

**THE SCHOOLING SITUATION OF
HEARING IMPAIRED PUPILS IN FOUR
REGULAR SCHOOLS OF BAHIRDAR
AND DEBRETABOR TOWNS**

By

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1. Introduction

1.1 Background to the problem

Hearing impairment in children does not only make it difficult for them to communicate with other people; it also slows down, or even prevents altogether, their learning.

A great deal of what children learn comes from what they (over) hear. They hear their family members and other children or people in the community talking and they learn. They hear the radio or television and they learn. All this is in addition to what is said to them.

Children who are hearing impaired miss out on this learning. So they need very special help in order to learn. This special help will come from schooling; but parents, siblings, family members and the community are all needed to help as well.

If hearing-impaired children receive a good and suitable education, they are every bit as capable as hearing children. There is the same range of ability. They can be academically successful-doctors, lawyers, and lecturers. They can do many jobs-printers, carpenters, farmers, and dressmakers (UNESCO, 2000). But, these things only happen if they are given opportunities. If reading is taught, for instance, visually or by gestural method, many hearing impaired children are better able to learn how to read, write, and use logic forms and will be successful in school (Kirk *et al.*, 1993). With this in mind, the purpose of this paper was to investigate the schooling situation of hearing impaired pupils in two special units and two integrated settings of the deaf in Bahirdar and Debreabor towns.

Currently there are no statistical data on the prevalence of hearing impairment and the situation of persons with hearing impairments in Ethiopia in general and in Amhara Regional State in particular. However, according to the population and housing census conducted in 1998 by central statistical authority the number of hearing impaired children in the country

was 50957. From this estimation number of hearing impaired children, only 1675 got special education services (MOE, 1999). According to this statistical report, the number of hearing-impaired students served in Amhara Regional State in special boarding schools (52) and in special units (238) was 290.

Thus, from this general estimate it can be said that the majority of the hearing-impaired children in Ethiopia in general and in Amhara Regional state in particular are still directed largely toward struggling for survival. With this information in mind, it can be assumed that the participation of hearing-impaired children in the school settings remains below one percent.

In investigating the schooling situation of hearing impaired children at two special units and two integrated settings, this paper has tried to assess variables related to family, curriculum, methods of teaching, educational facilities as well as attitude influencing school learning and achievement of hearing impaired pupils.

1.2 Statement of the problem

Although many countries are trying to increase the opportunities for hearing-impaired children to have access to education, the majority of the hearing-impaired children are excluded from any kind of education in the income-poor countries of the south for economic, cultural and logistical reasons (Golden & Joseph, 2000).

In spite of the low enrollment rate, the educational system is unable to provide schooling for all the enrolled children in general and hearing-impaired children in particular (Tirussew, 2001). Most of the available education services in special schools and units of the deaf are even urban-based and ill-equipped with human as well as material resources (Tirusew, 1998 & 1999). Even Alpha and Hossaena schools for the deaf, which are the oldest schools for the deaf, have few facilities required for the hearing impairment students

(Felekech, 2000) It was assumed that the schooling situation of hearing-impaired students is particularly serious and alarming in the special and integrated classes for the deaf at Bahirdar and Debretabor towns as far as the services at the regular school settings are concerned.

Bearing this idea in mind, the major purpose of this study was to investigate the schooling situation of hearing-impaired children in Meskerem and Tabor special units as well as in Ewket Fana and Shinbit integrated classes of the deaf in Bahirdar and Debretabor towns. Meskerem special unit, Ewket Fana and Shinbit integrated classes are located in Bahirdar town, whereas Tabor special unit is located in Debretabor town.

Specifically, the purposes of this study were:

1. To find out major factors influencing the schooling situation of hearing-impaired pupils;
2. To examine the current methods of teaching the hearing-impaired pupils; and
3. To suggest practical ways of handling the problems of hearing-impaired pupils schooling in the selected school settings of the deaf.

In order to achieve the aforementioned objectives of the study, the research was intended to seek answers to the following questions:

Question 1. To what extent do parents of hearing impaired children participate in the school learning of hearing impaired pupils in the selected schools?

Question 2. To what extent is the curriculum of the schools relevant to the needs of children with hearing impairment?

Question 3. What methods of teaching do teachers of the deaf use for instruction? To what extent are their approaches appropriate for teaching hearing-impaired pupils at the special units and integrated classes under this study?

Question 4. To what extent are teachers of the deaf trained and motivated? Question 5. To what extent are special equipment and facilities that are required for teaching hearing-impaired pupils available in the selected school settings of the deaf?

Question 6. What cultural beliefs impede the school learning of hearing-impaired pupils in the selected school settings of the deaf?

1.3 Significance of the Study

If hearing-impaired children are educated and trained, they are able to be productive members of society. According to UNESCO (2000), there are deaf professors in some countries, for example, in the United States of America. There are university departments for deaf students where many of the lecturers are deaf, for example, in England. In some countries deaf students go to regular universities and colleges and have sign language interpreters, note takers and other help, for example, in Norway.

The study conducted at Addis Ababa University to assess the participation of persons with disabilities of higher education level however reveals that only persons with motor and visual disabilities were identified to take part at higher education level (Tirussew, 1998). The drop out rate and the low educational achievement of hearing impaired children in the Ethiopian school system could be an indicator that there is a lot to be done in this area (Tirussew, 1999).

Though it is a serious problem, little attention has been given by local researchers to investigate the schooling situation of hearing-impaired children in the country. Moreover, even though teachers and parents of hearing-impaired children complain about it, this particular investigation has not been done before in Ethiopia in general and at Bahirdar and Debretabor in particular in special units and integrated classes of the hearing-impaired.

It was, therefore, of paramount importance to investigate the schooling situation of hearing impaired children in special units and integrated classes for the Deaf in Bahirdar and Debretabor towns before embarking on inclusive programs at once all over the country in general and in Amhara region in particular.

Specifically, the importance of the study lies on the following reasons:

1. It helps to identify limitations in curriculum, teaching methods and facilities;
2. It helps to identify cultural problems; and
3. It also initiates other educational researchers to carry out more extensive studies in the area.

1.4 Delimitation of the Study

'Schooling' is a wide topic and can be related to many factors. But, it was difficult to include all components in the area of the study due to scarcity of resources and time. The study is delimited in Bahirdar and Debretabor towns in Amhara Regional State on the basis of homogeneous cultural and language background of the participants as well as the researcher. The study did not also include other special units of the deaf and integrated settings for hearing-impaired in the region, but addressed only two special units and two integrated settings in the two towns for its manageability and accessibility. It is also delimited by grade level, that is, children below grade 4 were not involved in the study because it was assumed that relatively more and precise information might be obtained from upper grade students who communicate and understand better.

1.5 Definition of Key Terms

Curriculum: Similar to hearing children but includes special skills such as speech development, speech reading and auditory training, and reading (Kirk, et. al, 1993)

Deaf Children: Children who get little help from sound, or do not hear anything at all. The "deafness" is often referred to as "severe" or "profound" (UNESCO, 2000).

Hard-of-Hearing Children: Children who can rely on auditory perception. But, the terms "partially deaf" and "partially hearing" are sometimes used as well (UNESCO, 2000).

Hearing Impairment: Generic term indicating a hearing loss that may range in severity from mild to profound (Hallahan & Kauffman, 1988& 1991).

Hearing-Impaired Children: Both deaf and hard-of-hearing children. This term, used mainly in education, indicates a child who needs special services because of a hearing loss (Heward & Orlansky, 1988).

Integrated Classes: Classes where hearing-impaired children are placed in class of hearing children with special help and attention for the hearing-impaired (UNESCO, 2000).

Oral method: Method that children receive input through speech reading (lip reading) and the amplification of sound, and they express themselves through speech (Moore, 1996).

Prelingual deafness: The condition of persons whose deafness was present at birth or occurred prior to the development of spoken or signed language (Moore, 1996).

Postlingual deafness: The condition of persons whose deafness occurred following the spontaneous acquisition of language (Moore, 1996).

Sign languages: Languages produced by using positions and movements of the hands, face and body that can be used to express everything that spoken languages do and have their own grammar (Ahlgren & Hylden, 1994)

Special Units: Classes (often called "units") of the deaf children attached to regular schools for hearing children. These are usually day schools (UNESCO, 2000).

2. Review of Related Literature

The review will consist of six sections.

2.1 Overall ideas about the education of the hearing impaired

2.1.1 The general background of the education of hearing impaired children

Hearing-Impaired persons have long been a source of fascination and interest. The end of the dark ages for the deaf may be marked by the writings of Girolamo Cardano (1501-1576), an Italian Mathematician and Physician, who accepted Agricola's report of a deaf-mute who had learned to write (Moore, 1987 & 1996). Cardano argued for the teaching of the deaf to read and write, believing that many abstract ideas could be explained to them through signs. Apparently, he was the first to realize that written words could represent ideas directly without recourse to speech.

One of the earliest educational programs for exceptional children of any kind was a school for the deaf children of noble families that was established in Spain around 1578 by Pedro Ponce de Leon (Heward & Orlansky, 1988). In order for children to be recognized as persons under the law and be eligible to inherit their families' titles and fortunes, it was necessary for them to be able to speak and read. Ponce de Leon hence reportedly achieved success in teaching speech, writing, reading, arithmetic, and foreign languages to some hearing-impaired students (Sacks, *et al.*, 1986 cited in Heward & Orlansky, 1988).

During the 18th century, schools for deaf children were set up in England, France, Germany, Holland, and Scotland. Both oral and Manual methods of instruction were used (Heward & Orlansky, 1988; Moore, 1987 & 1996). Deaf children were among the first groups of handicapped individuals to receive special education in the United States also. The American Asylum for the Education of the Deaf and Dumb was opened in Hartford in 1817 (Heward & Orlansky, 1988).

In fact, oral approaches to education of hearing-impaired students came to dominate professional thought to such a great degree that the use of sign language in schools was

officially prohibited at an international conference held in 1988. A particularly influential figure during this era was Alexander Graham Bell, the inventor of the telephone, who had a lifelong interest in deafness. Although, several day schools for deaf students were established, before the end of the 19th century in general, the late 19th century brought about an increasing isolation of deaf children from their families and from society at large (Moore & Kluwin, 1986 cited in Heward & Orlansky, 1988; Kirk, et al., 1993; Moore, 1996). And it was not until many years later that most schools relaxed their restrictions against the use of sign language. Educational opportunities for hearing-impaired children in regular public schools have become widespread only in recent years (Gearheart, et al., 1988; Hallahan & Kauffman, 1991).

Although increasing attention is given to the needs of hearing-impaired children, the present state of special education for hearing-impaired children is not a happy one. Many deaf students leave school unable to read and write their mother tongue proficiently. "The average deaf student completing a secondary education program is still performing at a level similar to the average 9 or 10 year old hearing students". (Heward & Orlansky, 1988, 266) Many deaf students are not able to communicate effectively, perhaps not even with schoolmates or members of their own family. Many parents are given confusing, contradictory information and advice when it is discovered that their children have hearing impairments; identification of a deaf child is often devastating for parents. The rate of unemployment and underemployment among deaf adults is shockingly high and their wages are often lower than those of the hearing population. They are faced with the stark choice of attending the local school, where they are likely to fail unless efforts are made to include them, or go without formal education (Heward & Orlansky, 1988; Golden & Joseph, 2000; UNESCO, 2000).

Although many questions remain unanswered, and many challenges remain to be faced in the education of children with hearing impairments, if they receive a good and suitable education, they are every bit as capable as hearing people. There is the same range of ability. They can be responsible citizens. But these things only happen if they are given opportunities (UNESCO, 2000).

In conclusion, it can be said that the education of hearing-impaired students has a long history. Efforts to teach deaf children in Europe as early as the 16th century can be a case in point. Although most deaf children were educated in residential schools, today, many of them attend classes in regular school settings. This reflects the desirable shift of thinking from segregated special schools to an integrated approach.

2.1.2 An overview of the education of hearing impaired children in Ethiopia

The traditional services for exceptional children in Ethiopia used to be carried out exclusively by the individual families and religious organizations (MOE report, 1987 cited in Tibebu). However, the trend of development of the education of exceptional children in general and the hearing-impaired in particular is similar to that of developing countries.

In Ethiopia, for many people, special needs education is only for children with disabilities. Some are aware of the diverse needs of all children, with or without obvious disabilities. Still others think that the education of children with disabilities is humanitarian activity. It all depends on the level of awareness. With these perspectives, the existing provisions in Ethiopia include boarding special schools, day special schools, special units or special classes in regular schools and preparatory programs in the form of community based rehabilitation. These arrangements are all for children with disabilities, primarily for those who have visual, auditory, physical and mental impairments (Mamo; EFPD, 2001).

The establishment of such diverse patterns is associated with the origin of special schools and how and by whom they were established. To be more specific, the schools for the hearing impaired were established by missionaries. The first schools for the deaf in Ethiopia were established in the 1960s. The schools taught either in sign language or oral language. In addition, the schools were not established with the idea of making the hearing impaired children literate citizens who can participate as equal citizen in the work life of the society. The aim was rather to teach them Bible (Tibebu).

According to Abeba (1996) the first method of communication of the deaf in Ethiopia was the American manual system, which was used for ten years from 1975 to 1986, was a combined method of Amharic signs and speech. The second, oral method of communication was introduced by British Sister Barbara from 1986 to 1989. This was “deaf children can talk” method.

Although currently there are no reliable statistical data on the number of schools and hearing children in Ethiopia, according to the MOE (1999) report there are 3 boarding special schools, 5 day special schools, and 33 special classes in regular schools for the deaf with the total of 1675 students (940 males; 735 females) in the country.

Out of the total boarding and day special schools, 60% are run by non-governmental organizations. All the special classes in regular schools (100%) are however in public government schools. The number of special schools has remained the same or to some extent decreased while the number of special classes in regular schools has been increasing. (MOE, 1999; Mamo).

It is generally recognized throughout the world that children need and have a right to education. Hearing-impaired children share that need and right. The Salamanca Frame work for Action (as cited in UNESCO, 2000) states that education policies should take full account

of individual differences and situations. The importance of sign language as a medium of communication among the deaf, for example, should be recognized and provision should be made to ensure that all hearing-impaired persons have access to education in their sign language.

In this regard the Ethiopian Education and Training Policy (TGE, 1994) outlines the principles of special needs education by stating that all children, including the disabled and the gifted children, learn in accordance with their full potentials and needs. The Policy (Article. 3.3.1), recognizing the need in identifying potentials and limitations of students at all levels, has indicated that "continuous assessment in academic and practical subjects, including aptitude tests will be conducted".

Although empirical study and literature on the situation of persons with disabilities in general and on hearing-impaired persons in particular in Ethiopia are scarce, the existing few studies indicated that a stereotype attitude of the majority of the people and their orientation towards the inabilities rather than the potential of persons with disabilities is very prevalent (Mikre, 2000). Moreover, in Ethiopia according to the base line survey conducted by the Institute of Educational Research at Addis Ababa University, the general public have misunderstandings and misconceptions about the potential and contribution of persons with disabilities, and negative attitudes tend to be more dominant in rural areas, among people with no education and among people who are engaged in agriculture (Tirussew, et. al, 1995).

Generally, as it can be understood from the discussions so far on the education of the hearing impaired, many of the practical arguments about the educational needs of hearing impaired children, such as the kind of syllabus they should follow, the methods of communication they should receive and by the kinds of teachers they should have, are really based on answers to, or attitudes towards, certain key theoretical issues. In the remainder of this part of the paper, thus, specific issues related to the schooling situation of hearing-

impaired children are highlighted. Although the paper sometimes used the masculine forms of addressing, the reference applies to both sexes. Sometimes the terms pupil, students, and children may also be used interchangeably in this paper.

2.2 Individual and family factors related to the education of the hearing impaired

Hearing loss affects communication, and the social, emotional, educational and vocational aspects of the life of the individual. It affects the family and the community too. However, the amount of hearing loss varies a great deal. What can be heard and what cannot be heard varies a great deal. The use people make of what they can hear varies a great deal. Thus, the extent of the effect will depend on, among others, the type of loss, the degree of loss, the age of onset of impairment, and the home environment.

2.2.1 Factors related to the child. As already stated, age of onset of impairment, age of discovery of impairment, degree of impairment, type of hearing loss, effective use of hearing aid, mental ability, linguistic aptitude, additional handicaps, and personality traits are some of the conditions that appear to be most closely related to the academic success of hearing-impaired child (Reed, 1984& 1987; Heward & Orlansky, 1988). It should be understood, however, that a decibel level on the audiogram does not sufficiently reflect the degree of hardship the child experiences; nor does it offer a sufficient basis for predicting the linguistic or educational outcome (Davis, et al., 1986 cited in Sinkkonen, 1994).

A child who is hearing-impaired from birth or who loses his hearing before acquiring speech and language is at a greater disadvantage than a child with a post lingual hearing impairment. Similarly, the greater the hearing loss, the more likely the child is to experience difficulty in learning language and academic skills. However, it is not also easy for persons who become deaf after many years of listening and talking to learn sign language. This is mainly because they have relied for so long on auditory perception that to change to visual

perception is not easy (Heward & Orlansky, 1988; Reed, 1987; Kirk, et al., 1993; UNESCO, 2000).

Delayed speech and language development have been found in connection with chronic middle ear disease, in the case of unilateral hearing loss as well as with minimal bilateral sensor neural hearing loss (Sinkonnen, 1994).

In a landmark study, (Webster & Wood, 1989) it was found that how soon the problem is recognized, how well the child is accepted and how early he/she is helped to learn different ways to communicate are important factors which affect the schooling situation of hearing-impaired child. It has also been indicated that a child with additional defects such as mental retardation or a cerebral palsy will have a harder time in learning to communicate than a child who is deaf only (Reed, 1987).

However, it is difficult to determine whether any special learning problems created by deafness occur only with a specific degree of deafness or whether deaf and partially hearing children suffer similar problems with differing degrees of severity.

In examining sources of variation in school learning, research has also consistently shown that the major variable explaining much of the difference is the students' family environment (Marjoerie-banks, 1979 cited in Tibebu,n.d.). Thus the following subsection deals with factors related to the home conditions of a hearing-impaired child.

2.2.2 Factors related to home. The conditions in the home, the language in the home, deafness in the family, size of the family, relationships with siblings, guidance given to the family, ability of parents to follow the guidance, and mode of communication in the home some of the most important factors which affect the schooling of hearing-impaired children (Reed, 1984 & 1987; Powell, et al., 1985; Webster & Wood, 1989; Haring, et al., 1994; Sinkonnen, 1994; UNESCO, 2000).

Several surveys have consistently shown that the deaf child with deaf parents is considered to have better chance of academic success than a deaf child with normally hearing parents particularly if the deaf parents are highly educated. However, more than 90 percent of hearing-impaired children are born to hearing parents. This means that the child has difficulties of various degrees to learn the spoken language used by his/her parents. Deaf children with deaf parents learn signed language as fast as hearing children learn spoken language. The earlier a deaf child learns to sign, the quicker the child learns. The child is likely to learn to read and write more easily too (Heward & Orlansky, 1988; Gearheart, et al., 1988; Sinkonnen; 1994; UNESCO, 2000).

Similarly, Meadow (as cited in Powel, et al., 1985) summarized a number of studies showing that, compared with deaf children of hearing parents, deaf children of deaf parents have significantly better scores on reading and writing language (with no difference on tests of speech and lip reading skills). These youngsters also have a more optional adjustment in terms of maturity, responsibility, independence, popularity, and adjustment to deafness, and motivation for work.

In addition, deaf children with deaf parents have greater impulse control than do deaf children of hearing parents (Harris, 1978 cited in Powell, et al., 1985). Harris indicated that this may result from the early use of manual communication, which provides the child with a tool for monitoring impulse. It is also believed that these differences may exist because most deaf parents welcome their deaf children and are not rendered powerless or helpless by them (Powell, et al., 1985; Hallahan & Kauffman, 1988).

Although deaf children of deaf parents have advantageous communication environment from the beginning compared to deaf children of hearing parents, the process of vocabulary development occurs in a similar fashion for young deaf children whether they have

deaf or hearing parents, as long as fluent sign language communication is established in the home (Sinkonnen, 1994)

On the other hand, a hearing impaired child whose parents are affluent and college educated is more likely to achieve academic success than a child from a low-income, less educated family (Heward & Orlansky, 1988). In a study it also appeared that it was the mother who took the lead in determining the family's choice of mode of communication. Well educated mothers used more manual communication. However, a controversial study found that family income had no significant role in the choice of communication method (Sinkonnen, 1994).

In fact, the parents who have themselves achieved high educational attainment tend to emphasize the academic achievements of their deaf child. The gap between parental expectations and the child's performance may lead to a bitter disappointment of the parents and to a deflated self-image of the child. Hoping to create possibility of higher education and better integration for the child, high achieving and high socioeconomic parents may prefer oral-only communication methods and educational mainstreaming (Sinkonnen, 1994).

Johnson (cited in Tibebu,n.d.) also showed that within the academic content areas of reading comprehension, mathematical concepts and mathematical computation, deaf students who differ significantly in their level of achievement do differ significantly in characteristics of their family environments. However, there is no sufficient data to conclude whether the overall effects of the high parental education or high SES are positive or negative for the child (Sinkonnen, 1994).

To sum up, from the studies reviewed so far, the severity of the hearing loss, the age of onset of the hearing loss, the socio economic status of the family, and hearing status of the

parents were, among others, the conditions that seem to relate most closely to academic success of a hearing-impaired child.

2.3 Specialized curriculum for hearing impaired children

A child's major responsibilities during elementary years are to learn the basic skills: reading, arithmetic, and language. However, in most programs the hearing impaired child seems to fall progressively behind the average child in achievement. A hearing-impaired child who receives no specialized assessment, amplification, or training until the age of 5 or 6 will undoubtedly be at a great disadvantage in communication and general development (Kirk & Gallagher, 1986; Heward & Orlansky, 1988).

Over the past few years, it is become increasingly obvious that the more serious the hearing loss, the more likely that specific changes must be made in the academic content itself. With speech and language therapy, hard-of-hearing children are usually able to perform at their grade level. The deaf child, however, faces quite a different problem. Because he/she never hears speech, the child does not normally acquire language or the subtleties of meaning which are more readily acquired through the sense of hearing. Deaf children's education requires more specialized training (Kirk & Gallagher, 1986; Kirk, et al., 1993). Thus, the educational provisions for teaching deaf children are significantly different from those utilized with hard-of-hearing children.

2.3.1 Curriculum for hard of hearing children

Hard-of-hearing children are educated in the regular grades with an itinerant teacher helping them in the specific areas of use of hearing aids, auditory training, speech-reading, and speech training (Cruickshank & Johnson, 1962; Reed, 1987; Kirk, et al.; 1993; Moores, 1996).

- a. **Instruction in the use of Hearing Aids.** The best procedure in this area is to start using a hearing aid only in the tutoring session and under the supervision of the speech

and hearing teacher. It should be used for short periods of time under instruction and the periods gradually increased, so that the child will learn to use the aid profitably.

- b. **Auditory Training.** Auditory training is training the child to listen and discriminate between different sounds. This kind of instruction is given to the hard-of-hearing child by an itinerant hearing specialist in school in accordance with the needs of the child. One of the goals of the hearing specialist is also to instruct the parents and obtain their cooperation.
- c. **Speech-reading.** Speech reading or lip reading lessons are given to hard-of-hearing children to sharpen their understanding of what is said to them. For instance, television, which uses both auditory and visual aids, is more effective than a radio.
- d. **Speech training.** The usual procedure for speech training is first to detect specific errors a child makes in speech. Then corrective measures can be initiated. Most effective results are obtained when such training is integrated with the work of the regular class and when the parents will cooperate with the program at home.

2.3.2 Specialized curriculum for deaf children

The specialized curriculum of a class for the deaf includes speech development, speech-reading and auditory training, language development, reading, and other school subjects (Cruickshank & Johnson, 1962; Reed, 1987; Kirk, *et al.*, 1993; Moores, 1987& 1996; UNESCO, 2000).

- a. **Speech development.** The deaf child does not learn to speak by ordinary channels. But it has been found that a totally deaf child can learn to speak if properly taught by skilled parents and teachers. The chief goal is intelligible speech (involving much more than normal articulation). Vibrations and the sense of touch, visual aids, kinesthetic

and proprioceptive cues, and the use of any residuals hearing through a hearing aid are all part of the process as the deaf child learn to speak.

- b. **Speech-reading.** A combination of various methods is used by most teachers of the deaf in this area. When the child is young, the teacher or the parent talks to him or her in whole sentences. At a later stage these vague whole impressions are converted into lessons, which emphasize details.

Speech-reading or lip reading for deaf children in special classes for the deaf is used in teaching language, speech and the regular school subjects. It is not, however, like arithmetic, taught at certain hours of the day. It permeates the whole class day, whenever the teacher talks to the children.

- c. **Language development.** It may be easy to teach a child. Concrete objects like "comb" and "ball" or action verbs such as "sit" and "jump" through lip-reading, but the more complex forms of language and particularly the different shades of meaning of the same word are difficult to teach. Reading and language are combined because the deaf child learns language through reading, and reading primarily through language. Thus, language development is dependent upon the child's developing language grammatical sequences, relationships, and nuances of meanings through context clues derived from reading.
- d. **Reading.** Reading is written language and is an integral part of the language program during the school years. The language that deaf children are learning to read and write is a second language for them. Being able to use sign language and to communicate makes it easier for deaf children to learn to read.
- e. **Other school subjects.** In oral schools much class time is devoted to speech development, speech reading, language, and reading. But the curriculum also includes

arithmetic, spelling, writing, creative arts and the social and natural sciences, and physical education just as it does for hearing children (Reed, 1987, Kirk, et al., 1993; Moores, 1987 & 1996; Schulz, et al., 1991)

The mechanics of writing need little special attention in the curriculum for deaf children. In some schools for the deaf copying occupies much of the child's time. The intelligent deaf child has also little difficulty with the mechanics of numbers and their computation. Social and natural sciences need to be presented to the children in a meaningful ways with considerable opportunity for material manipulation, creative dramatics, and supplementary reading.

Art and drama play a large part in their lives, and drama especially in the form of mime has enabled very deaf children to excel in local festivals together with children from ordinary schools. Music obviously presents some difficulty, yet in some schools for the deaf children have learned to play recorders quite tunefully by learning to read music although there can be little feedback of quality.

Through athletics, physical education is a natural sphere for deaf children to build confidence in association with their hearing peers. Thus, in game and physical education, they can compete on equal terms with their hearing peers although where sound is important-with a starting signal in athletics, for example-they will be at a disadvantage. However, visual signals can replace auditory signals.

Many schools utilize the unit plan for these school subjects. However, there are no textbooks designed especially for deaf, since they learn to utilize the books intended for hearing children.

On the other hand, in a landmark study, Moores, (1996) found that because training in speech and in hearing has been seen as the major need of deaf children, content areas such as

mathematics, science, and social studies have received insufficient attention. The fact that most teachers of deaf students have not been trained in specific academic areas increases the tendency to sacrifice content.

The evidence that the achievement of hearing-impaired children in areas such as arithmetic computation is higher than it is in reading-even though they receive less instruction in all areas of mathematics than do hearing children-suggests that their achievement is probably far below what it should be.

The elementary school for deaf children is divided generally into a primary level and an upper elementary level. The primary level instruction is much more highly structured than that in the kindergarten. Training in language, speech, reading, and speech reading permeate all activities and all content subjects. If the child does not learn speech and speech reading at this level, it is unlikely that he will acquire these skills later.

The upper elementary level in schools for the deaf enrolls children of ages 9 or 10 to 16. Since deaf children are generally from two to four years retarded educationally, the instruction is keyed to the content subjects of the fourth through the eighth grades. The large majority of deaf children consequently do not complete the eighth grade.

To sum up, unlike the regular school curriculum, the specialized curriculum of the hearing-impaired needs to be organized on the basis of the nature of hearing loss and the proportion of time to be spent on each area of training.

2.4 Teaching and communication approaches regarding hearing impaired children

Educational programmes and techniques for hearing-impaired students are special primarily because of the many challenges involved in teaching communication to children who cannot hear normally. Educators, scientists, philosophers, and parents- both hearing and

deaf-have for many years debated about the most appropriate instructional methods for hearing-impaired children. Today, this controversy is as lively as ever.

The fundamental disagreement concerns the extent to which hearing-impaired children express themselves through speech and perceive the communication of others through speech reading and residual hearing. These oralists often discourage the use of sign languages and gestures. Other educators believe that sign language, gestures, cues, and other manual means are a more natural way of communicating and enabling hearing-impaired children to express themselves and to understand other people. Methods of communication receive so much publicity that this is often interpreted as the sum total of methods of teaching.

For children who have a considerable hearing loss, thus, three methods have been advocated: the oral method, the manual (sign language) method, and total communication.

2.4.1 The oral method. The oral method requires the student with a hearing impairment to use a combination of residual hearing, a hearing aid, and speech reading. It encourages the use of the residual hearing while the presentation of the material emphasizes the student's visual and auditory attention. This method emphasizes speech-reading and oral speech as the primary means of communication (Gearheart, *et al.*, 1988; Schulz, *et al.*, 1991; Moores, 1987& 1996).

The proponents of the 'oral only' method suggest that the use of manual communication will interfere with the child's motivation for developing oral skills. Secondly, they maintain that the integration of the deaf child into the dominant hearing community will be hampered. Thirdly, they suggest that manual languages do not have the capacity for expressing abstract ideas and that people using manual languages will be limited to concrete thinking (Reed, 1987; Sinkonnen, 1994).

However, the biggest problem with teaching only oral communication is that it slows down a child's language development at the age when children learn language fastest (age 1 to 7 years). For instance, a deaf child usually learns to lip read and speak only 5 to 10 words by age 5 or 6. By that age, the same child can learn over 2,000 signs as many words as a hearing child speaks. But, oral communication usually works well for children who can hear the differences between many words or for children who became deaf after they learned to speak (Werner, 1994).

2.4.2 The manual method. In the light of recent scientific findings, the manual method seems to have more advantages to the intellectual and emotional development of the deaf child than the oral only approach (Sinkonnen, 1994; UNESCO, 2000).

The manual method usually includes sign language and finger spelling. However, since all sign languages include a way of spelling the letters of spoken language (UNESCO, 2000) and the manual communication systems range from simple home made gestures to finger spelling, the term 'Sign languages' is used for the purpose of this paper. Although very little is known about the origins, history and possible relationship of sign languages, compared to the point when modern linguistic research into signed languages started, an understanding of these visual-gestural languages has increased dramatically.

Hearing children learn by listening to the language spoken around them. Hearing-impaired children, however, need to see sign languages used around them in order to learn. They also need to learn to read and write the language that is spoken in the community, just as hearing children learn to read and write. They can learn all other school subjects too, with the help of sign languages. However, they will need special help to do this.

The sign language that families develop with their deaf children is usually not very complete. Using the signs of the sign language with talking is helpful until sign language has

been learned by the child and the family and community. This is not sign language but it is signed language- the natural language of deaf people when they communicate with one another. (Ahlgren & Hyldenstam, 1994; Werner, 1994). However, people have joined together to create sign languages which are much more complete. There are hundreds of different sign languages, but there are 3 main types (Werner, 1994; UNESCO, 2000):

- **National and regional sign languages.** In nearly all countries, hearing-impaired people create their own sign languages, in which they can learn to communicate as well and nearly as fast as hearing children. Different hand signs represent different things, actions, and ideas. The structure (grammar) of these languages is different from the spoken language, and therefore is difficult for hearing people to learn. These languages are preferred by people who were born deaf. Examples are American Sign Language (ASL), which is used in the USA and Canada, and Mexican Sign Language.
- **Sign languages based on spoken languages.** These languages have the same organization and grammar as the local spoken language. They are easier for hearing persons to learn and for persons who became deaf after they learned to speak. Sometimes they use the first letter (finger spelling) of a word as part of the sign. This is harder for children to learn who cannot read, but can make learning to read easier and more fun. Examples are English Sign Language and Spanish Sign Language.
- **Finger spelling.** Each word is spelled out with hand signs that represent the letters of the local alphabet. This method of 'writing in the air' is slow but exact. It is easier for persons to learn who can already read and write. For English, the British use a 2-handed system and the Americans use a one-handed system (Schulz, et al., 1991; Ahlgren & Hyldenstam, 1994; David, 1993; Werner, 1994; UNESCO, 2000).

Generally, it is understood that hearing-impaired children's brains are not affected by their impairments, they can learn about the world around them and all the school lessons through sign languages. They use their eyes to see the language, and their hands, faces and bodies to produce the language.

2.4.3 Total communication. Total communication is an approach that encourages a child to learn and use all the different methods that work well for that child in his or her particular community (Werner, 1994). This might include any (or all) of these: the child's own gestures; sign language; drawing, reading, and writing, finger spelling; and whatever hearing the child has, to develop lip-reading and speech.

'Total communication' does not mean that all the above methods are used for every child. It means that we try all the methods that might work for a child. Then we work with whatever methods will help the child communicate as easily, quickly, and fully as possible with his or her family and community (Werner, 1994; Moores, 1996).

Moreover, research does indicate that no one method or collection of methods can meet the individual needs of all children. Depending on the particular child and situation, the teacher uses a combination of such techniques as auditory training, speech-reading, sign language, and finger spelling (Hallahan & Kauffman, 1988; Schulz, *et al.*, 1991). We must adapt our methods to the needs of the particular child and to the realities of the community where he or she lives. To shed more light on this point, it is helpful to see individual differences among hearing-impaired children themselves in some detail. If a child is only partly deaf, sometimes we can help him or her to hear more clearly, to understand more speech, and perhaps learn to speak. A child who has no hearing ability at all usually cannot be helped to hear. But if they became deaf after beginning to speak, perhaps he/she can be helped to 'read' people's lips and to improve speech. However, it is difficult for even the best lip-

readers to get the full content of a lesson or conversation from lip-reading by itself since many sounds that are used in talking are not visible so words may look alike but be different. It is not also easy for persons who became deaf after many years of listening and talking to learn sign language. This is mainly because they have relied for so long an auditory perception that to change to visual perception is not easy (Werner, 1994; UNESCO, 2000).

If the child was born deaf and has never heard speech, learning to lip read and speak is always very slow and difficult and is usually not very successful. It is better to help the child first with her face, body, arms and hands, then possibly adding pictures, reading and writing, finger spelling, and as much lip-reading and speech as she is able to learn (Schulz, et al., 1991; Werner, 1994).

If the child comes from an area where there are many deaf people who communicate with each other in a national sign language, it is probably best to have people in the deaf community help teach the child and her family their language. But if the child lives in a small village where there are few deaf people, none of whom know the national sign language, learning that language may not help the child much. Probably it makes more sense for her to learn ways to communicate as best she can with those who can hear. Again, this probably means a combination of methods, based on the signs and gestures people already use in the village. With these, the child can also use pictures, and later perhaps, reading and writing (Cruickshank & Johnson, 1962, Hallahan & Kauffman, 1988 & 1991; Werner, 1994).

It should be remembered that most children with hearing loss can learn quickly. But some may have brain damage or disabilities that affect their ability to learn or to control their hands, lips, or voices. However, with sets of pictures, head movements, or eye movements, they can be helped (Werner, 1994).

Many specialists seem to follow the pattern of intensively stimulating oral communication with hearing-impaired children during pre-school and early elementary years (Kirk, et al., 1993). However, if the child has not developed adequate language by the age of 9 or 10, consideration is then given to teaching the manual communication (Schulz, et al., 1991). Werner (1994) also indicated that learning sign language and other forms of communication first actually makes it easier for a child to learn to speak and read lips. For all these reasons, therefore, more and more experts and organizations of hearing-impaired people recommended teaching most hearing-impaired children a combination of methods.

Finally, following is a list of instructor activities that will enhance the hearing-impaired student's learning environment (Hallahan & Kauffman, 1991; Schulz, et al., 1991; Werner, 1994; Heward & Orlansky, 1988):

- The learning place should be well lighted, so that the child can see the teacher's hands, face, and lips.
- Facing the child when speaking to her, and being sure that the child is watching the teacher.
- Talking to the child a lot, even if she does not understand. Talking with hands, face and lips, and encouraging the child to watch them all.
- Speaking clear and loud without shouting or exaggerating the movement of the mouth and lips. This will help the child learn to recognize normal speech.
- Being patient and repeating things often.
- Providing immediate and enthusiastic acceptance of the child because this relationship can be observed by other students.
- Having a lot of toys, pictures, and other things ready to use in helping the child learn the signs and words for them.

- Making learning to communicate fun. Including other children in games that help children use their eyes, ears, and bodies, and copy each other.
- Playing games that exercise the child's lips, tongue, and mouth muscles. In a deaf child, these muscles can get weak.
- Making a list of the words that other children of the child's age use by starting with a short list and gradually making it longer. The child will learn about language by playing, watching, listening (as much as he/she can), and finally by copying the way most children learn language.
- As the child gets a little older, helping him/her become familiar with letters and written words by making pictures of things with their names in big, clear letters, or making pairs of 'flash cards' so the child can match pictures with words. This will help the child understand hand signs that are based on letters. It will prepare him/her for learning the alphabet in writing and signs, and for learning to read and write.

Generally, as it is clear from the foregoing discussions, many special techniques are used in the education of hearing impaired pupils. Although there is no clear indication that any one method is best for all hearing-impaired children, total communication is now the predominant method of instruction in schools for the deaf. The school for deaf children must consider the fact that within that school there will be a wide range of abilities and range of handicaps and therefore each group of children must be catered for in a different way accordingly.

2.5 Educational facilities for the hearing impaired

Surveys indicate that classroom teachers have limited knowledge about hearing disorders, and that teachers initially express anxiety about working with a student who is hearing impaired in a regular school setting (Schulz, et al., 1991). It is suggested that teachers

should be aware of the kinds of adaptations required to accommodate students who are hearing-impaired. Findings in achievement may at times be more attributable to such variables as the qualifications of teachers, class sizes, clinical services, and instructional facilities than to some special factor under consideration (Dunn, 1964). Thus, in the following paragraphs, some of the highlights of the variables related to teachers of deaf and instructional facilities for the deaf are presented.

2.5.1 Quality and training of teachers

Teachers of the deaf have to be trained as teachers of hearing children, but have to have an additional qualification to hearing-impaired children. Most frequently, these are separate courses, general training first and then the special training either immediately after the initial training or after some years teaching experience (Reed, 1987; Kirk, *et al.*, 1993). There is a need for specialization in speech-reading, in the development of speech, in anatomy and physiology of the ear and of the organs of speech, as well as mastery of the fields of subject matter (Baker, 1968; Heward & Orlansky, 1988).

Similarly when educators of hearing-impaired children themselves were asked to list qualifications for themselves they set higher standards. The competent and qualified teacher of the deaf should be well-grounded in the following areas (Cruickshank & Johnson, 1962):

1. Philosophy of education of the deaf and an awareness of its ever changing qualities.
2. Normal child development, normal child educational curricula and techniques - so that adaptation to the needs of deaf children in subject matter areas and reading can be made.
3. Knowledge of the communicative process as it related to deaf children. This includes hearing, speech, language, lip reading, and vision.
 - a. Hearing: its anatomy and physiology, how it is evaluated, etc.

- b. Speech: its nature and how it is produced, how to diagnose difficulties, etc.
 - c. Language: its normal development, the special language problems of the deaf, etc.
 - d. Lip reading: its process and how to assess and train this skill.
 - e. Vision: understanding that this is the modality through which most of the deaf child's learning will come, what visual perception means, etc.
4. Psychological tests and measurements as applied to deaf children.
 5. Social adjustments - the handicapping influence of a hearing loss and how to facilitate adjustment to that loss academically, vocationally, socially, and emotionally.
 6. Public relations - so that the teacher can be a guide to parents, to other professionals dealing with the child, employers, and the community as a whole.
 7. The history of the education of the deaf - in order to understand its growth and be able to evaluate present- day programs.
 8. The adult deaf and their problems - in order to be a better guide to the child in the classroom.
 9. Allied disabilities which impose added problems to the child's learning ability, adjustment, and capabilities.

Based on recent reports, it has also emphasized that teachers of deaf children need to learn sign language and know how to use it very well in teaching (UNESCO, 2000). But if they have deaf children to teach before they have opportunity to learn sign language well, they can help the children by learning some signs and using them when they talk. This is not sign language and should be replaced by sign language as soon as possible.

Moreover, deaf adults are often overlooked as the most obvious human resource available for the education of deaf children. The over-professionalization of 'special education'

has made it difficult for deaf people to obtain the necessary qualifications to become teachers. An ability to communicate fluently in sign language has not been considered a necessary qualification. It is only in the last 10 years or so in the UK that the importance of involving deaf adults in the education of deaf children has been recognized (Golden & Joseph, 2000).

In addition to knowledge of subject matter and skill in communicating with hearing-impaired children, the following instructional variables enhance the teaching/learning process (Moore, 1987 & 1996; Schulz, et al., 1991).

1. Reinforcement. The teacher should provide appropriate reinforcement and positive feedback.
2. Mastery learning. The addition of teaching and feedback procedures to conventional instruction enhances learning.
3. Graded homework. Meaningful homework that is assigned, graded, and responded to will result in increased learning.
4. Time on task. There is a positive correlation between the time spent on a subject and the amount learned. Many teachers-particularly teachers of the deaf in academic content areas-spend little time on task.
5. Class Morale. The teacher should strive to maintain cohesiveness, satisfaction, and goal direction in the classroom.

2.5.2 Equipment and supplies

The problems of instruction for the hearing-impaired are such that the best of facilities should be available. The rooms and general atmosphere must be cheerful and have plenty of illumination so that the speech-reading and other visual needs shall be well provided (Baker, 1968). Physical equipment such as audiometers of all kinds, hearing aids, and similar material should be at hand.

Visual aids are of great significance in instruction for hearing impaired children. Visual demonstrations, blackboard work, films and slides are important instructional aids for the hearing-impaired. An overhead projector allows teacher to maintain eye contact with students while writing on the projector. When using slides or films, the teacher should be certain that there is sufficient light to enable the hearing impaired student to see faces clearly as the teacher makes comments. To get the attention of the hearing impaired child, waving the hands or turning off and on lights has proven effective in some instances. In general, supplementary diagrams and pictures should be used as often as possible (Gearheart, et al., 1988; David, 1993).

Moreover, opportunities for motor expression should be liberally supplied, with gymnasiums and opportunities for such physical activities as dancing and games (Baker, 1968). However, naturally the costs of such education are much greater than for the normally hearing pupils.

Hearing-impaired students frequently wear hearing aids. However, hearing-aids are more effective for hard-of-hearing children and for conductive deafness (David, 1993). Hearing aids are small instruments that amplify (make louder) sounds, especially the sounds that make up speech. But, hearing aids cannot replace hearing that has been lost.

There are many different kinds of hearing aids. Even though most children will wear their own individual hearing aids, a good group hearing aid is indicated because of its superior fidelity and amplification, and because it permits auditory stimulation of both ears. For its maximum use, a suitable environment is necessary (a room in which reverberation and internal and external room noises will be reduced to a minimum (Cruickshank & Johnson, 1962). However, right hearing aids are expensive and need maintenance.

Although those audio and visual aids mentioned above for use with both hard of hearing children and deaf children, the teacher is expected to devise special equipment for her or his specific group.

Generally, the use of visual aids of all kinds supplement the program in many helpful ways. Additional costs include the auxiliary staffs of nurses, medical specialists, psychologists, and audiologists.

2.6 Attitude of the community towards hearing impairment

Many problems that hearing-impaired persons face are secondary consequences of their impairment. Hearing-impaired children, throughout their development are likely to evidence an increasing gap between what they know, think and feel on the one hand, and what they can express, negotiate and communicate about on the other. This growing gap between knowledge and communication often dislocates processes of social interaction, teaching and learning (Wood, & Wood., 1989).

Hearing-impaired students have the same social needs as other students. They need interaction with peers in academic and extracurricular activities. They need to share sports, games, drama, clubs, and competitions; they need to stand in the halls between classes to discuss a test or to gossip and also to have the usual experiences in dating (depending on the culture) and in selecting a friend from a large group (Schulz, *et al.*, 1991).

However, low expectations from society disable hearing-impaired children. In the history of the deaf there are countless examples of authoritarian and paternalistic attitudes of hearing people towards the deaf (Lane & Sacks, 1989; Veron & Andrews, 1990 cited in Sinkonnon, 1994). The deaf have been treated like people from developing countries, the "civilized", i.e. hearing persons have known better the needs of the deaf than the deaf themselves.

There are also indications that the social interactions between hearing and hearing-impaired students is much less than that among hearing students. Part of the poor interaction may be attributed to the lack of communication skills of the hearing impaired student or to insufficient social skills, such as the ability to initiate and continue conversations or discusses playground or after-school activities. Other factors may include the teachers, the environment and the hearing students (Gearheart, et al., 1988).

Comparing the public attitude toward the blind and the deaf many writers have also found more favorable reaction to the blind than the deaf. The blind receive a mildly favorable judgment while a more unfavorable attitude is expressed toward deaf “mutes” (Barker, et al., cited in Tirussew, et al., 1995). There are figurative sayings and the pejorative implication of disability terms when used as metaphors in commonly accepted languages in Ethiopia (Tirussew, et al., 1995).

In poor economies particularly many deaf people are not working because jobs are scarce, or the deaf people have not been given the skills that the economy needs. The families think the deaf child cannot, or need not, work. Sometimes, even when the deaf person has the right training and skills, employers are reluctant to give them the job. Usually, however, once they have taken one good deaf workers, they are quickly willing to take more (UNESCO, 2000).

The stereotyped picture of the unique deaf personality is one of passive dependency on others, unquestioning styles of learning, and unenquiring, self-centered and naive assumptions about the world. However, typical behaviors and learning styles in the severely hearing-impaired may be a product of early home experiences and of schooling, rather than inherent in a 'deaf personality'. Less nurturing styles of interaction will lead to slower generation of

speech and language, but will also have effects on the child's take-up of more mature ways of problem-solving and self-organization (Webster and Wood, 1989).

Ives (cited in Tirussew, et al., 1995) has also examined the adjustment problems of the deaf and partially-hearing children. Ives stated that some patterns of behavior in the hearing – impaired do not necessarily indicate any more than a somewhat different personality structure consequent on deafness. However, when the deaf and partially-hearing children are compared with each other, the latter seem to have markedly more adjustment difficulties than the former. According to Ives, sometimes these problems are caused by adverse home management, but in some instances they appear to be the outcome of complex communication difficulties. Ester & Blood (as cited in Sinkonnen, 1994) also found that the hearing children apply mainly negative attitudes to the hard of- hearing than the deaf children.

A hard- of hearing child more often has to perceive frustrating words as they are spoken with high intensity. Defective speech and hearing loss frequently lead to so many frustrations in conversation that the child may become withdrawn or isolated or, in some cases, overly aggressive. Sometimes the child defends him or herself from embarrassment and humiliation by talking uninterruptedly in order to avoid difficult questions, or that keeps smiling and nodding (Sinkonnen, 1994).

Some investigators have, on the other hand, studied the behavior and attitudes of the hearing toward the deaf as seen by persons with impaired hearing. The investigators have pointed out that the deaf may exaggerate or misinterpret the behavior of persons with normal hearing, that innocuous and situation – demanding behavior on the part the latter may be misinterpreted by the deaf according to their stereotype of the nondeaf (Barker, et al., 1946 cited in Tirussew, et al., 1995). In two separate studies in the same article it also appeared that the deaf had more negative attitudes towards deafness than the hearing. The deaf seem to

perceive themselves as lacking in comparison with the hearing. This results in relatively negative self-concepts (Cates, 1991 cited in Sinkkonen, 1994).

There is also evidence that deaf children of hearing parents have lower self-esteem than deaf children of deaf parents. The hearing parents face a huge task in adjusting themselves in a new situation a new communicational mode. Poor communication leaves both partners frustrated; the child feels isolated and a failure (Kirk and Gallagher, 1986; Powell, et al., 1985; Sinkkonen, 1994).

From such results, the investigators concluded that hearing-impaired persons feel themselves, in general to be in the position of a minority group which is discriminated against and held in low social regard by the majority.

As strong and Shaver (as cited in Sinkkonen, 1994) thus suggested that the best method to change any adverse attitude of the deaf is to create the possibilities of structured contacts between the hearing and the deaf. Teachers need to plan for the social integration of their hearing-impaired students and encourage them to initiate contacts with their hearing peers (Schulz, et al., 1991). It is also suggested by UNESCO (2000) that it is always necessary to inform the society that hearing-impaired persons can do everything except hear. But it is certainly not easy to change old beliefs and views of man deeply rooted in society. It takes great effort, struggle and the development of new knowledge and attitudes-it demands a change in awareness!

Summary

Educational programs for hearing impaired children are available in residential schools, special day schools, and regular public schools. The educational programs for these children in local public schools have expanded in recent years, in response to legislation, improvements in hearing aids and other technology, and an increased demand by parents and

deaf citizens for services at the local level. Hearing impaired children in regular schools may attend special classes or may be integrated with hearing children for all part of the school day.

According to many researches, the most important ingredients for the hearing impaired child's success in the regular classroom are good oral communication skills, strong parental support, self-confidence and other personal qualities, and adequate support services, such as tutoring, audio logical consultation, and speech therapy. The specialized needs of children with severe hearing impairments make special services necessary in virtually all cases. Moreover, teachers of hearing-impaired students must complete specialized training programs for the deaf.

However, it may be difficult for regular schools in countries like Ethiopia to provide all of these services. Although the lack of systematically recorder and documented data has made it difficult to elaborate on the educational services that are available to persons with disabilities in general and hearing impaired individuals in particular by non-governmental organizations in Ethiopia, as far as the researcher knows, the services are not available in Bahirdar and Debretabor towns. Moreover, from the researcher's past experience the majority of the people in Amhara region, describe the hearing impaired person by the Amharic term "donkoro" which is contextually used to denote ignorance or idleness-one who can not be educated or does not understand at all.

Thus, the purpose of this study was to investigate the present schooling situation of hearing impaired children in special and integrated classes of the deaf in Bahirdar and Debretabor towns.

3. Method

3.1 Participants

The participants of this study were 26 hearing-impaired pupils (19 profoundly deaf and 7 hard of hearing), 20 teachers, and 23 parents of the hearing-impaired pupils of grades 4, 7 and 8 in Bahirdar and Debretabor towns. The total number of these participants were 69 (35 males; 34 females).

Of the total number of pupil respondents, 12 were grade 4 in two special classes, whereas 14 were grade 7 and 8 in nine regular integrated classes. These were Meskerem special unit for the Deaf in Meskerem 16 regular elementary school, Ewket Fana and Shinbit regular Elementary and Junior secondary schools, which all are located in Bahirdar town. The school special unit in this study, Tabor special unit for the Deaf in Tabor regular elementary school, is situated in Debretabor town, which is about 96km from Bahirdar.

Because of the small number of respondents involved in the study, all of the hearing impaired pupils, all (8) of the teachers at special units, 12 (6 at each school) of the teachers who had relatively better experiences in the teaching of hearing-impaired in integrated classes, and all parents of the hearing-impaired pupils who were available at the time of this study, were taken. Concerning parent participants, mothers were selected whether fathers were deceased or alive. But, if both parents were not alive, the one who took care of the hearing impaired child during the study were used. Mothers were given priorities because it is the mother than the father who is expected to know more about her child.

These schools and grade levels (4, 7 and 8) were chosen principally for they are the levels at which most hearing-impaired children had a relatively good general education as well as good training in speech and language. Moreover, hearing-impaired children of grades 5 and 6 at Bahirdar town were not available since special unit service was closed for some time for unknown reasons.

3.2 Instruments

A descriptive study was done to explore the current schooling situation of hearing-impaired children in the special units and integrated classes of Bahirdar and Debreabor towns.

The main instrument used for data collection was interview. The interviews were conducting with the pupil, teacher, and parent respondents on their perceptions of the school experiences of the hearing impaired. The research was particularly interested in discussing issues relating to family, curriculum, teaching approaches, educational facilities, and cultural beliefs regarding the schooling of hearing impaired pupils.

- a) **Pupils.** The interview questions with the pupils consisted of two parts. The first part was used to gather relevant background information such as the age of onset of hearing loss of the pupils.

The second part (which is the core of this study) was intended to gather information concerning the pupils school related experiences such as pupils' course work (eg., "what subject works do you like best?"), and their mode of communication (eg., "what mode of communication do you use with your teachers?")

In the latter part of the interview, focus group discussions were also used with 3-5 group sizes of the pupils regarding the last two items (major schooling problems and their possible solutions).

- b) **Teachers.** Interview questions conducted with the teachers were also used to obtain information on teacher's background and their reactions to the school learning of the hearing impaired pupils.

In the second part of the interview, the interviewer tried to elicit teachers experiences in course work (e.g., " Which subjects do most of the hearing impaired pupils perform poorly in terms of your past measure of achievement?").

Moreover, focus group discussions with 4-6 group sizes of the teachers were made to discuss the problems and the possible solutions concerning the schooling of hearing impaired pupils.

C) Parents. The interview with parents also contained a series of questions about their socioeconomic background and their experiences in the school learning of their hearing impaired child. Examples: “To what extent do you understand what your impaired child says?” and “How often do you come to school to consult your hearing impaired child’s teachers?” Regarding the last two items group interviews were also conducted with the parents.

The interviews with the parents were tape recorded, with explicit confirmation about confidentiality, privacy, and informed consent.

All participants of the study who participated in the individual interviews had participated in the focus groups as well.

To supplement the interview, observation was also carried out in the schools.

3.3 Procedures

To obtain information for answering the research questions set forth in this study, the following steps were taken:

1. In consultation with the advisor, the researcher developed a set of interview questions, which were then pretested in the pilot study at Meskerem special unit for the deaf in Bahirdar town. An inspection of the responses resulted in the alteration and elimination of various items which were not sufficiently discriminating. However, a systematic and rigorous item analysis was not feasible due to time constraints.
2. Relatively experienced teachers in sign language were selected to be interpreters. In making the students respond to the questions freely, the teacher interpreters were not

assigned to their respective students. Interpreters were given the necessary orientation on how to interview the hearing-impaired children.

3. An explanation was given to all participants about the purpose of the study. They were assured of the confidentiality of the information they would give.
4. The researcher and assistant researchers contacted the participants and set up interview times. A series of meetings was held on weekends with the agreement with the parents. The interviews with teachers and students were conducted during their free periods shifts at their respective schools.
5. Interviews were generally conducted in three segments, taking a total of two to four hours .
6. The method of interviewing was not standardized. The usual procedure was to allow for discussion, and then to go systematically and fairly rapidly through the interview questions.

3.4 Method of data analysis

The interview results were analyzed by categorizing the information. Observation data such as the proportion of instructional time and the school facilities were also used to substantiate the interview information.

4. Findings

4.1 General information

The following table provides some highlight concerning the special units and integrated classes .

Table 1: Brief overview on the current status of the special units and integrated classes for the deaf

Research Site	Location	Grade level	Pupil participants			Teacher participants			Number of classrooms
			F	M	T	F	M	T	
Meskerem 16 Special Unit	Bahirdar	4	2	1	3	3	1	4	1
Tabor Special Unit	Debretabor	4	5	4	9	3	1	4	1
Ewket Fana Integrated classes	Bahirdar	7	1	2	3	2	4	6	2
		8	-	4	4				2
Shinbit Integrated classes	Bahirdar	7	2	-	2	1	5	6	2
		8	1	4	5				3

The elementary-level hearing-impaired children were admitted to different elementary and junior schools across the towns. Four of them were found in Bahirdar, while one in Debretabor. Fourteen of the hearing-impaired students were integrated with hearing students for two or more classes, without any special support.

The hearing-impaired pupils completing first cycle primary schooling at special units of the deaf go to their neighborhood regular schools to be integrated with hearing pupils. However, since Meskerem Special Unit for the Deaf was not functional for two years, hearing-impaired students were not attending grades 5 and 6 in the 2001/2002 Academic year.

Similarly none were attending integrated classes at Debretabor at the time of the study.

4.2 Characteristics of respondents

4.2.1 Characteristics of pupil respondents

The following table summarizes the major characteristics of hearing impaired respondents in this study.

Table 2: Major characteristics of pupil respondents

Dimension	Student Respondents by School															
	School	Meskerem		Tabor		Ewket Fana				Shinbit				Total		Grand Total
	Grade Level	4		4		7	8			7		8				
Age range	Sex	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
	14-16	1	1	3	1	1	1	-	-	-	-	1	-	6	3	
	17-19	1	-	2	3	-	1	-	3	1	-	-	3	4	10	
	20-22	-	-	-	-	-	-	-	1	1	-	-	1	1	2	
Age of onset of hearing loss	Born deaf	-	-	-	-	1	-	-	1	-	-	-	2	1	3	4
	Birth – 3years	2	-	3	2	-	2	-	1	2	-	-	-	7	5	12
	4-6 years	-	1	2	-	-	-	-	1	-	-	-	-	2	2	4
	7-9 years	-	-	-	2	-	-	-	1	-	-	1	2	1	5	6
Degree of hearing-loss	Less than severe	-	-	2	1	-	-	-	1	-	-	1	2	3	4	7
	Severe/profound	2	1	3	3	1	2	-	3	2	-	-	2	8	11	19
Cause of Deafness	Disease	2	1	4	1	-	1	-	2	-	-	1	1	7	6	13
	Accident	-	-	-	2	-	-	-	1	2	-	-	1	2	4	6
	Unknown	-	-	1	1	1	1	-	1	-	-	-	2	1	2	7

As indicated in the table, 15 of the hearing-impaired participants were males, and 11 females. Thus the number of male and female hearing-impaired children was similar. However, the data suggest that as the grade level increases, the schooling participation of female hearing-impaired pupils decreases.

The ages of the hearing impaired respondents ranged from 14 to 22 years, most of whom (14) were aged between 17 and 19, some (9) aged between 14 and 16, and the rest (3) were between 20 and 22 years of age.

Most of the hearing-impaired pupils in this study represented a predominately post-lingually deaf population: only 4 of the 26 had lost their hearing before birth and 12 out of 26 had lost their hearing ability before the age of three. Four of the 12 pupils had lost their hearing ability in the first 18 months of age at the time of rapid language development. The data suggest that most of the children (22 to 26) had lost their hearing during the critical period of language development.

Based on the report of the teachers regarding the degree of hearing loss, most (19 of 26) of the hearing-impaired children were profoundly deaf, while the rest (7) were in the category of the hard-of-hearing. With respect to the causes of the hearing loss, disease and accident (13), accident (6), were the causes of deafness of the children as indicated by nineteen pupils. The most commonly reported diseases were meningitis, measles and mumps.

Only a very small number of hearing-impaired child had deaf parents and siblings (3 of 26). Of these children, only one child had hearing impaired father and brother.

4.2.2 Background of teacher respondents

The major characteristics of teacher respondents are summarized in the following table.

Table 3:Major characteristics of teacher respondents

Aspects	Respondents by school											
	Range/level	Meskerem		Tabor		Ewket Fana		Shinbit		Total		Grand total
Age range	27-30	M	F	M	F	M	F	M	F	M	F	
		-	2	1	2	-	-	-	-	1	4	
	31-33	1	1	-	1	-	1	-	-	1	3	4
	Above 33	-	-			4	1	5	1	9	2	11
Level of Education	12+TTI	1	3	1	3	-	1	-	-	2	7	9
	12 + Diploma	-	-	-	-	4	1	5	1	9	2	11
Service years in Regular schools	3-5	-	2	1	3	-	-	-	-	1	5	6
	6-8	1	1	-	-	-	-	-		1	1	2
	9-11	-	-	-	-	-	1	2	2	2	3	5
	Above 11	-	-	-	-	4	1	2	-	6	1	7
Service years in teaching in special units/ integrated classes	1-2	-	-	-	-	2	1	4	1	6	2	8
	3-5	-	3	-	3	2	1	1	-	3	7	10
	Above 5	1	-	1	-	-	-	-	-	2	-	2
Hearing status	Normally Hearing	1	3	1	3	4	2	5	1	11	9	20

As indicated in Table3, the teacher respondents in this study consisted of 11 males and 9 females. However, as grade level increases, the participation of female teachers seem to decrease. That is, the teachers at special units in this study were predominately women, while the reverse was true at integrated settings.

The teacher respondents at special units were relatively younger than those at integrated settings; most (5 of 8) teachers at the special units were aged between 27 and 30, while 11 of the 12 at integrated settings were aged above 33. However, there were only small differences across groups between female and male teacher respondents; most (7 of 9) females were aged less than or equal to 33, while 9 of the 11 males were aged above 33. With respect to respondents' level of education, almost all teacher respondents at their respective settings met the qualification required by the Ministry of Education as teachers in regular primary school. Moreover, the majority of the teacher respondents informally reported that they have been attending further education in different higher education institutes in the country.

Regarding service years in teaching, differences were occurred between at integrated and special unit settings; the teachers at integrated settings had relatively grater experience in teaching hearing students compared with those at special units of the deaf. The experiences of teaching hearing-impaired students at special units were better than at integrated settings.

Concerning the hearing status of the teacher respondents, the data indicated that deaf teachers of the deaf were totally excluded from teaching.

4.2.3 Background of parent respondents

The educational status and the monthly income of the parents are indicated in Table 4 below.

Table 4: Highest educational levels completed and monthly income of the parent respondents

Aspects	Level/Range	Respondents by school										
		Meskerem		Tabor		Ewket Fana		Shinbit		Total		Grand Total
		M	F	M	F	M	F	M	F	M	F	
Educational Level	Illiterate	-	1	3	-	1	-	-	-	4	1	5
	Church education/Basic literacy	1	-	2	-	2	-	1	-	6	-	6
	1-6 grades	-	-	1	2	-	1	3	-	4	3	7
	7-8	-	1	-	-	-	1	-	-	-	2	2
	9-12	-	-	-	-	-	1	-	1	-	2	2
	Above Grade 12	-	-	-	1	-	-	-	-	-	1	1
Income per month in Birr	Below 50	1	-	3	-	-	-	1	-	5	-	5
	51-100	-	-	3	-	3	-	1	-	7	-	7
	101-150	1	-	-	3	-	2	2	-	3	5	8
	151-200	-	1	-	-	-	-	-	1	-	2	2
	Above 200	-	-	-	-	-	1	-	-	-	1	1

As shown in Table 4, the majority of the parents of hearing-impaired children in this study had low educational status. Of the 23 parents, only 5 had gone beyond primary school;

only one father had gone beyond grade 12. Of the 14 mothers, only 4 had attended one to six years of primary school. The educational level of most parents (18 of 23) were below grade 7.

Examining the monthly income of the parents of hearing-impaired children, the majority of the families (20 of 23) had less than or equal to 150 Birr. Only three parents had monthly income of greater or equal to 151 Birr.. Thus, most of the parents of this study were living at a subsistence level.

Regarding the occupational profile of the parents of the hearing-impaired children half of the mothers (7 to 14) were housewives, while the rest (7) mothers were engaged in small businesses. Among the 9 fathers, four were merchants, two factory employees, one farmer, and one retired.

The data on the family size of the parents of hearing-impaired children ranged from 3-9 family members. It was found that most families (14 of 23) had five to six children, while six parents had two to four children and three had seven to nine children. On the other hand, out of the total parent respondents, only two affirmed that they had one hearing-impaired sibling or relative in the family while the rest (21 of 23) said that no one among their family members had similar hearing difficulties. Thus, the majority of hearing-impaired children had no other hearing-impaired person in their family to communicate with.

4.3 Parental participation in the schooling activities of hearing-impaired children as indicated by respondents

An attempt was made to understand how parents follow and how they perceive their hearing impaired children's schooling. Parents were asked to describe their children's experiences in school. Four of the parents responded 'some' 17 said 'little', and only 2 said 'a lot' to the question "To what extent do you understand what your hearing-impaired child says?" The common reason provided by those who said "some" and "little" was lack of

knowledge or little or no help either from the schools or any organization on how to handle or communicate with their hearing-impaired children. The above information was also supplemented by the related question that reflected the parents' modes of communication with their hearing-impaired children. Most of the respondents (16 of 23) used spoken language with some home-made signs while 7 parents used speech only. Most of the parents (20 of 23) could communicate with their children only about things or events that were present in time and/or space.

Regarding the understanding of the hearing-impaired children about what their parents said, 6 of the pupils said 'a lot', 13 'some' and 7 'little'.

In connection to the above question, as one parent also said "my hearing impaired child becomes easily upset or concerned when he can not make himself understood, or when he thought he is teased. When he is upset or angry, he tends to speak very loud to make himself understood". Five other parents said something very similar to this.

Another question posed to the parent respondents was "How often do you come to school to consult your hearing-impaired child's teachers? Only 3 of the 23 said 'often', while the rest 9 said 'sometimes', and 11 'seldom'. The teachers' responses confirmed this view since they said that few parents made a follow up about the children's schooling. When asked if there was contact between parents and the classroom teachers, 14 of the 20 teachers said they seldom meet the parents, while seven said 'sometimes' (7) only two said 'often'. The majority of the teacher and parent respondents (16 teachers and 20 parents) confirmed that the parents were called to the school only in the case of low academic performance or behavioral problems of their children. When parents were further asked what they felt when they heard their children's problems at school, al revealed reactions and feelings such as anger, guilty, resentment towards the school and the child's impairment, and disappointment.

Parent respondents were also asked how often their hearing-impaired children were absent from school. Seventeen of 23 parents responded that their children were 'often' absent from school, while five said 'sometimes' and one said "not at all". Those parents who said that their children were frequently absent from school gave the following reasons: Unwillingness of the child to go to school was mentioned by 8 parents and problems related to family by 2 parents. Six parents did not give reasons.

The teacher respondents also indicated that the hearing-impaired students were often absent from classes for the following reasons: lack of interest in school work from both children and parents (13) and being late (5). Two teachers did not give the reasons.

In connection to the above question, 'being late' and 'lack of interest in the school subjects', were indicated by 18 pupils

Following this, parents and children were asked a question about the activities of the child with hearing impairment at home. Most of the respondents (19) reported that the children's are mainly engaged in play most of the time. Some (5) parents stated that the children were mainly involved in income generating activities. The above responses were also substantiated by the pupils that 17 pupils indicated playing during their free-time, 8 pupils helped their parents with household chores and other income generating activities. Concerning the kind of educational encouragement parents provided to their hearing-impaired children's schooling. Twenty of the parents encouraged their children mainly by providing learning materials, and relieving their children from household chores, while 3 mentioned such activities as point question more than half of the parent respondents (14 of 23) reported that they gave more attention to their hearing-impaired child than to their hearing siblings, while the rest (9) gave equal attention for both hearing and hearing-impaired children. Regarding their family's educational encouragement, twenty five of the pupils said that their parents

provided them learning materials to some extent. Only 1 child reported his fathers encouragement in relation to helping him with homework.

Seven teachers added by other information that: “Because most of the hearing impaired have come from very poor family, they do not have enough learning materials such as pen, pencil, exercise book, and calculator and hence do not come to school regularly.” Two experienced teachers at special classes also supplemented the above information: “ since some of the hearing impaired pupils sometimes come to class even without having had a meal, they do not only come to class late regularly, but they are not usually looking at what we are saying.”

4.4 Relevance of the curriculum for the hearing impaired

The teacher and students were asked questions regarding their view on the curriculum being used for hearing-impaired students at special units as well as in integrated settings.

The first question posed to teacher respondents was, “To what extent do you think the curriculum being used is relevant for all hearing-impaired children?”

Surprisingly all teacher respondents responded negatively. Eleven teachers (5 in special classes; 6 in integrated classes) said the curriculum is “very inappropriate”, and nine teachers said “inappropriate”.

All teachers attributed inappropriateness of the curriculum being used for hearing-impaired children to abstractness of the curriculum for hearing impaired pupils, lack of knowledge to implement curriculum according to the needs of the hearing impaired, and to the lack of support services such as resource personnel.

All teacher respondents at integrated settings also indicated that hearing-impaired pupils in their respective classes showed great differences in terms of their ability to follow classroom lessons equally with their hearing peers. As four of these respondents added “most

of our hearing impaired pupils are retarded at all school subjects, especially in academic subjects”. Variation among hearing-impaired children themselves was also reported by some teachers at special units (3 of 8).

The above responses of the teacher respondents were also supplemented by other information. Nine teachers (out of 20) said that since hearing impaired children need more time than the regular time provided in the curriculum for each content, the annual curriculum could not be covered by the end of the academic year.

Four teachers added that hearing-impaired pupils can not attend lessons through radio with their hearing peers in order to pass the national exam since the radio lesson time (usually 15 minutes) is too short for hearing impaired children.

The interviews with the teachers and an investigation into time tables revealed even variations in the proportion of time spent on different aspects of the curriculum.

However, the teachers at special units as a group reported that: “The proportion of time we spend on language is higher for the hearing impaired as stress has been laid on speech and language areas”. This is because some proportion of time normally given for environmental science and mathematics is used for sign language and speech reading training. Moreover, 16 of 20 teacher respondents agreed that practical subjects such as physical education, music, art, handicraft, metal work, wood work were given little or no attention due to shortage of teachers as well as teaching and learning facilities.

Some differences were also observed on the emphasis on sport and art subjects between the two special units; i.e., Meskerem gave relatively greater emphasis on sport and art subjects in comparison to Tabor special unit.

As the researcher had also checked the time tables in the special units sign language training program was inserted.

Almost all of the teachers indicated that in vocational and technical subjects. Most of these teachers also stated that the majority of the hearing-impaired students had low interest in academic subjects especially in natural science areas. According to the response of the teachers, subjects in which hearing-impaired students performed poorly were English, physics, chemistry, and mathematics in that order.

Nineteen of the hearing impaired students indicated mathematics, sport and art as the first three favorite subjects. However, when asked to tell the stream they wish to study after completing grade 10, 26 hearing-impaired students indicated vocational areas. On the contrary, languages and academic subjects specially science areas were ranked last by twenty one pupils.

The reasons provided by the hearing-impaired students for their emphasis on mathematics, sport and art was not related with their future educational aspirations.

Regarding the students' opinion about the reasons for difficulties they had with the school subjects, almost all students at integrated settings reported that their problems in hearing and in verbal language make it difficult for them to understand subjects which required wide readings. The responses of 17 of the pupils also indicated that they had especially limited vocabulary. Furthermore six pupils at Tabor special class related their liking and disliking of the subjects to teacher's classroom management.

The poor academic performance of the hearing-impaired children was also reflected in the average score they scored in the first semester of the academic year in which they were interviewed. The following table indicates the total average of the students.

Table 5: Total average score of hearing-impaired pupils

Range	Pupil Respondents by school					
	Meskerem	Tabor	Ewket Fana	Shinbit	Total	Grand

	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Total
Below 50%	-	1	2	1	2	1	3	-	-	2	2	-	9	5	14
50-59%	2	-	2	3		-	1	-	-	-	1	1	6	4	10
60-69%	-	-	-	1	-	-	-	-	-	-	1	-	1	1	2
70-79	-	-	-	-	-	-	-	-		-	-	-	-	-	-
≥ 80%	-	-	-	-	-	-	-	-		-	-	-	-	-	-

As shown in the above table, most of the hearing-impaired students in integrated classes, especially in grade 7, earned below 50 percent which is rated as failure according to the Ministry of Education rating scale. Though there was slight improvement in the scores in special units, it still cannot be rated as good. Only two students earned slightly above 60 average which are rated as satisfactory. However, considering the school environment of the special units (small number of pupils in a class, better trained teachers, and relatively homogeneity of the pupils) students of grade 8 at Shinbit could have relatively earned better. Females at Tabor special unit earned higher than those of the males. Generally, however, the scores of most of the hearing impaired students indicated 'failure'.

4.5 Teaching and communication methods as indicated by teacher and students respondents

The following table compares the modes of communication in different situations in the school.

Table 6: Comparison of communication methods in different school situations

Modes of communication																
Site	Grade Level	Instructional Method			Student with teacher in the classroom			Student among themselves			Students with hearing peers			Total		
		Oral	Sign	To	Oral	Sign	To	Oral	Sign	To	Oral	Sign	To	Oral	Sign	To
Meskerem 16	4	-	1	3	-	2	1	-	3	-	2	-	1	2	6	5
Tabor	4	-	2	2	-	4	5	-	7	2	6	-	3	6	13	12
Ewket	7	2	-	-	1	-	2	-	3	-	1	1	1	4	4	3

Fana	8	3	-	1	2	-	2	-	4	-	1	1	2	6	5	5
Shinbit	7	1	-	-	-	-	2	-	1	1	-	1	1	1	2	4
	8	4	-	1	2	-	3	-	4	1	2	1	2	6	5	7
Total		10	3	5	5	6	15	-	22	4	12	4	10	25	35	36

Key: 'To' stands for 'Total Communication'

The responses provided by pupil and teacher respondents represented a good amount of diversity. Total communication was the dominant method of teaching for most of the teachers in special classes (5 of the 8). However, oral communication was the dominant method of instruction for the majority of the teachers at integrated classes (10 of the 12).

With regard to the method of communication hearing-impaired pupils used in the classroom with their teachers, most of the students (15 out of 26) used total communication, while the remainder (11) signed or spoke orally with their teachers. The data suggest that the method of instruction used by the teachers is related to the special training the teachers had.

The majority of (22 out of 26) of the total student respondents signed with their hearing-impaired friends and about half (12 of 26) relied on oral communication to some extent with their hearing peers. None reported the use of oral communication with their hearing peers.

The reasons provided by teacher and student respondents for the choice of their particular methods of communication were also diverse.

At the special units, 8 teacher said that they found the method appropriate and some of them (3 of 8) added that the hearing-impaired children understand the method easily. The teachers at integrated settings said that they didn't know any alternative methods in teaching hearing-impaired children. All of them further said that they faced serious problems when they used the oral method.

When asked to comment on the problems, 8 of the 12 teachers in integrated classes said that since less than three hearing-impaired children were found in a class of 60-80 hearing students. Accordingly, their hearing-impaired students' classroom behavior was rated as "being followers, day-dreamers, and lacking initiative." Most of the teacher respondents (18 of 20) felt that it is a waste of time for hearing-impaired pupils at integrated classes in the present situation.

Even the special units teachers (6 out of 8) indicated that they were unable to effectively teach the hearing-impaired with their limited special training. These teachers further described that using the total communication method without available special equipment like hearing aids was ineffective and they confirmed that most of their students did not understand the lessons especially the academic subjects even with the use of the total or sign methods.

Most the hearing-impaired children at Tabor special unit supplemented the above point by saying that some of their teachers did not use concrete examples in order to clarify ideas or concepts, and thus the lesson became abstract to them.

On the other hand, all hearing-impaired pupils at integrated settings confirmed that their teachers did not know sign language and sometimes they taught their teachers the language. However, almost of their teachers used lecture only. They used different techniques rarely. Most of the teachers were not aware of the presence of hearing-impaired students in the classroom.

Of the 14 pupils who attended classes at integrated settings only 3 stated their speech was understood by their teachers most of the time. Eight believed it was understood sometimes, while the rest (5) said that they were not understood. Ten of the 14 said they

understood their classroom teachers and hearing peers through lip-reading most of the time and four said all the time.

Eight of the special units children rated their teachers' ability to understand them well. Four indicated that the teachers' communication ability as poor.

The majority of the pupils (12 of the 14 at integrated setting) further stated that they believed the ability to speak lip-read help them to adjust better to the hearing world and will help them to get a job.

However, all students who attended at integrated settings and more than half of the students at special units (7 of the 12) pointed out that their speech or language problem obstructed them from asking questions in class even when they didn't understand a point.

Most of the hearing-impaired (18 of 26) asked a hearing-impaired friend to clarify a point for them if necessary. The rest (8 of 26) reported that they did not answer questions. Speech problems and uncertainty were the main reasons for the failure to answer questions by most hearing-impaired students (14 of the integrated; 6 of the special units).

It can be understood from the students' responses that there was high possibility that most of these students' either get an incorrect or no explanation for their queries since their hearing-impaired friends may also have the same problems.

4.6 Teachers' special training and competence as indicated by respondents

The following two tables show the initial and in-service special training in teaching of the teacher respondents hearing-impaired children.

Table 7: Teachers' initial special training as indicated by teachers

Aspect	Participation level	Teacher Respondents by school				
		Meskerem	Tabor	Ewket Fana	Shinbit	Total
Initial Training	Yes	2	3	-	-	5
	No	2	1	6	6	15
Duration of the initial training	Short time seminars	1	3	-	-	4
	3-6 months	-	-	-	-	-
	7-11 months	1	-	-	-	1
	Above 1 year	-	-	-	-	-

Table 8: Teachers' in-service special training as indicated by teachers

Aspect	Participation level	Teacher Respondents by school				
		Meskerem	Tabor	Ewket Fana	Shinbit	Total
Duration of In-service Training	3-4 weeks	2	-	-	-	2
	5-6 weeks	-	2	-	-	2
	7-9 weeks	2	2	-	-	4
	Not at all	-	-	6	6	12

As shown in the above two tables, most of the teachers in special units (5 of 8) had received some initial training. On the contrary none of the teacher respondents at integrated settings had received any kind of special training that could help them teach hearing-impaired children.

Of the five respondents who received the initial training 4 received the training through short-time seminars or workshops only, while only one had received from 7 to 11 months of duration.

Regarding in-service training, all the teachers at special units participated in refresher courses that ranged from 3 to 9 weeks' duration. Half of the teachers had participated for about two months while two had received training for 3 to 4 weeks only. However, none of them in integrated settings had received any such special training. With regard to the adequacy of the training provided for teaching hearing-impaired children, all teachers of the special units (8) said the training was inadequate. Commenting on the inadequacy of their training, all of them agreed that the duration of the training was too short to enable them teach the hearing-impaired children.

A need for additional training was expressed by all teacher participants to improve the schooling situation of hearing-impaired children. Moreover, most teachers of the special units (5 of 8) argued that anything less than three months training in methodology can hardly make them competent teachers of the deaf.

4.7 Teachers commitment towards their job as perceived by teacher and student respondents

Table 9 below summarizes teachers' commitment towards their job.

Table 9: Teachers commitment towards their profession

		Teacher Respondents by school				
		Meskerem	Tabor	Ewket Fana	Shinbit	Total
Reason for initial interest	On interest	1	1	2	1	5
	Without interest	-	-	4	5	9
	To get transfer	2	1	-	-	3

	To upgrade educational status	1	2	-	-	3
Kind/level of Present Interest	High	-	-	-	-	-
	Average	1	-	-	-	1
	Low	1	2	2	3	8
	Little	2	2	-	-	4
	Not at all	-	-	4	3	7

As shown in the table, less than one fourth (5 of 20) of the respondents were teaching hearing-impaired children by choice. The remainder (9 of the 12) in integrated settings had been placed by administrative assignment out of their interest. Most of the teachers at special units (6 of 8) became special teachers of the deaf to get some sort of advantage.

Regarding the present level of interest in teaching hearing-impaired students, almost all teachers rated their interest to be low or none (19 of the 20).

Absence of special training and little or no support services from local education authorities were the basic and common reasons provided by all teacher respondents at all settings for their present interest.

Lack of special equipment like hearing aid and absence of additional payment on the part of all special units' teachers, and the difficulty of teaching few hearing-impaired pupils in a class ranging from fifty to eighty hearing students on the part of all teachers at integrated settings were also reported as major reasons for their lack of interest in teaching hearing-impaired students.

The responses of almost all hearing-impaired participants of this study (23 of 26) have confirmed the view that most of their teachers, especially those at integrated settings, have little or no interest in teaching them. Six of the 14 pupils at integrated classes especially noted that "most of our teachers do not care whether or not we are attending class and doing

homework.” They further noted that “Teachers do not at all attempt to use sign language. Thus we are forced to copy notes from our hearing peers.”

Some of the hearing-impaired children who attended at special units (5 of 12) also reported that since some of their teachers (1 from each special unit) did not know sign language well, they chose to be authoritarian and 6 of the pupils at Tabor unit added that most of their teachers did not come to classes regularly.

4.8 The availability of support services and instructional materials as indicated by respondents

As can be seen from the overall responses of pupils and teachers and the researcher's observation almost all essential instructional materials and especial equipment (Hearing Aids, Sign language Textbooks Resource Rooms, Audiogram, Pictures, diagrams, flash cards and the like) and supportive professionals (Itinerant teacher, audiologist, speech therapist and supervision support) needed for hearing-impaired children were totally absent or unavailable in all schools where hearing-impaired attended.

All of the teachers at the two integrated settings also indicated that the average class-size in their respective classroom was 70 students. The average number of hearing-impaired students in each regular class was less than three. The teachers believed that the classrooms were inadequate not only for teaching hearing-impaired children but also for hearing children. Five teachers and 14 pupils at integrated classes also noted that most teachers assigned in integrated sections some times forget even the presence of hearing-impaired students.

Regarding the suitability of classrooms in the two special units it was observed that there were two special classrooms (grades 1-4) with a total of 27 hearing-impaired children at Meskerem 16 special unit for the deaf and 1 special classroom for nine grade 4 hearing impaired children at Tabor special unit of the deaf.

One surprising finding was that due to shortage of classrooms at Meskerem special unit children, two different grade levels were being taught in the same classroom. According to the unit leader of Meskerem 16 special unit due to lack of awareness on the part of local education authority including the school's principal, lack of specially trained teachers of the deaf and shortage of classrooms, teachers were forced to place two grade levels in one room. Accordingly, grades 1 and 2 with a total of 17 children and grades 3 and 4 with a total of 10 children were being offered the same instruction to some extent.

The table also shows that the provision of supervisory support either for teachers or students with hearing impairment was unsatisfactory. The special units were not supervised either by principals or regional education department supervisors. Concerning the support of outside supervisors all the principals and unit leaders of the special units indicated that there was no support from the concerned bodies. The researcher also found out that the regional or zonal special educational departments themselves were not unaware of not only the number of schools, students, or teachers in the region or zone but also the existence of such programs in the schools.

Pupil and teacher respondents were also interviewed whether or not classroom teachers at integrated as well as at special units used visual aids in their respective classrooms. Most of the special units teachers (6 of 8) and some at integrated classes teachers (5 of 12) said that they provided and used visual teaching aids most of the time. However 23 out of 26 hearing-impaired disagreed with the teachers' responses.

4.9 Hearing-impaired pupils schooling adjustment

Most of the hearing-impaired students (14 out of 26) reported that they preferred to associate primarily with deaf friends and some (10 out of 26) with both hearing and the deaf peers. Only two of the pupils at integrated settings preferred to associate mostly with hearing

peers. The teachers' and parents' responses substantiated this finding to some extent. Most of the teacher respondents (14 of 20) felt that the hearing-impaired children associated mostly with deaf friends, while the rest (6) said the hearing-impaired children associated mostly with both. Half of the parents (12 of 23) reported they found their hearing-impaired children more eager to play with both the deaf and the hearing and nine said with deaf.

Of those who associated mostly with deaf, most of them (11 out of 14) felt comfortable when they affiliated with hearing-impaired friends. They say in a sense, "I am a deaf, I prefer to marry and associate socially with the deaf because I feel more comfortable with them". Of those who associated mostly with both deaf and hearing peers, 7 of them reported that the ability of the hearing students to speak and read lip-reading helped them to adjust.

Most of the teachers (9 of 12 in integrated classes; 5 of 8 in special classes) attributed to mainly on lack of interest on the part of the hearing-impaired children.

The responses of the nineteen of the parents to the question about their own feeling about their children's hearing difficulties, revealed similar reactions. They often ask, "why is my child deaf?" They feel "May be we did it our selves", "God wants it that way", "we are being punished for something", or they gave some reason not related to the possible causation". All of the parents had taken their hearing impaired children from specialist to holy water in the hope of finding a cure, a hope of removing this impairment from their children and of restoring the normal hearing.

Four of the parents, however, mentioned their increased ability to relax with their children, to accept them as they are, and respect their accomplishments. For instance, one father said: "I have become more patient. I feel we have had a good understanding. I enjoy in things we do together and really appreciate him."

Difficulties anticipated by the majority of the parents (18 of 23) centered on their children's difficulties in communication. Some of these parents (10) expressed fear that their children would have difficulty in participating in group activities. However, most of the parents did not want their hearing impaired children limited to the companionship of the hearing-impaired for the future.

The hearing-impaired, teachers and parents were also asked questions regarding the participation of hearing-impaired pupils in educational activities outside school time. Most of the hearing impaired said that their participation in such activities as sport, music, theatre, and watching TV, was low or nil. According to them, most hearing-impaired students participated poorly in and out of school activities outside school time because:

- 23 respondents out of 26 activities such as music, theatre and drama can be done only by the hearing student not by hearing-impaired.
- They thought they would have difficulties to express and to ask or answer questions while participating (14 respondents).
- Cultural pressures and other social problems obliged them not to participate in such activities (8 respondents).
- Their parents did not allow them to do such activities (13 respondents, 9 of which were females).

Most of the teacher participants (16 of 20) also acknowledged the low participation of hearing-impaired students in extra-curricular activities. Most teachers (14 of 20) felt that technical activities are appropriate for the hearing impaired while music, theatre and the like which require the ability to speak are inappropriate. The response to the teachers suggest that teachers' perception of appropriate and inappropriate were consistent with their view of the school subjects the hearing-impaired students had high or low interest.

The parent respondents were also asked whether their hearing-impaired children participated in-and-out of school educational activities. Of the 23 parents, 14 expressed fear that their children would have difficulty in participating in such activities as music, drama, sport and watching television with hearing children. Most of them expressed the following concern: "Being ignored by the hearing, not being understood, not understanding and being alone."

The majority of the pupil respondents (17 out of 26) perceived themselves as lacking something. Seventeen of them said, "I sometimes feel inferior, I wish I should be independent and understood." They also posed similar feelings pertaining to their future academic success and social relations.

In summary, lack of parental support; unawareness of parents on how to handle and treat their hearing-impaired students at home as well their low level of education; lack of specially designed curriculum for the deaf, difficulty in language of instruction; low expectation of academic performance; lack of specially trained teachers of the deaf; lack of motivation for learning and teaching; unavailability of special equipment and materials and lack of opportunities of the hearing-impaired to get with hearing peers were found to be the major factors influencing the schooling situation of hearing-impaired children at the special units and integrated settings of this study.

5. Discussion

5.1 Overall situation

Investigating the schooling situation of hearing impaired pupils in Meskerem and Tabor Special Units, and in EwketFana and Shinbit regular classes of the deaf of Bahirdar and Deretabor towns, interviews were conducted with 26 hearing impaired pupils, 20 teachers, and 23 parents of the hearing impaired pupils. Moreover, observation was made. The responses of the participants with some suggestive results were grouped into categories. For convenience, the discussion tries to follow the basic questions of the study.

The age of the pupils reflected large variability compared with the average age of pupils in the primary schooling. This probably indicates that the hearing impaired pupils had begin school very late and/or had not continued their schooling steadily without interruption. The findings also indicate that more than 70 percent of the pupils in the integrated classes were males. This may be the fact that although the social problems of hearing impaired children intensify in adolescence in mainstreamed settings, for hearing impaired females it is especially so.

The majority of the pupils (19 of 26) represented postlingually deaf population. The greater the hearing loss, the more difficulty the child has linguistically and academically. Hearing does not get better but it may decrease. But sometimes it appears to have got better because the person has learned how to make use of what is heard (UNESCO, 2000). However, children who lose their hearing impairment was present at birth or acquired by the age of two

years (Powell et al., 1985). The data of the present study suggest that most of the pupils (16 out of 26) became hearing impaired at a critical period for language and concept development. The earlier the children learn to sign, the quicker they learn. They are likely to learn to read and write more easily too (UNESCO, 2000). However, more than 90 percent of the pupils in this study have come from hearing families. Thus, transmission of the culture and sign language of the deaf is not familial. The data also suggest that most of the hearing impaired pupils need specific changes in the curriculum content and learn through total communication.

5.2. Major factor Influencing Schooling of the Hearing Impaired

5.2.1. Factors related to parental participation in the school learning of the hearing impaired

Parent participation is important in the education of a child who has a hearing loss. Many parents who face rearing a child with a severe hearing impairment have little knowledge of what they can do. After the child is in school it is important for the parents to know how the child's hearing is developing and how certain aspects of the school program can be extended to the home.

As Thomas & Feilder (as cited in Tirussew, 1999) indicated that what will count for much more and what will have a direct impact on children's learning is what parents do. In a country like Ethiopia where the magnitude of the problem is broad and the number of trained personnel in the field of special education is negligible the involvement of parents in the education of children with disabilities is of utmost importance (Tirussew, 1999).

The findings of this study, however, indicated that most of the parents do not understand well what their hearing impaired children try to say to them, as 16 out of 23 parents use speech and try to support their speech through home-made signs which are invented by the family, such as mime and iconic. The communication problems of most parents also

seem produce barriers to social and emotional development of the children. In turn, these barriers cause in social adjustment Home-made signs language may only be understood within the family but it is helpful in preparing for sign-language learning. According to UNESCO (2000) using the signs of the sign language with talking is helpful until sign language has been learned by the child, family, and community. Sign language is considered to be more advantageous to the intellectual and emotional development of the hearing impaired child than the oral only approach (Sinkonnen, 1994) Most signs are for concepts and ideas rather than for words. Pointing, motioning, demonstrating, and signaling are acceptable (David, et. al, 1993). Although home made signs support the spoken language, they are not able to make the parents of the present study to express ideas, especially past events or abstract concepts. One reason could be that the parents may not like to use signs or develop more since strangers notice this and make remarks, and , the parents may find that embarrassing.

The other reason may be the parents may feel that in a busy family it is easier to do things for the hearing impaired child rather than wait for the child to ask or to tell them things by pointing, demonstrating, and the like. Absence of other hearing impaired persons in most families with whom they can interact nonverbally may also be the reason for the communication problems. The parents also do not have any idea about alternative ways of communication other than speech.

An important educational implication of this study is that hearing impaired children who are not able to participate in meaningful interactions with their families are unlikely to benefit from integrated placements with large groups of hearing children.

Schools for deaf become the place where parents meet each other, setup classes in sign language, discuss things of interest to them all. They are able to see that their children are learning, and happy, and note when the school is running smoothly. This involvement of

parents in their children's education is important that the children and their parents know each other well and have shared experiences (UNESCO, 2000).

However, the findings of this study indicated that the home-school relations, the pupils' school attendance, the pupils' educational activities at home, and the educational encouragement of the parents were found to be low.

The general conclusion apparent from these results is that the socio economic and cultural conditions of the parents (The low educational level of parents, especially mothers, their need to work for long hours make it difficult to give attention to the education of their children, their belief in miraculous cure of the hearing loss, etc) may contribute importantly to the schooling problems of the hearing impaired pupils.

The income of the parents, however, seem to have a greater influence, as the data confirmed that most parents were economically disadvantaged and struggling to survive.

More children in the family seem also aggravate the risk of economic hardships of the family, especially in very poor families.

However, the total situation was not totally discouraging as the data indicated that relatively better educated parents had better contact with teachers and tried to help their hearing impaired children schooling in reading, writing, arithmetic, doing homework and the like just they helped their hearing children.

5.2.2. Relevance of the curriculum for the hearing impaired

Hearing impaired children go to school to learn the basic skills of reading, arithmetic and writing, as well as for the purposes of social and personality development. In principle, hearing impaired children should have equal access to all areas of the curriculum as far as it is possible (Reed, 1987). However, sometimes in discussing the education of hearing impaired children, too much stress is placed on speech and language, which although of fundamental

importance, is not the whole of education. Still before hearing impaired children can hope to compete with their hearing peers in regular classes, they must have secure language foundation. It is also become increasing obvious that the more serious the hearing loss, the more likely that specific changes must be made in the academic content itself (Kirk & Gallagher, 1986).

For a number of reasons, the pupils and teachers of this study are not satisfied with the curriculum used in the schools where hearing impaired attended. According to the findings of the study, there was no specially modified curriculum for the hearing impaired at any of the schools. The regular curricula were designed for hearing children and the number of hours of the regular school in mind.

Both groups (hard of hearing and deaf) were also given the same educational program without any distinction in special classes of the deaf. This contradicts the fact the two groups require two different educational programs.

A survey of timetables showed that the same subjects figure in the curricula of the schools though with some differences of emphasis as indicated in the findings at the special unit teachers devoted large blocks of time to language areas by reducing instructional hours from other school subjects. Although much stress is placed on language in the schools most of the hearing impaired pupils had great language difficulties and little gains. These pupils have, thus, had speaking, reading and writing problems in dealing with the academic subjects. This finding is also supported by other study (Feleketch, 2000) that hearing impaired students reported problems in reading and writing. Surveys (e.g., Schulz et al., 1991) indicated that hearing impaired individual's are at risk for reading and writing difficulties because the hearing loss affects their ability to construct accurate representations of sound-letter correspondences. Reading ability, which relies heavily on language skills and is probably the

most important aspect of academic achievement, is the most affected (Hallahan & Kauffman, 1988 & 19991). However a number of surveys (eg, Hallahan & Kauffman, 1991) over the years, taken as a whole, in a program of intensive and systematic instruction, observed the academic progress of hearing impaired students.

One of the most consistent findings in educational research is the correlation between achievement and " time on task". Simply put, everything else being equal, the amount of time spent studying or concentrating in class on particular topic or subject area is positively related to learning and mastery of content (Moore, 1996).

The more time students spend on biology or mathematics, for example, the more they will learn. However, the findings of the present study indicate that although academic subjects are given relatively more time in the regular curriculum the hearing impaired pupils had low interest and shown poor performance in academic areas.

The pupils' language difficulties to understand the concepts of most academic subjects may be due to lack of adequate experience of reading materials. The data also suggest that many hearing impaired pupils who might have continued for an indefinitely time in a special or school for the deaf are being transferred to regular classes before they complete the special unit program.

The quality of the course works for hearing impaired pupils and their academic progress with hearing pupils leads one to believe that for the majority of this group, integration after grade four with hearing children worked out unsatisfactorily. There are a number of special skills routinely that should be provided by resource personnel. Although the specific skills vary depending of the grade levels of the students, most special programs set aside time for individual or small -group training in speech and reading (Gearheart et al, 1988; Moore, 1996).

The results of present study call attention to education beyond the elementary level for hearing impaired pupils should depend upon the extent and kinds of special services provided, and the way in which it is regarded by the general school population.

Hearing impaired pupils problems related to education and training in the present study also common in other developing countries that the majority of hearing impaired children in developing countries are faced with the stark choice of attending the local school, where they are likely to fail unless efforts are made to include them, or having no formal education (Golden & Joseph, 2000).

It has also been suggested that in a country like Ethiopia where the nature of sign language is not studied and where interpretation services are not available it would be unrealistic to think of integrating hearing impaired children in the present educational system (Tirussew, 1999).

A study conducted in South Africa (Engelbrecht & Charis Cited in Tirussew, 1999) suggested that in developing an inclusive curriculum, Core special needs components in teacher training programs should be organized round a curriculum that confronts issues of the accommodation of diversity education. Furthermore, special education curriculum must be modified and teacher educators must come to a new understanding of the work their students will undertake to reshape their programs.

What the researcher also felt that in the regular schools of the study, the education seems limited in extent and confined to an academic curriculum, and failure to do in these areas, for one reason or another , throws the hearing impaired pupils into the category of social burdens.

5.2.3 Factors related to methods of instruction used in classes attended by the hearing impaired

It is a mistake to think that it is easy for hearing impaired children to learn. Deafness makes it difficult. It is not also easy to teach hearing-impaired children. Teachers need to develop special skills and understanding (UNESCO, 2000).

According to UNESCO, there are many good teachers of deaf throughout all countries, including those in Africa. Most of these teachers have found sign language a great help in their work. Moreover, the Salamanca Statement recommends (as cited in Golden 4 Joseph, 2000, p. 12) that: "The importance of sign language as the medium of education among the deaf should be recognized and provision made to ensure that all deaf persons have access to education in their national sign language."

Some schools also use sign language, reading and writing together and call it "total communication." Many schools add speech as well. The language that the hearing impaired children are learning to read and write is a second language for them (UNESCO, 2000). Being able to use sign language and to communicate, makes it easier for many hearing impaired children to learn to read and write.

Some children who knew the spoke language well before they lost their hearing become good at speech reading skill. However, it is difficult for even the best lip-readers to get the full content of a lesson or conversation from lip-reading by itself.

The teaching methods of most teachers in the present study are so purely verbal that the hearing impaired pupils' classroom participation is very low. In the first place, the teachers' don not know any alternative teaching methods, such as sign language. Secondly, they lack motivation. The teachers do not try to help the pupils by learning some signs and using them

when they talk. The teachers do not know what type of words are used most frequently and in what way in classes where hearing impaired pupils attended.

The data suggest that the better the training level, the higher the use of sign language and total communication as those teachers of special units who has received special training used sign language and total communication most of the time in the classroom.

The data suggest that hearing impaired pupils showed great flexibility in their mode of communication. The mode of communication used seems to relate to the age of onset of the hearing loss. That is, the late the hearing loss, the greater tendency to use total communication. However, grade level did not show a direct relationship with the mode of communication. This suggests that skill in speech was acquired without training.

Based on the overall discussions with the participants of this study, the researcher has felt that the majority of hearing impaired children will continue to be denied their right to education and access to schooling unless schools are made more accessible. This requires a greater willingness by teachers, parents, siblings and school children to learn sign language and to recognize the valuable role that can be played by the hearing impaired.

It is also the belief of the researcher that regretted education does not promote inclusion. Yet without an effective means of communication such as sign language, it is extremely difficult for the hearing impaired to be included in their families, communities, or in education.

Studies in inclusive education in Ethiopia also suggested that in order to facilitate the development of sign language, communication skills, active interaction and self-identity among hearing impaired children, providing them with education in special classes in pre-school and primary years seem to be feasible and practical (Tirussew, 1999).

5.2.4. Factors related to qualification of the teachers for the hearing impaired

Inclusive education is a matter of providing appropriate and high quality education for pupils with hearing impairment in regular schools. Whether or not this happens depends critically on teacher Variables, specifically their willingness to take on this task and their ability to do so. These two variables are interconnected (Tirussew, 1999).

Teaching hearing impaired children is not a simple task; it requires qualified teachers in the field of deaf education; past experience in the area of special education; highly motivated and conscious teachers who can commit their spare time, knowledge, and experience to the educational development of the children. This statement has been confirmed by many researchers (eg. Schulz et. al, 1991) that dealing with hearing impaired children demands qualified and competent teachers with some kind of special training in addition to or beyond that for regular school teachers. Moreover, recently deaf persons have been found the best teachers of the deaf (Werner, 1994; UNESCO, 2000). Deaf and hearing people working together in a school or classroom can help each other and benefit the children. Deaf and hearing people the children. According to UNESCO (2000), deaf people, who are happy and successful in all kinds of jobs and in their lives, provide role models for hearing impaired children.

However, the data of the present suggest study that the level of teachers training to carry out their duties as teachers of the deaf tends to be lowest in the sample schools which, paradoxically, have the greatest need of highly trained teachers.

The hearing impaired pupils have no deaf teachers. Due to this fact the pupils seem to face problems in adapting deaf culture, deaf community, and mastering sign language.

The regular schools of this study seem unwilling to burden teachers of the deaf. Teachers have also been reluctant to try to teach such children in regular classrooms. Some

teachers who started out wanting to teach hearing impaired children even seem change their minds and remain in ordinary classroom of hearing children only.

One reason may be the local education authorities might refuse to provide incentives for their additional qualification. Because as teachers indicated that teachers of the deaf in other parts of the country have been paid in addition to their regular salary. However, due to lack of information, the researcher could not investigate matters related to payment and training programs for the teachers of the deaf in the country.

5.2.5 Factors related to equipment and supplies for the hearing impaired

Audiovisual equipment and personnel are of particular value to the teacher who as a student with a hearing impairment in the class.

As the teacher lectures, he or she may put important notes or key vocabulary words or phrases on the overhead projector. An overhead projector allows the teacher to maintain eye contact with students while writing on the projector. When using slides or films, the teacher should be certain there is sufficient light to enable the hearing impaired student to see faces clearly as the teacher makes comments. In general, supplementary diagrams and pictures should be used as of the as possible (Gearheart et al., 1988)

Research (eg, Schulz et al., 1991) also indicts that hearing impaired students frequently wear hearing aids in the class room. Hearing aids make sounds louder. Hearing aids may help some children, especially partially hearing children.

In a school the teacher will use many visual materials for the children. Stories can be told with pictures and objects matched to the printed names.

Other special services for a hearing impaired child in an regular school setting also include Speech, language, and auditory training instruction from a specialist; special seating in the classroom (placing the child close to the teacher, and the teacher should keep the face in

view of the hearing impaired child) to promote speech reading; instruction for teachers and hearing students in sign language or other communication methods used by the hearing impaired; counseling; and the like (Heward & Orlensky; 1988; David, 1993).

The findings of the present study and the researcher's observation, confirmed that essential schooling services required for the hearing impaired pupils such as hearing aids, sign language text books, resource or itinerant teacher, audiologist, speech therapist, and other visual teaching aids were unavailable in all the schools. However the teachers' responses regarding the use of visual aid is not reliable. It is contrary to the pupils' responses. It also contradicts its previous responses in which many of the teachers reported the absence of such instructional materials. The researcher also confirmed in his observation that visual aids such as pictures, diagrams, charts and flashcards were unavailable in all schools. Perhaps the teachers might have considered the question about the use of visual aid as an indirect way of administrative evaluation.

Therefore, although the integration approach seems an improvement over isolation of the hearing impaired pupils in institutional settings; the reality in regular school settings of this study suggests that their needs are unmet in regular classes designed for hearing only.

5.2.6 Cultural factors hindering the schooling of the hearing impaired

The promotion of friendship development for children with disabilities is nowadays being considered as a primary educational goal. These peer social networks serve to complement and extend those peer relationships and friendships formed while participating in the integrative setting (English et al, 1997 cited in Tirussew, 1999).

Regular class teachers can a) provide non-disabled students with opportunities to interact with students with disabilities, b) encourage and reinforce interactions between the two groups, and train non-disabled students in regard to human difference.

Davis (as cited in Kirk & Gallagher, 1986) reported that loneliness and rejection of children with hearing losses who were mainstreamed in a local school program. The hearing impaired child's self-concept and confidence influence how rejection by others is perceived and handled.

Research (eg, David, 1993) indicates that hearing impaired individuals prefer to enroll in residential or day schools that provide segregated programs. These schools are preferred because they have a higher percentage of deaf teachers and workers, and the students have greater opportunities to participate in extracurricular activities such as sports.

Requiring hearing impaired individuals to meet demands of the hearing population's culture (for examples to what hearing people consider "proper" language) may lead to feelings of inferiority and inadequacy. For this and other reasons the issue of placement of hearing impaired children in a main streamed environment is a highly emotional and controversial issue with the deaf population. Despite high standards of services provided in a special school it may eventually be difficult to overcome the consequences of segregation in the later years when the child is unexpectedly pushed into hearing society.

The findings of this study indicate that most of the hearing impaired pupils wanted to be with children like themselves, with friends whom they can feel socially accepted and comfortable. Part of the poor interaction may be attributed to the lack of communication skills of the hearing impaired or to insufficient social skills; such as the ability to initiate and continue conversations or discuss playground or after-school activities.

The parents and teachers lack of knowledge about hearing impairment seems to contribute negative impact on the emotional, social as well as schooling achievement of the pupils. If parents and teachers of hearing impaired children do not have enough knowledge

and positive attitudes to deafness, it is impossible to expect support and good feeling from family members and teachers. The results of the present too confirm this fact.

It was found that the majority of the parents (19 out 23) are still wishing there were no loss of hearing. It was also observed that most of these parents' feelings were deep grief for their child's misfortune.

The participation of the pupils' in extra-curricular activities at school followed the same pattern as their classroom participation. Music, theatre, sport and other activities were not considered important for the hearing impaired pupils. The weekly time table of the special units did not allow the hearing impaired pupils to participate with their hearing peers in sport, music, and the like.

The data suggest that what teachers perceived appropriate or inappropriate professions for hearing impaired consistent with the subjects or areas they believed hearing impaired students had high or low aptitude and performance. It seemed that teachers transmit messages to their hearing impaired students and parents about the inappropriateness certain fields for hearing impaired.

The lack of expectation that a hearing impaired person can participate and contribute in many aspects of life seems to be resulted in the poor schooling achievement of the hearing impaired pupils in the present study.

6. Conclusion and Recommendation

6.1 Conclusion

One problem the researcher faced during the study was that since it was impossible to conduct oral interview directly with the hearing-impaired respondents due to the nature of the problem, communication was difficult. Another problem was that although large sample of respondents desirable, this was not made possible due to lack of time, inadequacy of finance, and because of the in availability of many respondents in the two towns for the purpose of this study.

The other problem what the research faced in the field work was getting information concerning the schooling situation of hearing impaired children in Amhara Education Bureau. The other major problem was that speech and audiometer tests were not done due to lack of materials and professionals in the schools. It would be more advantageous if it was possible to conduct the audiometer measurement.

Parental adjustment appears to be unsatisfactory. It seem to be difficult for most of the parents with low educational level, very poor families and to help their children in reading, writing and make use of spare time in pre-planned manner.

The absence of special curriculum for the deaf and the acute shortage of special teaching personnel appeared to be the major obstacles in adopting sound teaching techniques and classroom activities. The deaf and hard of-hearing were found to attend one and the same section and the same teaching techniques were made available for them.

Classroom lessons were not supplemented with activities and experiences that develop language and general knowledge of hearing impaired students.

The teachers at integrated settings were lacking even a preliminary orientation for teaching the hearing impaired, and the below three months training for methodology and

learning a new language sign language can make the teachers at special units hardly competent teachers of the deaf. The schooling problems seem also to be the result of lack of training of teachers and instructional facilities.

The teachers also preferred not to teach such children. One may conclude that the effectiveness of such teachers, especially those at integrated classes, are less than ideal.

The lack of expectation that a hearing impaired person can participate and contribute meaningfully in many aspects of life was also found to be the major schooling problem of hearing impaired pupils. The belief seems that one must hear and speak in order to function. This in turn, seems lead the hearing impaired pupils to underestimate themselves.

Generally, the study indicates that the schooling problem of hearing impaired children at the sample units and schools was a function of a multitude of factors which emanated from both what the students experienced in schools and in their socio economic environment. One important point this study tells us that a hearing impaired child is unlikely to overcome the restrictive schooling environment before developing adequate language skills in a special class or school. Thus the study does not recommend that integrating the hearing impaired children to an ordinary school before this time.

Thus, it can be seen the series of problems arising from the different aspects of educational systems are in the study, the most important factors in the school learning of the hearing-impaired pupils. It is unlikely that such education will be satisfactory unless it is based upon the needs of the hearing impaired children and unless it potentially leads them to join the same world as their hearing fellows, either at school, at university, in vocational training or finally in work. This implies a flexible curriculum and well trained teachers able to accept the responsibility for adapting their instruction to the children's needs and equipped with the teaching techniques demands by the education of hearing impaired children.

6.2 Recommendations

1. Parents of hearing-impaired children must find the best sources of information and guidance available to them. It is advisable to improve communication between parents and schools and to involve parents fully in the schooling of hearing impaired children. The schools should prepare a conference to raise the awareness of parents, hearing students and teachers toward hearing impaired education. Parents need encouragement to believe in the possible achievements of their child. They need help in being more comfortable in their acceptance of their child and in lessening their demands of their children. An understanding of the degree of their child's hearing loss and its significance is essential for this acceptance of their children's limitations and capacities;
2. The curriculum for the regular program should be modified. And educational experts in special education should be engaged in the design and development of special modified curriculum for the hearing impaired. Teachers need to be trained in order to translate and implement the curriculum into practice.
3. Total communication or combined method of teaching rather than oral only or one method is preferable.
4. Preparing an in-service training program for teachers with short, intensive courses of the subject matter is an important and urgent for improving the schooling situation of the hearing impaired children, and deaf teachers also should be available.
5. Support services and special equipment are urgent for minimizing the problems of hearing-impaired children, and
6. Social integration should be made practical for hearing-impaired child through such means as games, social clubs, and plays of both the hearing and the hearing-impaired within the schools' compound.

Abstract

The purpose of the study was to investigate the schooling situation of hearing impaired pupils at two special units and two integrated school settings of Bahirdar and Debreabor towns in Amhara region.

To carry out the study, relevant literature review was made. Interviews with 69 participants (26 hearing impaired pupils, 20 teachers, and 23 parents) and observation were used to collect data. The data were grouped into categories.

The results indicated lack of parental support, absence of modified curriculum, inappropriate instructional methods, lack of trained teachers, lack of motivation, absence of support services and teaching materials, and low expectation were found to be the major factors contributed the schooling problems of the hearing impaired pupils in the special and regular classes of the deaf in the study.

The incidence of the problem was highest in integrated classes than in special classes of the deaf. The study suggested a set of factors which may need due consideration for the schooling of the hearing impaired pupils in regular school settings.

References

- Abeba Hagos. (1996). *Academic barriers of the hearing impaired students: Case study of one of the deaf schools in Addis Ababa*. Unpublished master's thesis, University of Joensuu.
- Ahlgren, I., & Hyltenstam, K. (1994). *Bilingualism in deaf education*. Hamburg: Signum-verl.
- Baker, H. J. (1968). *Exceptional children* (3rd ed.). New York: The MacMillian Co.
- Central Statistics Authority. (1998). *The 1994 population and housing census of Ethiopia* (Vol. 1). Addis Ababa: Author.
- Cruickshank, W. M., & Johnson, G.O. (1962). *Education of exceptional children and youth* (7th ed.). Prentice-Hall, Inc.
- David, A., (1993). *Principles and methods of adopted physical education and recreation* (7th ed.). Mosby year book, Inc.
- Dunn, L. M. (1964). *Exceptional Children in the schools*. New York: Holt, Rinehart & Winston, Inc.
- Ethiopian Federation of Persons with Disabilities. (2001, December). Ethiopian national association for the deaf. *Bright Hope* (Issue Brief No.5), p. 32, Addis Ababa: Author.
- Felketch Bahiru. (2000). *Social and academic problems of hearing impaired students in the second cycle of primary school in selected special schools*. Unpublished master's thesis, Addis Ababa University.
- Gearheart, B. R., Weishahn, M.W., & Gearheart, C.J. (1988). *The exceptional students in the regular classroom* (4th ed.). Columbus: Merrill Pub. Co.

- Golden, M., & Joseph, K. (2000, March). Education for all deaf children by 2015? *Enabling Education Net work*, Issue 4, p. 12, Paris
- Hallahan, D. P., & Kauffman, J. M. (1988). *Exceptional children* (4th ed.) New Jersey: Prentice-Hall, Inc.
- Hallhan, D. P., & Kauffman, J. M. (1991). *Exceptional Child* (5th ed.), Boston: Allyn & Bacon.
- Haring, N. G., MacCormick, L., & Haring, T.G. (1994). *Exceptional Children and youth* (6th ed.). New York: Macmillian College Pub. Co.
- Heward, W. L., & Orlansky, M. D. (1988). *Exceptional Children* (3rd ed.). Columbus: Merrill pub. Co.
- Kirk, S. A., & Gallagher, J. J. (1986). *Educating exceptional children* (5th ed.). Boston: Houghton Mifflin Co.
- Kirk, S. A., Gallagher, J.J., & Anastasiow, N.J. (1993) *Educating exceptional children* (7th ed.). Boston: Houghton Mifflin Co.
- Mamo Mengesha. (n.d.). Special needs education: Emerging in Ethiopia. In H.Savolainen, H. Kokkala, & H. Alasuufari, (Eds), *Meeting Special and diverse needs: making inclusive education a reality*. Helsink: Nilomaki Institute. (Original work published 2000)
- Mikre Teferra. (2000, March). *The situation of persons with disabilities in Ethiopia*. Paper presented at the meeting of the International Day of Disabled Persons, Addis Ababa, OAU
- Ministry of Education. (1999, June). *Yeliuu Timihirt Getsita be Ethiopia* (The situation of special education in Ethiopia). Addis Ababa, MOE, Educational Programmes Supervision Department.

- Moore, D. F. (1987). Educating the deaf (3rd ed.). Boston: Houghton Mifflin co.
- Moore, D. F. (1996). Educating the deaf (4th ed.). Boston: Houghton Mifflin Co.
- Powell, F., Finitzo-Hieber, T., Friel-Patti, & Henderson, D. (1985). *Education of the hearing impaired child*. San Diego: College-Hill Press.
- Reed, M. (1984). *Educating hearing impaired children*. London: Open University Press.
- Reed, M. (1987). *Educating hearing impaired Children* (2nd ed.). London: Open University Press.
- Schulz, J. B., Carpenter, C.D., & Turnbull, A.P. (1991). *Mainstreaming exceptional students: a guide for classroom teachers* (3rd ed.). Boston: Allyn & Bacon.
- Sinkkonen, J. (1994). *Hearing impairment, communication and personality development*. Helsinki: Jonesund Yilopiston.
- Tibebu Bogale. (n.d.). *Communication methods used at home and in school for the hearing impaired in Ethiopia*. Unpublished master's thesis, University of Juväskylä.
- Tirussew, T Savola inen, H. Agedew, R., & Daniel, D. (1995). *Base line survey on disabilities in Ethiopia*. Institute of Educational Research, Addis Ababa University. Addis Ababa: Commercial Printing Enterprise.
- Tirussew Teferra. (1998). Educational rehabilitation: a missing component of teacher education at Addis Ababa University. Institute of Educational Research, *FLAMBEAU*, 5(2) 24-38.
- Tirussew Teffera. (1999). Inclusion of children with disabilities in regular schools: Challenges and opportunities. Addis Ababa: The Ethiopian Journal of Education, 19, (1), 29-64.

- Tirussew Teferra. (2001). Preventing learning difficulties and early school drop out. In P.S. Klein (Ed.), *Seeds of hope: Twelve years of early intervention in Africa* (pp. 115-129). Oslo: Unipub forlag.
- Transitional Government of Ethiopia. (1994). *Education and training policy*. Addis Ababa: Author.
- UNESCO. (2000). *Deafness: a guide for parents, teachers and community workers*. Paris, Author.
- Webster, A., & Wood, D. (1989). *Children with hearing difficulties*. London: Cassell.
- Werner, D. (1994). *Disabled village children: a guide for community health and rehabilitation workers, and families*. California: The Hesperian Foundation.
- Wood, D., & Wood, H. (1989). *Teaching and talking with deaf children*. New York: John Wiley & Sons Ltd.