview it is important for the teacher to establish a rapport with the parent to set him at ease. Once this is done, the teacher then focuses on the subject and goal of the interview in order to clarify what information is being sought. This eliminates the danger of parents providing irrelevant information. The teacher must tactfully guide the conversation back to the goal of the interview, if such digression occurs. Through the teacher's structured questions the parent should provide the necessary data to conduct an informal assessment. It also provides the teacher with a broad picture of the pupil's home environment.

(ii) Questionnaires

A questionnaire is an interview in written form (Luftig 1989:165). When a parent or care-giver is not available for the interview, a questionnaire, that could be easily filled, is sent to them. This would enable the teacher to discover the facts concerning the home environment, likes, dislikes and preference of both parents and the child concerned.

A questionnaire can also be used during the interview, for example, a questionnaire on the child's developmental history or his language milestones. This enables the teachers to ask the questions in a structured manner and to ensure that
important aspects are not left out.

(f) Individual assessment file

All assessment data concerning a specific child should be kept in an individual file. This would facilitate the teacher's monitoring of the child's progress. It would provide the basis for discussion with parents and other professionals. This file would also allow for continuity in the child's assessment programme.

5.3 SYNTHESIS

The purpose of language assessment is to gain an understanding of the pupil's current level of functioning, so that an effective programme of language intervention can be designed by the class teacher. In considering the conclusions of the research with regards to the phenomenon of SMH (Chapter Two), language development (Chapter Three) and the language of the SMH (Chapter Four), the following general guidelines for assessing the language of SMH children were formulated.

5.3.1 The following general guidelines are suggested:

Guideline 1: Assessments should be teaching-directed

It should be teaching-directed because it should give direct cues to the teacher, for selecting instructional objectives for the SMH pupil's individual curriculum. The individual programme of instruction must consider the SMH child's individual differences, strengths and weaknesses and specific needs.
Guideline 2: It should be individualised

It should be individualised because no two SMH develop in exactly the same rate in all aspects. They require an individualised approach in both instructional strategies and in assessments.

Guideline 3: It should be informal

It should be informal not only because teachers are ill-equipped to administer standardised tests, but because informal tests reveal the information required by teachers. This information being what a person knows and what deficiencies he may possess. Informal assessments include criterion referenced tests, observation, checklists and questionnaires, inventories and interviews.

Guideline 4: It should be comprehensive

It should be comprehensive because language is multifaceted and therefore important language areas must not be omitted.

Guideline 5: It should be practical

It should be practical because the class teacher should be able to assess the pupil in everyday situations whether in the class or outside the classroom situation. There should be no special testing situation or special material should not be required. The focus of assessment should be whether his use of language in communication is functional, age-appropriate and suited to the needs of his life environments.
Guideline 6: It should not take up too much time

It should not take up too much time because, since the SMH takes so long to learn so little, the teacher should not use too much of valuable instruction time for assessment. This would benefit the SMH.

Guideline 7: It should show progress

It should show progress because this would reveal the effectiveness of the instructional programme selected for the SMH child.

Guideline 8: It should provide a developmental profile

It should lead to a developmental profile of the child's strengths and weakness in both receptive and expressive language. This would certainly assist the teacher in designing an effective instructional programme to suit the child's needs. The teacher should bear in mind that the SMH displays both interindividual and intraindividual differences.

Guideline 9: It should include the SMH pupil's language functioning in specific environments.

The teacher should identify present life environments of his pupils before assessing their current level of functioning to cope in such environments.

Guideline 10: It should be directed at the child's future environment

It should be directed at the child's future environment. The teacher must assess the child in terms of language skills he will need to function in his future environment and to evaluate
the extent to which he has acquired the skills. He has to enlist the assistance of various people who would be interacting with the pupil in future.

**Guideline 11:** It should involve parents and other care-givers.

By involving parents and care-givers in the assessment procedures useful information can be gathered of the child’s responses to particular people in particular settings outside the school situation.

**Guideline 12:** It should include reports from other professionals

To supplement his own information of the child, the class teacher should use the observations, tests and judgements of other professionals who are in contact with the child.

**Guideline 13:** It should consider the child’s cultural background

It is important for the teacher to consider the child’s cultural and socio-economic background when assessing language. Very often, the type of English that the child is exposed to is very different from the standard English taught at school. The teacher must ascertain whether the child’s language is deficient or different. The influence of the vernacular causes children to mispronounce and confuse words. Furthermore, the socio-economic status of the family also affects the type of language the child is exposed to.
Guideline 14: It should be on-going

It should be on-going because it allows the teacher to measure the progress of his pupils towards achieving instructional objectives. This would also clarify what and how to teach the pupil.

5.3.2 The following specific guidelines are suggested for the class teacher's practical use in the classroom

(a) The teacher should administer a developmental checklist

The teacher should administer a developmental checklist to obtain a developmental profile. The checklist should cater for the various divisions of the SMH in a special school. Each division/group should have a checklist which is appropriate for the needs of those children and to suit their chronological ages. Hints were given on compiling a checklist, on rating the individual and on when and where to administer the checklist. Finally an example of a checklist is given.

(b) The teacher should observe language behaviours in various settings

The teacher should observe language behaviours in various settings to get a true, meaningful assessment of the pupil concerned. Various types of observations were discussed including the procedures involved in observation. Hints were given on proper recording of observation and the need for parental input.
(c) The teacher should include an ecological survey of the child’s language needs

The teacher should make an ecological inventory of the child’s language needs so that he can identify the child’s life environments and the language demands of those environments. A programme of instruction can then be devised to help the child meet the language demands of his environment.

(d) The teacher should make use of interviews with parents and care-givers

The teacher should interview parents/care-givers to supplement his information on the pupil. Since parents/care-givers know their children well, the information they provide reflects the pupil’s performance in natural settings with naturally occurring cues and consequences.

(e) Questionnaires should be used simultaneously or separately with interviews.

When parents are not available for an interview, the questionnaire could be filled enabling the teacher to discover the facts concerning the home environment, likes, dislikes and preferences of both parents and the child concerned. A questionnaire can also be used during an interview, for example, a questionnaire on the child’s developmental history or his language milestones.
(f) Individual assessment file

All assessment data concerning a specific child should be kept in an individual file. In this way, progress of the child may be monitored, a basis for discussion with parents and other professionals is supplied and the continuation of assessments can be provided for.
CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 SUMMARY

The history of Indian education in South Africa revealed that special education is a fairly "new" concept. Only in 1965, Act No 61 of the Indian Education Act provided for the education and training of children who differ from other children to such an extent that special facilities had to be made available to meet their special needs.

However, the Indians were left to their own resources to provide these facilities which could only receive a state subsidy if they were registered and approved by the Division of Indian education (cf. 1.3.1.3). To the present year 1992, there is no "blueprint" for the training of the SMH Indian child. The Indian special schools are following the example of white special schools, and special schools of the western world. However, this type of education, based on the western world, is not often suited to the Indian child in the South African context. The Indian SMH children have the problem of English being the second language. They are exposed to standard English at school and English spoken with an accent of the Indian dialect at home.

The teachers at the special schools have to bear the responsibility of assessing each child's level of functioning before devising a curriculum which would suit his needs and equip him to function as "independently" as possible in his community. A study of western literature, in the absence of literature on the SMH Indian child, revealed that there are no
guidelines especially for the assessment of the language of the SMH, available to the class teacher.

It was found that in some other countries, such as the United States of America, multidisciplinary teams are responsible for the assessment of handicapped children. However, this is not the case in South Africa. Therefore in South Africa the onus is on the class teacher to find the best possible means of informally assessing the SMH pupils in his class. He can only devise an effective language instructional programme if he is able to constructively assess these SMH pupils. Therefore there is a need for guidelines according to which teachers of SMH Indian children can assess the level of language functioning of the child in order to devise an effective programme of language intervention.

In order to reach this goal, a number of sub-problems had to be addressed. These are:

* What is severe mental handicap? What are the causes thereof? What are the developmental and learning characteristics of the SMH?

* What is the phenomenon of language? What are the factors that affect the development of language? How does language develop in the "normal" child?

* What are the language problems experienced by the SMH? Is there a single, language developmental pattern that can be applied to all SMH? What are the various factors that can affect the development of language in the SMH?
Which general criteria should be applied in the language assessment of the SMH and what are the specific guidelines according to which the teacher could assess the language of the SMH Indian child in his class?

6.2 CONCLUSIONS

An investigation of the above-mentioned problems revealed the following:

6.2.1 Severe mental handicap

Since mental handicap is multifaceted, it can be viewed from various perspectives. This leads to variations in the definition, classification, prevalence and causes of mental handicap.

The most universally accepted definition of mental handicap is the one by the American Association of Mental Retardation (AAMR). The following criteria is used:

* a general, sub-average level of intellectual functioning;
* significantly sub-average adaptive behaviour;
* manifestation during the developmental period.

For education purposes, the SMH are classified as educable, trainable and custodial (cf. 2.3).

There are two qualitatively different kinds of mental handicap which are distinguished by causal factors. These being:
(1) Mental handicap caused by non-organic causes. These children often have nothing physically wrong with them but their handicap is caused by psychological and social conditions. These children are usually mildly handicapped.

(2) Mental handicap caused by specific organic causes. These are the children who are brain damaged as a result of disturbances to the central nervous system caused during the pre-, peri-, or post-natal phases. This may lead to both physical and developmental defects. The severely and profoundly handicapped children fall in this category.

Mentally handicapped children are characterised by poor intellectual functioning. This leads to problems in the spheres of cognition, perceptual-motor, social and emotional development. In fact, in most spheres of development, mentally handicapped children lag behind their normal peers in both rate and quality of development (cf. 2.7).

The most obvious characteristic of the SMH is their limited cognitive ability. They display weaknesses in almost all aspects of cognitive functioning. The SMH usually remain in the pre-operational stage of development (cf. 2.7.1). They usually do not reach the concrete-operational stage because they display deficiencies in tasks involving grouping, flexibility and reversibility which are prerequisites for this stage of development.

Since their biological make-up is defective the SMH experience difficulty in processing information they receive from their environment (objects, noises, experiences). They have difficulty in classifying, organising and integrating information effectively. This adversely affects the
development of language. A specific cognitive defect of the SMH is rigidity and lack of originality. They seem unable to solve problems as they fail to think in abstract terms. Therefore their vocabulary is concrete and based on the here-and-now (cf. 4.4.2.1. (a) (ii)).

They have poor short-term memory (STM) which can be attributed to the poor quality of their central nervous system (cf. 2.7.1.2). It can also be attributed to their inability to rehearse information spontaneously. Added to this, they find difficulty in applying strategies to organise and control the flow of information through their memory systems. They therefore fail to store information systematically and this, in turn, influences their ability to recall. However, their long term memory shows no significant limitation. A striking characteristic of the SMH is that they find difficulty in transferring what they have learnt in one situation to another (cf. 2.7.1.3).

Another cognitive characteristic is their inability to scan and attend selectively to relevant aspects of a problem (cf. 2.7.1.3). They also take much longer to direct their attention to what is learned. This causes them to take a longer period to learn fewer facts as compared to their normal peers.

Since perception is dependent on cognitive development which is poorly developed in the SMH, the perception of the SMH is superficial and incomplete, more especially their visual perception (cf. 2.7.2). Furthermore, the poor quality of their auditory perception is noted in their difficulty to distinguish between sounds that are similar. This can cause the SMH to find difficulty in interpreting spoken language. This has serious implications for learning, especially language, because so much of learning is based on oral discussions.
As far as motor development is concerned, the movements of the SMH are disharmonious and undirected, displaying specific difficulties in gross and fine motor activities. This impedes the child’s exploration of his environment, and/or his manipulation of objects to gain information for his receptive repertoire (cf. 2.7.3.2).

One of the noticeable characteristics of the SMH is their emotional immaturity. Their emotions are transient and easily changed with no apparent cause. There can be a number of reasons for these emotional problems, for example, poor cognitive development, parental reactions and certain personality traits. Some of the specific personality traits are: poor self-concept, outer-directedness, perseveration, hyperactivity, stereo-typed behaviour and low tolerance level for frustration.

Socially the mentally handicapped children are isolated and rejected by their peers. This is mainly because they are unable to learn many of the social skills that lead to acceptance and popularity among peers. Furthermore, these children tend to prefer egocentric play and fail to initiate interaction, whether in play or in communication. This would naturally impede the development of language.

The mentally handicapped child’s repeated experiences of failure and rejection leads to frustration. Since the mentally handicapped child has a low tolerance level, this feeling of frustration can be vented in inappropriate behaviour which would cause further rejection and isolation.
6.2.2 The nature and acquisition of language

Language is multifaceted, being composed of five different aspects. These are: phonology, morphology, syntax, semantics and pragmatics. Literature study has revealed that there are various theories on the acquisition of language. The theories referred to in this study are the Behaviourist, Nativist, Cognitive and the Social-Interactionist theory (cf. 3.4).

An in-depth investigation of the various theories revealed that no single theory could be entirely correct in its explanation. However, for the purposes of this study, various aspects of the above theories are extracted to form the theoretical framework of language development.

As language development is not an automatic process, it is shaped by the development of factors which are interactive. These being: intrinsic factors (within the child), and extrinsic (environmental factors). The intrinsic factors are the physical, neurological, motor and cognitive development of the child. The physical factor is very important because normal speech requires well-formed and sound hearing and speech organs. Any defective organ will seriously impede the development of both receptive and expressive language.

Neurological development affects language development because children require a specialised organisation of higher brain structures for normal speech. The area of Broca, at the side of the frontal lobe of the brain, is concerned with the production of speech sounds (expressive language), the area of Wernicke, at the side of the temporal lobe, is responsible for decoding the spoken language which is heard (receptive language).
Since the child learns by experience, he needs to be physically mobile to facilitate an active involvement in his environment. Therefore he must have good motor-co-ordination, be orientated in space and develop directionality and laterality. His constant interaction with his environment provides his communicative context to which he must respond.

As far as cognitive factors are concerned, it is found to have a direct influence on children's language development. Language acquisition does not begin until important cognitive abilities have emerged (cf. 3.5.1.3).

The extrinsic factors are the environmental influences, socio-economic status of the family, and parenting styles. A child cannot develop in isolation but grows within a framework of multidimensional environments.

The environment that the child is exposed to is dependent on the socio-economic status of the family of the child concerned (cf. 3.5.2.3). Closely related to this is the effect of the parenting styles on the development of language. Authorative parents, although strict, explain the reasons for rules and encourage their children to enter into a healthy discussion, a verbal give-and-take and less criticism. The authoritarian parents, on the other hand, are strict and emphasize unquestioning obedience and respect for authority, discouraging discussions.

The matrix of language is laid down during the early years of life, and in a fixed pattern. Children all over the world, regardless of race, colour or creed learn their native language at roughly the same age. They proceed through the same stages at roughly the same time and roughly the same rate (cf. 3.6).
6.2.3 The language of the SMH

The language of the SMH deviates from their normal peers. Although the SMH do not demonstrate the same language behaviour as normal children of the same C.A., they use normal linguistic forms and not bizarre language patterns. They proceed through the same stages of development as normal children of the same C.A., but at a slower rate and they reach a lower ceiling. The SMH will never reach the normal adult language level. The language of the SMH is so defective that it is being considered an aspect of mental retardation rather than a consequence of mental retardation (cf. 4.2).

It is important to remember that the development of language may be "arrested" at any stage of development. All SMH children do not have the same stage of development "arrested". Therefore the SMH are delayed and, in most cases, not deviant in their acquisition of language.

This delay is noted when comparing normal language development with that of the SMH. Many SMH children are five or six years old before they develop two year-old language skills. They will never reach the normal adult language level. Although the SMH will be able to develop his vocabulary well into adult life (if he is motivated) his language development will make no significant progress after the age of fourteen years.

Furthermore the SMH displays specific defects in the various components of language. His problems involve both receptive and expressive language. It is more than just not knowing enough words. He also has problems with speech which includes late phonological development, poor articulation, omissions, reduplication of syllables, distortions and substitutions. Regarding his knowledge of morphology, his vocabulary is limited, concrete-bound, and lacks variety. Descriptive words,
pronouns and prepositions are absent in his spontaneous speech.

His syntax is backward and he displays poor rules generalisation while relying on primitive word rules. He is seen to remain in the "telegraphic, one-word, two-word stage" for a longer period of time than the non-retarded.

He tends to perseverate in some situations or becomes rigid and uses stereotype expressions. Some SMH also become echolalic, that is, repeating sounds or words without understanding them. They are poor at decoding other people's non-verbal gestures and cannot adapt what they want to say to the demands of the situation. Therefore they sometimes say things which are not socially acceptable.

They also have a problem in understanding negatives or sentences in the passive voice. Their inability to distinguish between speech sounds could affect their receptive language. Many SMH experience voice disorders (cf. 4.4.2.3) where their voices are either too high, too low and the quality of their voice is gruff or nasalised. Others could experience dysfluency in speech which is characterised by no meaningful repetition of sounds, words or phrases while speaking.

There are a number of reasons for language deficiency in the SMH. Since the SMH are not a homogenous group, what may cause language deficiency in one child may not necessarily cause the same in another SMH. The reasons discussed in this study include:

* physical, characteristics - because as noted in Chapter Two (2.6) the physical characteristics of most of the SMH are distinctly different from non-retarded children. In most cases these physical characteristics seriously impede the development of speech (cf. 4.3.1);
disorders of input - that is, auditory and visual impairment. Brain damaged children have a considerable delay in the development of intersensory integration (cf. 4.3.2). This seriously limits their use of information from various channels leading to confusion and educational retardation;

* neurological reasons - as noted in 3.5.1.2. Normal speech requires specialised organisation of higher brain structures. Many SMH children are brain damaged, therefore their language development would be affected;

* cognitive limitations - language depends on the child’s level of cognitive development (cf. 3.5.1.3) and the majority of SMH children’s level of language ability is at or below their own level of functioning in other cognitive domains;

* memory. The short term memory deficiency is one of the noticeable characteristics of the SMH. One of the reasons could be a verbal difficulty which causes inadequate recording of situations attended to. This makes recall even more difficult. On the other hand, memory problems will limit language acquisition;

* impaired motor development. Some overt motor problems, for example, cerebral palsy, completely interferes with or prevents speech; or hyperactivity causing children not to remain in one activity long enough to learn;

* environmental deprivation. The processing of information about the environment begins at birth but environmental and experiential deprivation can impede language development. The SMH are found in two types of environments, that is, home-centred or residential;
socio-economic conditions are closely associated with the environment that the child is exposed to, and the quality of language that he hears spoken around him;

parenting. It is found that children whose mothers constantly correct them develop more slowly than those children of mothers who are more accepting of pronunciation and vocabulary, without constant correction. Furthermore, parents should encourage verbal responses and create a communicative situation and not overly anticipate the child's needs or desires;

emotional cause of language deficiency. The SMH displays emotional immaturity. This can inhibit the quality of language production;

syndrome-related causes. In some cases the causes of language delay may be directly related to the specific syndrome, for example Down's syndrome children are more delayed in their rate of language acquisition than might be predicted from their mental age alone. They also have a number of distinct physical characteristics which impede speech production, for example, thick slack tongue, deformed mouth cavity.

Considering these causes, one can assume that the SMH will probably never reach the normal adult language level. Their language deficit may be observed at various levels that is, problems in phonological, morphological, syntactical, semantical and pragmatical levels. Indian SMH children may experience even more language problems than the average SMH child. The double meanings for words (ambiguity), different sentence structures and different pronunciations would confuse them much more than it would an Indian child who has normal intellectual abilities.
However, it is impressive that despite a variety of brain damage syndromes SMH children learn the standard form of their native language. Each individual SMH may not display all the characteristics of language deficiency but may have them in different combinations. Therefore each SMH child must be treated as an individual and helped to reach his optimum level of development in language proficiency.

6.2.4 Guidelines for the language assessment of severely mentally handicapped Indian pupils

The following guidelines, based on the findings of the aforementioned investigations and therefore scientifically accountable, should be followed by the class teachers of the SMH.

The first set of guidelines may be regarded as basic rules which should be borne in mind regarding language assessments. In the case of any decision making, these guidelines may be used as criteria in order to evaluate the accountability of the proposed assessment activities. The second set is more specific in nature and can assist class teachers in administering individual language assessments.

6.2.4.1 The following general guidelines are suggested

Guideline 1: Assessment should be teaching-directed

It should provide the teacher with direct cues for selecting instructional objectives for the SMH pupil's individual curriculum. The individual programme of instruction must consider the SMH child's individual differences, strengths and weaknesses and specific needs.
Guideline 2: It should be individualised

Since no two SMH develop in exactly the same rate in all aspects, they require an individualised approach in both instructional strategies and in assessments.

Guideline 3: It should be informal

Informal tests should be used, not only because teachers are ill-equipped to administer standardised tests, but because informal tests reveal the information required by teachers. This information being what a person knows and what deficiencies he may possess so that an effective intervention programme could be developed for him. A number of disadvantages were found when using the standardized tests (cf. 1.3.7).

Guideline 4: It should be comprehensive

An assessment of language cannot merely be concerned with measuring vocabulary and syntax because language is multifacetted. It has five different components, each of which should be assessed to determine whether or not a deficit exists. The teacher must bear in mind that each of these components is mediated through two channels of communication. Furthermore, these components of language crosses these channels when communication takes place (cf. 5.3.2).

Guideline 5: It should be practical

Teachers should be able to assess children in everyday situations, whether in class or outside the classroom. A special test situation or special material should not be required. The focus of a child’s assessment should be whether
his use of language in communication is functional, age-appropriate and suited to the needs of his life environments.

Guideline 6: It should not take up too much time

As the SMH are slow learners the teacher needs the limited time he has with his pupils for meaningful instructional intervention. He cannot waste valuable time by engaging in time-consuming assessments of SMH children.

Guideline 7: It should show progress

To ascertain the effectiveness of any instructional programme strategy it has to be evaluated regularly. This evaluation would reveal the suitability of a particular teaching strategy, suitability of the chosen goals and objectives, as well as the particular programme of intervention. Assessment/evaluation of this kind should show progress in the student. The frequency of this evaluation is controlled by the need for feedback by the teacher.

Guideline 8: It should provide a developmental profile

In order to plan a child’s language programme he should establish the child’s current level of language functioning and the extent of the child’s receptive and expressive language skills. Having acquainted himself with the normal development of language, the teacher should compile a profile of the child’s strengths and weaknesses in the development of language. The teacher should bear in mind that the SMH displays both interindividual and intraindividual differences.
Guideline 9: It should include the SMH pupil's language functioning in specific present environments

As SMH children cannot transfer what they have learnt from one environment to the other, a teacher should note their language functioning in their various life environments. The teacher should identify the present life environments of his SMH pupil before assessing his current level of functioning to cope in such environments.

Guideline 10: It should be directed at the child's future environment

The teacher should also direct his assessments at the child's future environments. He should more or less gauge what the SMH pupil's future environments will be, what language skills he will need to function effectively in those environments and evaluate the extent to which he has acquired the skills.

Guideline 11: It should include parents and care-givers

Parents and care-givers should be involved in the assessment procedures because they can provide useful information of the child's responsiveness to particular people in particular settings outside the school situation. In order to assist in these assessment activities and to supply relevant and correct information, parents should be trained. The teacher can design a home programme and train parents, for example, how to observe in appropriate informal settings, how to note the frequency of behaviour, and how to record the information.
Guideline 12: It should include reports from other professionals

Since it is virtually impossible for the class teacher to acquire all relevant information of the child in the limited time that he has, he has to make use of observations, tests and judgements of other professionals who come into contact with the child. These specialists can provide different kinds of information that is important to plan procedures of intervention. This information would supplement his own information of the child (cf. 5.3.2). At the same time teachers could be expected to impart their assessment data to professionals who require more specific information of the child for diagnostic purposes.

Guideline 13: It should consider the child’s cultural background

In his language assessment of the child, the teacher must consider the cultural background of the child concerned. It is important to make a distinction between language difference and language deficiency. A study of normal language development revealed that children learn the particular language of their community (cf. 3.6). The influence of the vernacular causes children to mispronounce and confuse words. The dialect of English would be different from the standard English taught at school (cf. 5.3.7). Furthermore, the socio-economic status of the family also affects the type of language the child is exposed to.

Guideline 14: It should be on-going

The on-going assessment allows the teacher to measure the progress of the pupils towards achieving instructional objectives. He uses this information to modify his
instructional programme or strategy to suit the individual's abilities.

6.2.4.2 The following are specific guidelines

(a) The teacher should administer a developmental checklist

A checklist based on the normal developmental milestones of language development enables the teacher to quickly and efficiently assess and record the child's current language functions. It also indicates developmental strengths and weaknesses, thereby supplying a developmental profile of the child. In grading the checklist 0-4, and repeating the assessment at specific intervals, progress can be reported. Examples of developmental and functional checklist are given in 5.2.3.1.

(b) The teacher should observe language behaviours in various settings

To verify the information obtained from the checklist and to achieve a comprehensive view of the current language functioning of the child, the teacher must observe the child in various settings. These include those which are familiar and natural to the child as well as those in which the child is insecure. This would give a true measure of the child's language behaviour (cf. 5.3.2 (b)).

Teachers should use both systemic and unsystematic observations procedures (cf. 5.2.3.2). Although they are natural observers of their pupils' performance in class, they should bear in mind that one instance or occurrence of a certain language behaviour or utterance is not conclusive evidence of the child's knowledge, or ability in, that aspect of language.
Observations must be carefully, systematically and accurately recorded to be meaningful. Teachers should select the type of recording that allows the objective gathering of information without taking up too much time.

(c) The teacher should include an ecological survey of the child’s language needs

The ecological inventory will enable the teacher to identify the SMH child’s life-environments and the language demands of those environments. The teacher can then suit his language instruction to equip the SMH, as far as possible, to cope with the demands of his life environments.

(d) Interviews

In order to supplement and verify his information on the child, teachers could make use of interviews with parents, caregivers or other persons directly involved with the child.

(e) Questionnaires

Questionnaires are valuable assessment media which may be used simultaneously with the interview or separately. These could be filled in by parents/caregivers to discover facts about home environment, preferences and dislikes of both parents and pupils.

(f) Individual assessment files

All assessment data concerning a specific child should be kept in an individual file. In this way, progress of the child may be monitored, a basis for discussion with parents and other professionals is supplied and continuation is obtained.
6.3 RECOMMENDATIONS

RECOMMENDATION 1.

That the general and specific guidelines formulated for the assessment of language in the education of the SMH be made available to all teachers of special schools for the SMH Indian child in the Durban area.

RECOMMENDATION 2.

That in-service training on language assessment be provided for all special school teachers of the SMH.

RECOMMENDATION 3.

That special schools should employ speech therapists and that special school teachers should work closely with speech therapists to design effective programmes of language intervention for SMH children.

RECOMMENDATION 4.

That parents should be advised and trained to become involved with informal language assessments of their SMH children and to report relevant information to the teacher concerned.

RECOMMENDATION 5.

That further research be undertaken on the specific methods of assessing the language of the SMH in each phase of his development; designing individual language programmes for the various phases; how to involve parents in the language assessments and language instruction of their SMH children and on how to train them for that purpose.
6.4 CONCLUSION

In the absence of interdisciplinary support teams at schools for the SMH pupils the bulk of the assessment of language falls on the class teacher. However, the teacher of the SMH is ill-equipped to assess the language functioning of the SMH child in his class. This poses a problem when he is planning a language programme of instruction, especially, when he is dealing with such a diverse population of severely mentally handicapped children. These children, with their unique characteristics, need assessment and instructional procedures which are individualised. Appropriate and functional individual teaching programmes can only be planned effectively if they are based on a sound knowledge of the child, his abilities, difficulties, present and future environments. Such knowledge should be gained by detailed and valid assessment procedures.

Guidelines proposed in this investigations could play a major role in assisting teachers of SMH Indian children in the Durban area to assess the language in an effective and scientifically justifiable manner and in so doing, improving the quality of individual educational programmes presented to these children.


West Park School Brochure. 1990, p.10.


