

**ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

**THE EDUCATIONAL CHALLENGES OF “INTEGRATED”
BLIND STUDENTS: THE CASE OF SODDO
COMPREHENSIVE HIGH SCHOOL**

**BY
ANTO ARKATO GENDOLE**

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ABSTRACT

This study has tried to find out the educational challenges that blind students face in terms of various educational aspects: learning environment, curricular contents and their presentations, classroom interactions, obtaining and using special materials and services at Soddo Comprehensive High School. The views of the blind students, some sighted students and the participating teachers of the integration of the blind students into regular classes have been attempted to be investigated. The pertinent justifications of the subjects to support their respective views are also tried to be found out. In order to attain the stated goals, two sets of questionnaire, one set for the blind students and the other set for the participating teachers, were used as a primary tool to collect data. Interviews with the school principal and the school librarian, focus group discussion with 8 sighted students and observations to the blind students and some important settings in the school have been held just to supplement the data gathered through the sets of questionnaires. It has been found out that the blind students experience several severe problems in all the educational areas already mentioned above.

- *Classroom furniture together with its arrangement and the layout of the school compound are not convenient for free movement.*
- *No modifications and adaptations are made to curricular contents and their teaching approaches.*
- *There is a serious shortage of special materials and equipment in the school. No trainings are offered to use the materials and equipment.*
- *There are no special services such as resource room services, guidance and counseling services and mobility and orientation services in the school. The library services are also very meager.*
- *It seems that there is no effective interaction between the sighted and the blind students in the school. The majority of blind students claim that they are hardly treated properly by the regular teachers.*

A range of prospective measures have been proposed by the distinct subjects of the study so as to alleviate the above listed problems and others.

It was found that the views of the blind students, their sighted peers and the participating teachers regarding the integration of blind students into regular classrooms vary greatly for various reasons. Seventy percent, 62.5% and 36% of the blind students, sighted students and the teachers respectively support the integration of the students into regular classes for the enhanced academic and psychosocial development of the blind students. The rest proportions of the groups favour the segregation of the students for the lack of many relevant pre-conditions of appropriate integration. Finally based on the findings and discussions made, some helpful suggestions have been recommended.

PART 1

1.1. INTRODUCTION

The educational services of the disabled have got various shapes at various times since they came into existence. Before 1900, only residential schools which used to offer some instructions and trainings for the disabled existed in some parts of the world. In between 1900 and 1970 special schools and classes became more prevalent educational centers. At the same time, residential schools continued to grow and expand. During 1970-1977, movement towards mainstreaming handicapped learners in regular classes became the preferred type of educational service. Handicapped students who were formerly placed in residential institutions and special schools were made to move into special classes in public schools. Since 1977, following national efforts and state legislations, a substantial number of handicapped students have been provided appropriate public education in regular class settings (Schulz, Carpenter and Turnbull, 1991).

This obviously indicates that the movement has been from the complete segregation (serving the disabled individuals separately from the non-disabled ones) of the disabled populations to their complete integration with their peers in regular classrooms.

During the late 1960s and early 1970s studies comparing the academic progress and social adjustments of handicapped students, educated in special classes and in regular classes were conducted. Most of the researches found no significant difference but a few of the studies discovered the handicapped students in the regular classes to be more successful. Following these findings, there have been warm debates among professionals on the educational placement of students with disabilities. (Ibid)

Proponents usually stress that integration promotes the development of cognitive and social skills of the disabled children. Vandercook, Fleethan, Sinclair and Tetlie (1988) cited by Stainback and Stainback (1990) note "in integrated classroom, all children

are enriched by having the opportunity to learn from one another, grow to care for one another and gain community cooperation to support the inclusion of all citizens." (P.19). Tirussew (1999) argues that in inclusive settings students with disabilities benefit from exposure to a wide range of social interaction behaviors that they are able to react. Their social behaviors are also subjected to be reacted to. The dynamic interaction taking place between the disabled and the non-disabled makes a great contribution to the holistic development of the disabled. Egel et al (1981) cited by Tirussew (1999), again found out that students with disabilities can profit from learning basic educational tasks by observing their non-disabled peers..

Non-disabled students can have advantages from inclusive classroom setting. They can procure positive outcomes from it. They can develop the skills and attitudes necessary to function effectively in the future. Lack of contact with persons with disability results in doubts about the competency and potentials of the disabled and this finally leads to remarkable prejudices reflected by regular schools and employers. By encouraging inclusion at the critical stage of development, it is possible to do a lot of work to fill the gap of ignorance and misunderstanding that keeps the disabled and the non-disabled away from each other (Tirussew, 1999).

Some other supporters of inclusion view that it is a means of realizing equal rights of education for disabled learners. They perceive exclusion of persons with the disabilities from regular school system as dehumanizing, labeling, ineffective and expensive. They say that individuals having special needs receive quality and effective education in regular classes (Stainback , 1994, in Tirussew,1999)

The opponents of integration argue that the potential of the regular education system to serve students with disabilities is untested. They again contend that the resources needed to fulfill the needs of these students in regular education settings are not available. (McKinney and Hoccut, 1988 cited in Smith, Patton and Ittenback, (1994). Schmid and Nagata (1983) on their side, claim that current literature reflects that there has been very little change in the methods of instruction in classrooms where

handicapped students have been included and this has adversely affected their performances.

IDDC (1998) cited in Tirussew (1999) noted societal attitudes toward persons with disabilities is one of the significant factors influencing the practicability of inclusion. A lack of proper understanding of the concept of disability and unfavorable attitudes toward the persons and their inclusion, and a strong resistance to change are some of the reasons. As Tirussew (1999) summarises "the development of an inclusion educational policy, curriculum and teacher training programs are frontiers of challenges encountered in the course of implementing inclusion education." (P.43)

Irrespective of the several arguments favoring the segregation of the disabled, however , "in the past few years there has been a tendency toward serving students with disabilities in integrated school settings" (Smith et al, 1994:326). Inclusion has to be implemented in Ethiopia for it helps to:

- achieve psychosocial and educational benefits for both groups of children, disabled and non-disabled as well as the teachers and school administrators .
- attain a broad coverage of education of children with disabilities
- enable children with disabilities to exercise their right to be served in an educational setting which promotes their overall development
- identify and serve children with hidden disabilities, who have already been mainstreamed by default in the ordinary schools.
- empower parents, siblings, teachers, students and community to contribute to the well- being of children with disabilities in general and their education in particular. It minimizes cost and promotes inclusion beyond the school environment.
- enhance the quality of educational system and curb school wastage particularly early school drop-out and repetition rates (Tirussew, 1999:47-48).

Accordingly, the visually impaired children, particularly the blind in various Ethiopian schools are eligible citizens to enjoy the benefits of integration already listed.

For its appropriate use in this paper, the term 'integration' together with the other competing and interrelated terms such as 'mainstreaming' and 'inclusion' has to be clarified first. Different Scholars define the terms differently. Shea and Bauer (1994) define integration as "a school system in which learners with disabilities attend the same school with learners without disability, but not necessarily the same class." (P.41). They contend that mainstreaming focuses on mixing disabled learners with non-disabled ones for social interaction. They refer to inclusion as "a school system that educates all the students assigned to the school with their age peers." (P.4) In their view inclusion subsumes both mainstreaming and integration.

Smith and Luckasson (1995) also define : "Mainstreaming is including students with special needs in regular education classrooms for some or all of their school day." (p.26) and inclusion as the " practice of assuring that all students with disabilities participate with others in all aspects of school." (p.28). Salend (1994) on his own defines the terms as follows:

Mainstreaming is the carefully planned and monitored placement of students into regular education classrooms for their academic and social educational program. The academic program within the regular education classroom should be adapted to address the instructional needs of the mainstreamed student and the social program should be designed so that the mainstreamed student is assimilated into social climate of the class and accepted by peers. When this definition emphasizes academic instruction and length of time spent in the regular classroom, the term integration will be used ... " (p.11).

"Inclusion is a movement ...whose schools welcome, acknowledge, and affirm all learners by educating them together in high quality, age - appropriate regular education classrooms in their communities." (p.49).

When we examine the definitions of the terms, we can infer that even if the term inclusion seems to be broader than the other two terms, in most cases, its main ideas overlap with the ideas of mainstreaming. For instance Shea and Bauer Stress that inclusion incorporates both mainstreaming and integration as its fundamental elements.

They claim that the terms mainstreaming and integration concentrate on social and academic purposes respectively. These social and academic aspects of the disabled learners are incorporated in mainstreaming as the focal point in Salend's definition too.

It must be borne in mind that despite the variety of the terms in scope and area of concentration, in most existing literature, the terms appear to be used interchangeably. In this study, which focuses on the educational aspect of the blind students, however, the term integration seems to be the most appropriate. Salend's (1994:) idea which states "When mainstreaming emphasizes of academic instruction and the length of time spent in regular classroom, the term integration will be used" strongly supports the rationale of the researcher to prefer the term. Some of the principles of inclusion and the feasibility of the inclusion itself in our country make the term quite inconvenient to be used in this research work. For example, one of its principles allows all students to have an access to individualized education program, which is very difficult to implement in our country's context. For these reasons, integration the preferred term in this paper. Actually the integration of blind students taking place at the sample school is not intentional. It occurs by default. No deliberate special arrangements are made for its effective outcomes. For this reason, the researcher has a great hesitation to label it real integration and put the term 'integrated' in the title in question marks. In a few contexts, the term 'mainstreaming' is also made use of.

Just like other children, blind children have their own educational needs. The challenges that blindness, however, imposes upon their educational activities make the applications of some special approaches and materials, and additional curricular contents highly indispensable. The special skills employed and the extra contents included in the educational curriculum of blind learners are required merely to meet their special educational needs.

Fulfilling the special needs of blind students, particularly of those who are integrated with the sighted learners, is not an easy task. It needs reliable knowledge and consistent effort of the classroom teachers. Schulz, Carpenter and Turnbull (1991) say "classroom

teachers are undoubtedly expected to assume major responsibility in the mainstreaming process" (P.25). It again demands deliberate collaboration among classroom teachers, school principals, parents, and other professionals in the school. Besides these, it necessitates the consideration of several variables: physical learning environment, curricular contents and their presentations, specialized materials and equipment, support services etc. The essential questions, "Are the special needs of blind students in the listed educational areas in regular classes properly met?" "What problems do the students face in attempting to fulfill the needs?" "What measures could be taken to help blind learners cope with the problems?" call for urgent responses. Attempts are made to address these questions. Furthermore, the perceptions of the participating teachers and both sighted and non-sighted students of integration of blind students into regular classrooms are investigated. The basic justifications that the informants have to favour or disfavour the integration of the blind students are also investigated.

1.2. Background Information of the Sample School

Soddo Comprehensive High School is located in Southern Nations, Nationalities and Peoples Region, in Walayta Zone at Soddo town. It is about 380 kms from Addis Ababa, the capital city of the country. According to the oral information of Ato Wana Wagesho, an educated elder of the area, the school was established in 1969 by government as the result of consistent efforts of the informant himself and his close friend, Ato Bogale Wallelu (another educated elder). Before the establishment of the school, there was Ligaba Beyene Abasebsib Elementary and Junior Secondary School which was founded in 1942 after the name of the then ruler of the area. Ligaba Beyene Abasebsib School was advanced into elementary, junior and secondary high school in 1962. But after 7 years period, in 1969, the high school was detached from the elementary and junior secondary school and became today's Soddo Comprehensive High School.

The principal and the vice principal of the sample school together expressed that until the down fall of Derg regime, there were only two high schools :Yirgalem High School

(founded first) and Soddo High School (founded next) in the former Sidamo Province. This expression of the school authorities has been confirmed by Ato Wana Wagesho.

Neither the authorities of the school nor Ato Wana knows the exact time blind students began to join the sample school and their number at that time. Both the school figures and Ato Wana, however, believe that the establishment of Soddo School for the Blind by missionaries at Otona (Eastern region of Soddo town) is a fundamental cause for the existence of relatively large number of blind students at the sample school. The school principal has also reported that currently the school has 32 blind students distributed 11, 9, 5 and 7 in grades 9, 10, 11 and 12 respectively. Twenty-three of them are males and 9 of them are females. The school has 61 teaching staff, of whom 30 are BA/BSc. holders and 31 are diploma holders. The majority of diploma holders are qualified for 12⁺³. Of the total teachers, there are only two females (one BSc. holder and the other diploma holder). The school has also 8 permanent and 10 contract administrative staff.

1.3 Statement of the Problem

Best (1992) claims that it is hard work and tiring to be visually impaired. The impairment can pose innumerable difficulties to the learning activities of the children with the impairment, particularly the blind. The blind are not exposed to incidental learning which facilitates formal learning. They also experience inevitable limitations in moving around easily to explore what is happening in their surroundings. Moreover, most of them specially the congenital ones, are deprived of visual images of many intangible issues and ideas which are largely helpful in developing certain abstract concepts. Furthermore, their social interactions are highly restricted for various reasons and they must depend on auditory and tactile channels to acquire external information.

The inherent limitations associated with blindness are very likely to cause a number of challenges to the teaching and learning processes of blind students, particularly in the integrated classroom setting. This necessitates special modifications and adjustments in

the diverse instructional components to fulfill the special needs and requirements of the blind students.

In order to overcome the burdens of the blind students in their various educational elements, it is essential to conduct a systematic investigation into the actual problems they are facing before some helpful measures are suggested. The principal purpose of this study, therefore, is to assess the existing educational difficulties that integrated blind students experience due to their visual disability and propose some pertinent steps to be taken so as to minimize or alleviate the challenges.

Toward this end, the study attempts to answer the following fundamental research questions.

1. What educational problems do integrated blind students face as the result of physical learning environment?
2. What problems do integrated blind students face as the result of curricular contents and their presentations?
3. What problems do integrated blind students experience in terms of specialized materials and equipment?
4. What educational problems do blind students encounter in terms of instructional support services?
5. What measures could be taken to alleviate the educational challenges of integrated blind students in the above mentioned areas?
6. Do blind students favour their segregation or integration into regular classroom settings, and why?
7. Do regular teachers favour the segregation or integration of blind students into regular classroom settings, and why?

1.4 Objectives of the Study

The main objectives of the study are:

1. To explore educational problems of integrated blind students caused by physical learning environment
2. To find out educational problems faced by integrated blind students as the result of curricular contents and their presentations.
3. To find out educational problems that integrated blind student experience in terms of specialized materials and equipment.
4. To identify educational challenges encountered by blind students in the regular classes due to instructional support services.
5. To suggest some measures to be taken in order to alleviate the educational challenges of blind students in areas already mentioned.
6. To find out whether blind students and regular teachers prefer the segregation or integration of blind students in to regular classes.
7. To explore the justifications of the teachers and the students to favour either integration or segregation of the blind students

1.5 The Significance of the Study

The researcher believes that the study would have the following major significances.

- To the knowledge of the researcher, no formal study has been conducted on the educational barriers of blind students at the sample school. The lack of literature on the problem under consideration seems to be one of the critical issues that calls for considerable attention from the professionals in the field. This study would, therefore, contribute its own share to the availability of literature on the issue.
- Integration today has become a global move that many countries, including Ethiopia favour its implementation. But from practical point of view specially in our country it seems that no adequate researches- on various aspects of its

realization have been conducted so far. So, this study could make some investigations into some important aspects that would promote its proper implementation.

- The actual educational practices of integrated blind students demand appropriate professional assessments to identify the real challenges they encounter and to design intervention programs which help the students to cope with the challenges. This work could make its own contribution toward the attainment of this goal.
- It seems that policy makers and curriculum planners do not give due attention to the special demands of the blind when they design general policies and develop curriculum. This research work, hence, could initiate these professionals to consider the peculiar needs of blind in accomplishing their (professionals) respective duties.

1.6 Delimitation of the Study

The study delimits itself to Soddo Comprehensive High School. It includes all the integrated sections of grades 9-11. It involves all teachers of the integrated sections, some blind and some sighted students, the school principal, the vice principal, and the librarian of the sample school.

PART 2

LITERATURE REVIEW

2.1. Historical Development of Education of the Blind

History reveals that the knowledge of visually impaired people dates back to the ancient world. Records from ancient Egypt confirm that, unlike people with other significant impairments, people with visual impairments were accepted by society. Homer, the famous Greek poet who produced **Illiad** and **Odyssey**, the masterpieces of literature along all ages, was blind (Smith and Luckasson, 1995).

During the middle ages, special care and attention were given to the blind by monasteries, resulting from the humanitarian treatment of the early Christian era. In 1178, a home was established for the blind and some trials of instruction were made by the Duke of Bavaria. In 1254, a refuge for blind crusaders named the Hotel des Quinze-Vingts, was established in Paris. In the following five hundred years, many other institutions which led to the establishment of the blind schools were built in various parts of Western Europe (Backer, 1959).

The first school for the blind, the institution for Blind Youth, was founded in Paris in 1784 by Valentin Haüy, who conceived a system of raised letters on the printed page. In 1800's, Louis Braille, a blind Frenchman, developed a tactile system of reading and writing, today's Braille system (Smith and Luckasson, 1995).

In the United States the first blind school, the New England Asylum for the Blind, was opened in 1829. It was directed by Samuel Gridley Howe. The New York Institute for the Blind and the Pennsylvania Institution for the instruction of the blind were established around 1832. These 19th century institutes were privately owned boarding schools and usually were attended by children of well-to-do families (Ibid).

The first day classes in which the blind children were integrated with the sighted ones began in Scotland in 1872. In the United States, the first attempts to integrate the blind into the regular classes commenced in Chicago around 1900, when Frank Hall convinced people to allow the blind students to live at home. Hall also developed a mechanical Braille writer, a small portable machine for taking notes and performing other written tasks. At those times students attended regular classes also received Braille education by special education teacher. (Ibid)

Smith and Luckasson (1995) also noted that many technological advances have provided great benefits for people with visual impairments. The development of telephone by Alexander Graham Bell and phonograph by Thomas Edison in 1876 and in 1877 respectively has contributed much for the overall betterment of the blind. The invention of radio broadcast in the United States in 1906 gave remarkable access to personal entertainment and information for the visually impaired.

Smith and Luckasson (1995) pointed out that another important area for people with visual disability in which development has been realized is mobility and orientation. Between 1918 and 1925, dog guides were used to help blind French and German veterans of World War I. In the United States, dog guides were introduced in 1928. Long canes were developed around 1860. Before Richard Hoover, after whom the Hoover cane is named, developed a mobility and orientation system in 1944, there was no systematic method for teaching individuals how to move freely in their environments.

Other than long cane and dog guide, today other movement modes such as sighted guide and independent movement are commonly used. Even though, they are not well known in our country, existing literature portrays that several electrical devices are of a great aid for the movement of blind individuals in the developed world.

2.2. Blind Education in Ethiopia

Yusuf (1987) stated that before the 20th century, the type of education existed in Ethiopia was the church education. Its principal aim was to prepare the young people for the church services. The typical means of instruction of the educational system was oral presentation. This helped the blind students to equally benefit from the teaching-learning activities of the time.

According to Ministry of Education and Fine Arts material (1960 E.C) cited in Mengistu (1989) the education of the blind began simultaneously with that of the sighted people. This was possible as the applied teaching method was oral and suited the personal conditions of the blind learners as well. As the result, the blind were able to serve in the churches equally with the sighted people. Rigby (1970:2) also supported the view that "it was possible for blind children to receive this traditional type of education as reading and writing were kept to a minimum and instruction was given orally to all students. This could be taken as the first known form of an organized integrated system of education for the blind".

Rigby (1972) noted the 1930's Western type of educational system was introduced to Ethiopian government school system. At that time no real attempts were made to include the blind persons into the regular classes and to consider their special demands. Attempts of introducing Braille reading and writing into the classes were ignored and as the result the education of the blind, which had been given special attention in the traditional education, was forced to decline.

According to the information of Ministry of Education and Fine Arts (1960) cited in Mengistu (1989), various modern blind schools were opened at different areas of the country starting from the third decade of the 20th century. The first school was opened in 1924 in Wellega zone, Dembi Dollo, by American Presbyterian church. The number of students attended the school was not known and the school was closed after a short period's service. The second school, which later transferred to Bakko, was the Entoto

Blind School (Addis Ababa). It was established by Swedish Evangelical Mission. Next to this, Urael Blind school, today's Sebeta Blind School, was founded in 1952 by Emperor Haile Silassie. It was transferred to Sebeta in 1956. The fourth blind school opened in 1967 by the society for the Interior Mission, named the Sudanese Interior Mission, was the Soddo Blind School. The next school was Shashemene Blind School. It was established by Irish Mission in 1980.

The manager of Ethiopian National Blind Association has stated that currently there are totally six Blind Boarding Schools in the country: Walayta, Shashemene, Sebeta, Bakko, Gondar and Mekele schools for the blind.

2.3. The Concept Visual Impairment

Visual impairment can be defined from different points of view differently. It can be defined from medical (clinical), legal or educational perspectives. In this paper, which deals with the educational activities of the blind students, the term is defined only from the educational perspective. It could be merely defined as any eye defect which hampers the educational performances of a child and entails some adaptations and modifications in various educational areas. In terms of its severity visually handicapped individuals are categorized into partially sighted (low vision) and blind.

Taylor, Stenberg and Richards (1995) define the two terms, from the educational stand point as follows.

1. Partially sighted learners are those having significant visual problems but still use their vision as their primary sense for learning.
2. Blind learners are those whose visual impairment is so severe that they must rely on senses other than vision to function adequately.

It is indicated earlier that based on the onset of the problem, visual impairment, specially blindness is classified into congenital and adventitious. Those children who lose their sight prenatally or at birth are said to be congenitally blind, whereas those who lose their vision postnatally are called adventitiously blind. But "there is some evidence that children who lose all functional vision before age three do not recall facts about their environment (eg. colour, shape, distance, size, proportions). Most children blinded after this age do retain the concepts with some visual referent." (Kolk, 1981

cited by Olson, 1987:299). From this it would be safe to classify all children who lose their vision before age of three as congenitally blind and those who lose their vision after or at age three as adventitiously blind.

2.4. Causes of Visual Impairment

Scholl (1986) identifies the causes of visual impairment, particularly of blindness, depending on various age levels. It could be caused at prenatal, perinatal or postnatal period. Some causal factors are hereditary that they are genetically inherited but others are acquired after birth. He reports glaucoma, macular degeneration, cataract, optic nerve atrophy, diabetic retinopathy, retinopathy of prematurity, injuries and poisonings to be the utmost causes of blindness. He also asserts that infectious diseases like rubella (German measles) and other prenatal maternal diseases can cause damages to eyes. Tumors which occur in the brain, exterior to eye in the orbit, in the pituitary gland or in the eye ball can bring about eye damages leading to blindness.

Smith and Luckasson (1995) have found out that in developing nations infectious diseases, malnutrition, vitamin A deficiency and drug addictions are the major causes of blindness. Similarly, Dorrit (1985) and Eshetu (1980) both of them cited by Tirussew (1989) hold that among the several causes of visual impairment in Ethiopia, trachoma, vitamin A deficiency, river blindness, leprosy, venereal diseases, measles, small pox, cataract, typhoid fever and aging are worth mentioning.

2.5. Academic and Psychosocial Characteristics of Blind Students

2.5.1. Academic Characteristics

Taylor et al (1995) reported that most of the academic activities of the visually impaired children are visual in nature that their achievement is depressed to some extent when compared with the achievement of the sighted children. Newland (1986:576) quoted by Ysseldyke and Algozzine (1995) had nearly a similar report that "with the exception of unique problems of input and possible greater demand in processing, the fundamental

learning procedures of blind children do not differ from those of non-impaired children. Thus, with effective help and support, children with visual impairment can be successful as their sighted age-mates in academic performances."

2.5.2. Psychosocial Characteristics

Visual information plays a crucial role in the acquisition of social skills and the ability to interact appropriately with others. Sack and Rosen (1994) reveal that there is a wide discrepancy between the psychosocial development of persons with visual impairment and persons with 'normal' vision. They perceive that social learning is highly dependent on visual modeling and imitation. So, vision imposes a lot of social problems on young children with severe visual disability. It limits their ability to interact effectively with their peers, parents, siblings and significant others. Many children with visual disability are rejected by their sighted peers, possibly because of poor social interactions. The unfavourable peer reactions of sighted children towards the blind children might result in some unacceptable personal behaviours by the blind. In line with this view, Smith and Luckasson (1995) state that negative experiences with peers during the school years had contributed to characteristics which are often attributed to people with severe visual impairment: social immaturity, self-consciousness, isolation, passivity, withdrawal and dependency.

Special mannerisms, usually referred to as 'blindisms', characterized by repetitive body movements or other behaviours such as rocking, eye poking, hand waving, and head rolling are often exhibited by blind individuals. The behaviours are not harmful in themselves, nevertheless, they project negative feelings upon the individuals from the general society. The behaviours call the attention of the others to the person and let the others label the person as different or handicapped. The mannerisms, hence place the blind at social disadvantage. (Heward and Orlansky, 1988)

Dodds (1993) explains that simultaneous depression and anxiety is a common emotional characteristic of many blind people. They are usually sleepless because their minds are

buzzing with unanswered questions, unexpressed hopes and fears and a dread for the future. Their minds may be occupied with these thoughts appear to have no free attentional capacity to denote to listen to what others say. They may nod and agree to suggestions of others but after some minutes they unlikely to tell what they have been told.

Cooper-Smith (1967) cited by Dodds (1993) also reported that his many visually handicapped clients suffer a catastrophic loss of self-esteem attributing it to lack of sense of self worth and a lack of a sense of competence.

Blind individuals have a remarkable difficulty in expressing their emotions. They are highly reserved in communicating their internal feelings. Even in cases in which they make frequent contacts with their peer groups and teachers superficial relationships are commonly recognized (Jordan and Hunter, 1965).

Jordan and Hunter (1965) give different reasons that the blind people are reluctant to discuss their internal situations. Many of them feel that their fears, anxieties and emotional problems are peculiar to them. Some others think that their emotions are mental anomalies that make them different from others. Appropriate self-concept will be restored if the blind understand that their strong feelings and emotions are also experienced by the sighted individuals. This can promote their self-confidence and improve their academic performance.

To summarize, the social interactions of blind children in most cases, are limited. The restricted social contacts often affect the psychological behaviours of the children too, tending to develop low self-esteem. They are not encouraged to perform well in their daily social and academic duties that they require constant support and help of others to exploit their educational potentialities effectively. The support and the help could be through the modification and adaptations made in various educational forms. Some of these are discussed in the following sections.

2.6. The Physical Environment of Learning

This relates to several conditions in the school environment. The seat at which the blind student is positioned in the classroom may have a considerable impact on his/her learning process. The blind can better benefit from the learning if they are placed where their attention is not taken up by other external stimuli. But if the position exposes them to factors which fail them to follow the lesson attentively, their learning is more likely to deteriorate. For this reason Best (1992) contends that the position of the blind child should enable him/her to work without any strain. The height and surface of the desk and chair must ensure effective functions. The surface of the desk needs to be larger, flatter and more sloping to accommodate all print materials and equipment.

As to the classroom arrangement Best (1992) again explains that the classroom has to give free access which allows the child to move easily in the class. There must be adequately wide gaps between rows of desks. The learner may need access to electric socket in order to use tape recorder and other electric devices. This dictates the position of the child's desk near a wall. It will be highly helpful if the child is given a chance to explore the classroom areas and practice moving through routes when the class is free. Gearheart, Weishahn and Gearheart (1988) state this physical environment of the room should be changed as often as necessary, but the student has to be oriented to the new changes through a few minutes question and answer session immediately after the change. Sighted students could be of good assistance in directing the blind and describing the new arrangement.

The sound in the learning environment needs to be kept to the level that it does not pose obstacle to the effective learning of the child. "Totally blind children... will use listening as an important source of information. The sound environment therefore needs controlling and the child may be best helped in a position where he/she can hear the teacher very clearly and work with a minimum of distracting sounds." (Best, 1992:71-72).

The good images of open wider spaces of the school can facilitate safe mobility and orientation. In relation to this issue Ysseldyke and Algozzine (1995) indicate that "Instruction in non-academic disability specific skills that encourage appropriate physical growth and independence should begin in early childhood and continue throughout a student's school career. Emphasis on orientation and mobility is an essential component" (P.381).

The discussions clearly demonstrate that physical environment of teaching-learning process of blind children plays a vital role in enhancing or retarding the process in general. The place where the child is positioned in the class, the way the classroom materials are arranged, the effects of sound environment and the conditions of a buildings and other open spaces in the school require careful consideration in planning for the education of blind learners.

2.7. Curriculum Contents and Presentation

Many educators advocate that the curriculum of visually impaired children demands some modifications to meet their special needs. Ysseldyke and Algozzine (1995), for instance, note that in addition to traditional academic content taught to their peers, the curriculum of visually impaired children, specifically of the blind, demands disability-specific contents which include those related to concept development and communication such as Braille using, listening skills, use of slate and stylus, use of abacus for maths, hand writing keyboarding. The skills may provide access to the traditional curriculum.

Curriculum areas like science subjects, maths, art and craft, and physical education which involve practical activities exert additional challenges and need amendments in teaching methods and specialized equipment. The lack of access to physical education activities may hinder the children to monitor their activities as other children do and eventually create difficulties with posture which can adversely influence their comfort at work, their general health and appearance (Best, 1992). Lessons in physical

education or gross motor activities, thus, should be demonstrated by moving the student physically through the activity (Gearheart et al. 1988).

Gearheart et al (1988) also argue that concrete materials, learnings supported by practical experiences, tactile activities, field trips etc should be some curricular contents of blind learners.

The other curricular issue that calls for due attention is the presentation of the subject matter. Above all, the information presented should be accurate. Teachers have to avoid visual expressions which cannot be understood by the children. Pertinent to this point Best (1992) has to say, "The words will have to carry all the meaning that the teacher needs to convey as the additional information from body language may not be accessible. Gestures pointing to objects, hand movements describing an effect, facial expression moderating a remark to make clear that is a question or joke need to be replaced by clear verbal expressions"(P.77).

The understanding of the point or concept of discussion should be checked. To do so, teachers can raise relevant questions in the middle or at the end of the presentation. The quality of voice is also tremendously important in giving accurate information.

The non-visual educational tasks of blind students certainly need extra time to get through the same amount of work as sighted children. This has clear indication that the speed of working will be reduced. Some activities which are worthy of consideration here are tasks of exams and tests. Blind children, in most cases, do not have direct access to exam/test questions. They simply receive information from others (their readers). This makes the allotment of extra time extremely necessary. The test items may need altering because of their nature or the great difficulties the children could experience in achieving academic and cognitive skills. (Best, 1992)

Still the other curricular element that requires proper attention, specially in the integrated classroom setting, is the interaction of the blind students with classroom teacher and with their sighted classmates. The teacher's and the classmates' attitudes

toward the child both inside and outside the classroom might have a remarkable impact on his/her educational performance. Bishop (1986) cited in Kirk, Gallagher and Anastasion (1993) found out that an accepting and flexible regular classroom teacher and peer acceptance and interaction are some of the important school factors for successful mainstreaming. Kekelis and Sells (1988) also cited in Kirk et al claim that the itinerant teacher observing a visually disabled child in the mainstream setting should pose questions which check whether the child plays and talks to peers, shows affection and preferences for classmates and interacts with them in classrooms, in play grounds and during recess.

From the discussions, it is not difficult to have an insight that the role of classroom teacher in facilitating the classroom atmosphere and producing conducive interactive and accepting conditions is very high. As Lupi (1987) also states, "as more handicapped children are mainstreamed into regular classes...attention must be placed on assisting regular teacher in accommodating these children in the general school program and on fostering positive attitudes in non-handicapped students." (P.150). Therefore, in order to motivate the blind students and make their learning more productive in regular classroom settings, regular teachers ought to develop favourable feelings towards the children and be cooperative with them. Besides, they should encourage the sighted students to accept and interact effectively with the blind students both inside and outside the school environment. They still have to stimulate the non-disabled students to be helpful for the blind both in academic and non-academic issues.

In sum, developing appropriate curriculum modification, giving accurate information using voice with accepting quality, assigning sufficient extra time with reduced speed, altering the nature and number of test items and improving classroom interactions may result in effective learning for blind students.

2.8. Special Materials and Equipment

To enhance the instruction of visually handicapped learners, the school is required to provide some disability-specific materials and equipment. Shea and Bauer (1994) hold that the school needs to supply optical aids, tactual aids and auditory aids. For blind learners optical aids may not be as such relevant. Among the tactual aids that Shea and Bauer consider very important are Braille books and writers, Braille computers, slate and stylus sets, tactual globes and maps, abacus and similar counting frames, measuring devices and various templates and writing guides. They also take auditory aids as very essential tools in promoting instructional activities of this group of learners.

Similarly Gearheart et al (1988:162-164) emphasizes the importance of such materials and equipment as Braille writer, slate and stylus, raised line paper, cassette tape recorder, talking book and other recorded programs, variable speed compressor, optacon, talking calculator, closed-circuit television, Kurzweil, and Echocommander for educational benefits of blind students. For further detail, see appendix E. Regular classroom teachers should have basic understanding of these materials and equipment to ensure their proper use and thereby maximize their value for the blind students.

2.9. Mobility and Orientation Training

In total educational program of the blind, mobility and orientation training is one of the most demanding issues that require considerable attention. It plays a significant role in assisting the blind to move around safely and independently. Hill (1986) cited in Smith and Luckasson (1995) describes orientation as "the mental map people have about their surroundings. Most of us use landmarks and other cues to get from one place to another.... The cues or landmarks make up our mental maps and orientation to our environment." They again define mobility as "the ability to travel safely and efficiently from one place to another." (P. 475).

Gearheart et al (1988) contend that formal training in mobility and orientation is not a responsibility of a regular teacher but it is a responsibility of orientation and mobility

specialist or resource or itinerant teacher who has earlier preparations in the field. The regular teacher needs to have understanding of the nature of the training and different modes of travel used by visually impaired children. Five modes of travel used by people with visual impairment are presented by Gealheart and his associate as follows.

1. Sighted guide:- here the visually impaired student grasps the guide's arm just above the elbow and takes a position about a half step behind the guide. The grip is firm enough to maintain the contact and enables the visually impaired child to feel and detect any movement of the guide's arm and body.

The sighted classmates of the blind can be trained to serve as sighted guides by mobility and orientation specialist or the resource or itinerant teacher.

2. Cane travel:- it is a commonly used mode of travel, and the age at which it is recommended depends on the maturity of the child. It is usually made up of aluminum and its tip is of steel or nylon. Today there are attempts to prepare it locally from wood.

Its training ranges from fundamentals in restricted areas to extensive training conducted in crossing streets, using public transportation and dealing with complex navigational situations.

3. Dog guide- it is recommended after the age of 16 because before that age, the child may not be mature enough to handle the dog properly.
4. Electric travel aid - a number of devices are available but four of them are most frequently used: the Mowat sensor, the sonic guide, the laser cane and the Russell path sounder.
5. Independent travel-after the visually disabled child becomes familiar with the environment, he/she is able to move around without any aid.

In order to make the visually impaired child more efficient in using any of the mentioned modes of travel, the training should start as early as possible.

2.10. Support Services

Blind learners, may require a great number of additional support services so as to benefit adequately from the inclusive educational services. In this paper, however, only resource room services, guidance and counseling services and library services are treated.

2.10.1. Resource Room or Itinerant Teacher Services

According to Shea and Bauer (1994), "a resource room is a special education placement alternative in which the students receive specific support through specialized services while continuing to receive the majority of their instruction in the general education classroom." (P.65)

Back, Cooper, Dobroth and Siperstein (1987) cited in Shea and Bauer (1994) investigated students assigned to resource room are more capable than students assigned in special education classes. This, of course, could have an implication that resource room service should be made available in parallel with integrated educational system.

Resource room or itinerant teacher assumes numerous responsibilities in the educational process of the blind students. As presented by Gearheart et al (1988:178-181), resource room teacher, generally, offers direct and indirect services. Some of the direct services rendered by resource room teacher are the following.

- a) Specialized instruction in reading-he/she provides instruction in Braille reading and writing, the use of slate and stylus and reading instruments like optacon or Kurzweil reading machine
- b) Instruction in listening:- systematic instruction in listening activities in situations like formal presentations, informal conversations and audio reading of talking books and tape recorded materials is particularly important as listening is one of the most substantial avenues of learning for the blind students.

- c) Instruction in techniques of daily living:- The activities of independent living such as personal grooming, house cleaning, cooking, serving food and home repair must be part of blind students school curriculum.
- d) Instruction in mobility and orientation - when mobility and orientation training specialist is not available in the school, resource room teacher should assume this responsibility. Moreover, he/she is responsible to familiarize the student with new classroom and school buildings.
- e) Student and parent counseling- he/she give professional counseling to the student or his/her parents when needed.
- f) Instruction in the use of adapted or special materials and equipment.
- g) Supplementary or introductory instruction - if an activity takes a longer time to be completed or it is highly visual, its instruction must be supplemented by the help of resource room teacher. He/she may also introduce the instruction before the regular classroom teacher carries out the regular teaching.

Gearheart et al (1988:181-182) further discuss the services to follow as indirect but very crucial in facilitating the educational programs of the blind:

- a) Preparation of materials:- he/she can prepare some materials if they are needed and not available in the amount or format needed.
- b) Acquisition of materials:- he/she can still obtain necessary educational materials by duplicating those which are possessed by other students or by checking them from national and state agencies and volunteer groups.
- c) Conducting in-service sessions for regular teachers and school administrators.
- d) Coordination of outside service - he/she can coordinate other activities, in addition to classroom activities.
- e) Assisting in adapting or modifying activities.
- f) Interpreting medical information

2.10.2. Guidance and Counseling Services

The school which has a highly developed guidance program will find its exceptional children assisted in many respects through out the regular operation of that program. The program should help an individual to understand himself/herself and his/her environment to the point that he/she will be able to develop goals and aspirations in keeping with his/her potentialities. This is particularly true for a handicapped person since his/her versatility is usually limited by the handicap. An accurate understanding of his/her potentialities assumes more important to the handicapped than it might do to the non-handicapped person with a wider chance of choice (Finch and Yowell, 1950).

The guidance and counseling services provided have to enable the handicapped, including the blind to accept the limitations that cannot be avoided and to develop attainable and satisfying goals within the existing limitations. For example, the blind person must be able to see himself as blind but not perceive blindness as a limiting factor on his possibilities to be a whole person. The handicapped person could be as well adjusted as anyone else even when the individual faces extraordinary difficulties. What must be special here is that the counselor of the handicapped has to possess a higher order of professional competence by applying his/her scholastic knowledge he/she needs to make a lot of efforts to modify various environmental conditions which affect the adjustment of the handicapped (Jordan and Hunter, 1965; Finch and Yowell, 1950).

The competent counselor who is capable of understanding the needs and difficulties of the blind child and who is effective in helping the child to understand himself/herself and set his/her own goals must have a deep understanding of the school and the ways in which it can offer optimum possible services to the child. The counselor ought to assist the school develop varied and flexible programs to provide educational services which meet the special needs of the children with handicaps, including the blind (Finch and Yowell, 1950).

According to Jordan and Hunter (1965) a blind person projects various reasons for the refusal of accepting his/her blindness. However, it is highly crucial that the counselor has to make his/her ultimate effort to rehabilitate the individual to accept the change in self before he/she accomplishes all the new learnings, helpful for his/her future development. The counseling process is significantly essential to assist the blind person in reorienting his/her self-concept.

Jordan and Hunter (1965) go on saying that working with blind adolescents puts the counselor in additional difficulties and the counselor should be aware of the emotional challenge exhibited by the individuals. Adolescence is the most painful period in life, characterized by biological and psychological violences. It is a time at which sexual maturity followed by emotional turmoil is very common. It is a period when adolescents strongly need group acceptance and identity. It is very likely that the socio emotional upheavals of this particular development stage are even more reflected by blind adolescents than the sighted adolescents. Therefore, it is quite wise for a counselor to remember that when he/she counsels a blind person, "the client is first an individual and then a blind person when he (the blind person) can deal with his personal situations adequately, he will deal more effectively with problems of blindness." (P. 279)

The attitudes of the counselor toward blindness and the blind are really important. "In assisting the blind individuals in changing his self-concept the counselor should offer himself as a relatively fixed, warm, non threatening figure... A facilitating atmosphere is one in which the client sees the counselor as an available resource for the resolution of his many internal stress which holds the minimal threat." (Jordan and Hunter, 1965:279).

As a blind person is unable to benefit from emotional reactions and facial expressions the counselor is required to use alternative techniques to enhance the counseling process with blind personnel. Various audible cues can substitute visual cues which indicate to the client that his communication is being received and understood. The

counselor is demanded to interpolate frequent grunts like *yes, hum* and let the client know the counselor's attention to his/her communication (Jordan and Hunter, 1965).

To summarize, a counselor who is supposed to render appropriate professional services to blind students, specially to those who are in their age of physiological and psychological turbulence (adolescence) is expected to take serious attention of several issues. He/she should be able to understand the specific needs and problems of the blind learners and make every attempt to meet them. He/she ought to convince them to accept their disability as part of their life and set feasible educational goals that they strive to attain irrespective of the restrictions the disability imposes upon their performances. He/she must also be aware of the effects of blindness on personality development of the blind individuals and the resulting personal behaviours of the individuals. Finally, the counselor has to act and treat the individuals professionally accordingly.

2.10.3. Library Services

Socially conscious librarians seek to serve all the public, including the handicapped, and they view the library as one of several institutes working within society aimed at improving social conditions and developing human resources (Martin, 1975). This service is highly prevalent in schools where a range of citizens having various aims, interests and taste of reading are educated. Classroom textbooks cannot achieve these variety of individual goals. By the same token, it is inconceivable for a classroom teacher to be aware of the diversified personal reading needs and to satisfy them accordingly. Librarians, thus, are the right persons to provide their customers with proper materials, to offer necessary professional reading guidance, to entertain all other related needs.

Velleman (1977) contends that the school library program is inseparable from the total academic progress of its students and it is aimed at encouraging reading, providing a variety of learning materials in all subjects and teaching of library skills. Velleman also notes the reading and leisure-time interests of the handicapped students, including the

blind, are very similar to those of their able-bodied peers. Subsequently, the school book collection has to include the best standard and new materials in the areas of fiction, non-fiction, biography and references. Every necessary adaptations have to be made in the elements of exceptionality. A particular effort should be made by the librarian to give individual reading guidance to all students particularly to those who experience certain disabilities.

Some legally blind children will be taught Braille, others rely on special tapes, cassettes and talking books to entertain their reading needs. The current educational system has a tendency that visually handicapped children fully utilize whatever amount of sight they have. This dictates that whenever, the children are trained in the use of print, they must be encouraged to exploit their existing sight (Hunsicker, 1977).

From Hunsicker's contention one can guess the types of library services that should be provided to blind children in the areas just raised. Undoubtedly the person can draw that school libraries having blind clienteles ought to reserve Braille books, special tapes cassettes, talking books in their collection. Diverse forms of larger print materials which serve blind print readers much be available too.

In short, school libraries are responsible to accommodate the reading needs of its all types of students, including the blind. The libraries must be supplied with all kinds of books and other materials which meet the diversified reading needs of their customers. A school library, which is provisioned with all important instructional materials for blind learners and renders adequate services to them could play a profound role in enhancing the educational progress of the students.

PART 3

RESEARCH METHODOLOGY

3.1 Method

A descriptive method employing qualitative approach is administered to conduct the research.

The informants of the study included 20 blind students, of whom 5 were also involved in formal observation process, 8 sighted regular students, 25 teachers, the principal and the librarian of the sample school. Nine, 6 and 5 blind students, and 3, 3 and 2 sighted students have been respectively taken from grades 9, 10 and 11. The teachers are from all the integrated sections of the mentioned grades.

Purposeful and available samplings were employed to select the informants. The sample school was purposefully chosen for its long experience in educating blind students. Besides, the researcher has a good acquaintance with some of the school staff members and that was expected to facilitate conditions toward the achievement of the goals of the study .

Basically grades 9 and 10 were selected for the sole reason that they contained a greater number of blind students than the other grades (11 and 12) . Before the researcher went to the school to gather the data, he had been informally informed by the school director that there had been about 20 blind students in grades 9 and 10. But when the researcher actually went to the school, he found a considerable difficulty to obtain all the expected students and let them fill in the questionnaire as many of them used to come to school on and off. To compensate for the missing students, the researcher was forced to include grade 11 blind students in the study. Furthermore, four integrated sections, two from each of grades 9 and 10 were intentionally selected for observation purpose. Proximity of the sections, where the observation held, to one another was used as a

criterion for the selection of the sections. This helped the researcher to obtain and attend the target students at break times and the time they were going to home.

Eight sighted students (3,3 and 2 from grades 9,10, and 11 respectively) were deliberately chosen by the two unit leaders of the school, and participated in the focus group discussion. The students had equal distribution in terms of sex. They were chosen based on the belief that they would be able to reflect the reality relatively genuinely. The school principal, the librarian and all the teachers of the integrated sections of the stated grade levels took part in the study. All the blind students, except those who were not easily accessed, of the sample grades participated in the study.

3.2 Data Collection Instruments

Questionnaire, observation, interview and focus group discussion were applied to gather the necessary data. Two sets of questionnaires were prepared and filled in by the sample teachers and blind students. The sets of questionnaire had items on personal information of the respondents, scaled items, indicating 4 levels of difficulty and requiring the respondents to rate various educational challenges of the blind students, and certain open ended questions requiring the respondents to mention some significant specific educational problems that the students face, and suggest ways in which the problems could be overcome. The items of the questionnaire were set in Amharic for clear understanding. An observation supported by pre-set observation slip was used to record various behaviours exhibited and activities carried out by the 5 target students both inside and outside the classroom settings. With the exception of one student, each of the target blind students was observed three times in the classroom, in the school compound during recesses, and outside the school compound when they were going home. Each student was observed on three different days at each of these settings.

To collect information on some administrative affairs closely related with academic matters, on availability of some materials and support services and other relevant issues of the school, interviews were held with the principal and the librarian of the school.

Focus group discussion was also conducted with 8 sighted students on certain pertinent issues to cross-check some of the data collected through other tools. For the subsequent convenient analysis, the whole process of the interviews and focus group discussion was tape recorded.

3.3 Procedures

First of all, the problem was identified while the researcher was holding informal discussion with one of the sample school teachers at the teacher's residence at Soddo town. Then, relevant related literature was revised. Based on the literature and other relevant information, data collection instruments were devised.

Before the main study was effected, a pilot test had been carried out at Minilik Comprehensive Secondary High School to identify and to modify the shortcomings of the instruments. Four blind students were observed twice each in their respective classes covertly. As the researcher has B.Ed. Degree in English Language, and about 5 years experience of teaching the subject, with the consent of the regular subject teachers, he acted as a new English teacher and conducted classes twice in each section selected, making observation of the target students. Even though it was found very difficult to get the target students outside the classroom because of the huge number of students in the school compound, attempts were made to visit them at various times inside and outside the school campus.

A focus group discussion was conducted with 8 sighted students from grades 9 and 10, 4 from each (2 males and 2 females). The students were proposed by respective homeroom teachers of the sections in which observations were administered. Interviews were held with the school guidance and counseling professional and with the head of the school library.

Next, 10 blind students and 16 regular teachers of the integrated classes were made to fill in the questionnaires.

But before that, 10 readers (students) from Addis Ababa University, most of whom were from English department, were recruited. The teachers and the readers had been informed before they did the filling and the reading to point out the items with which the teachers themselves and the blind students had ambiguity. Accordingly, the items were identified and the necessary corrections were made.

At the sample school of the main research, at the very beginning, a contact was made with the school director. The mission of the researcher and the purpose of the research work were explained to the director in his office. Then, the researcher was directly referred to the vice director of the school. Similar explanations were made to the vice principal. In his office, identification of integrated sections with their respective number of blind students was made. Sections in which the formal observations to be made were also identified. There, the researcher was introduced to the unit leaders of the school and English language teachers of the sections selected for the formal observation. Next to this, 5 smart and dependable sighted students were chosen by their respective regular English language teachers from the sections where the main observation took place. The students were oriented to assist the researcher by observing the students inside and outside the school compound. The observation was being conducted for more than two consecutive weeks in the selected classes and outside the classes. The researcher was making the observation inside the classroom acting as a regular English teacher. He was also observing the students outside the classrooms with the help of the assistants. The assistants promised to keep what they were doing secret. Moreover, the researcher was informally observing many other issues related to blind students' learning situations. During recesses, he sometimes used to spend his time wandering and talking with some students in the school compound so as to conduct the observation secretly.

Then, students with good academic achievements and reliable reading abilities were selected from grades 11 and 12 and were oriented to read the questionnaire for the blind respondents. All the readers and respondents were appointed and filled in the questionnaire in the opposite shift of their actual shift on the same day. This is to mean that readers and respondents attending the school in the morning shift filled in the

questionnaires in the afternoon and those who were attending the school in the afternoon filled in the questionnaires in the morning shift. The teachers of integrated sections of grades 9-11 were identified first with the vice principal of the school. Fortunately, the school had a general meeting on one day and almost every teacher was present. At the end of the meeting the researcher was given a permission to disclose the names of the selected teachers who would be provided with brief orientation about how to administer the questionnaire. He also requested the respondents to fill the questionnaire with proper attention. Then, the questionnaire was distributed to the identified teachers at once. It was properly filled and returned by all the responding teachers.

After this, interviews were held with the school principal and the school librarian at their respective offices on the issues stated previously. Then, focus group discussion was carried out with 8 sighted students in one of the learning classrooms on different educational matters of blind students. Eventually the collected data were analysed and discussed.

3.4 Data Analysis

The data collected have been analysed and interpreted qualitatively. The data secured through observation, interviews, and focus group discussion have completely been presented and analysed qualitatively through in-depth explanations. The data obtained through the sets of questionnaire have been tabulated and described using some elementary descriptive statistical measures such as means and percentiles. Ideas proposed on the specific educational problems faced by the blind students and potential solutions of the problems and other related matters have been summarized and discussed.

monthly income 12(60%) parents of the students are illiterate. Only 2(10%) of the parents have attended grades 5-7.

Table 2 - Causes and Onset of the Problem

Causes of the Problem			Onset of the Problem		
	Nº	%		Nº	%
Illness	3	15	Before birth	-	-
Measles	8	40	Between birth and three years (Congenital)	7	35
Small pox	3	15	Three years after birth (adventitious)	13	65
Reflection	4	20			
Trachoma	1	5			
Cataract	1	5			
Total	20	100		20	100

As to the onset of the problem, 13(65%) of the participating students have acquired the problem three years after birth (adventitious blind) but 7(35%) of them have acquired it between birth and three years (congenital blind).

The respondents have mentioned several factors to be causes of their blindness. Five (15%) of them attributed it to illness (15%), 8(40%) to measles, 5(25%) to small pox, 4(20%) to reflection, 1(5%) to trachoma and another 1(5%) of them attributed it to cataract.

The information given by blind students on various educational challenges studied is very fundamental since the students are the primary sufferers of the challenges. The problems of the students are presented in the following tables.

NB: the level of the problems are rated as

4 - Serious

3- Moderate

2- Little

1- Very little

Table 3 - Problems Faced in terms of Learning Environment as Perceived by Blind Students

N ^o	Problem area	Responses on the level of the Problem												
		4		3		2		1		Unfilled		Total		M
		N ^o	%	N ^o	%	N ^o	%	N ^o	%	N ^o	%	N ^o	%	
1	Sitting position in a class	3	15	10	50	-	-	3	15	4	20	20	100	2.8
2	The height and surface of the desks and chairs	8	40	5	25	2	10	5	25	-	-	20	100	2.8
3	Arrangement of materials in the class	14	70	4	20	2	10	-	-	-	-	20	100	3.6
4	Familiarizing oneself with the classroom situations	7	35	9	45	1	5	-	-	-	-	20	100	3.00
5	Assistance from teachers and sighted classmates	12	60	8	40	-	-	-	-	-	-	20	100	3.60
6	Sound conditions in the learning environment	8	40	5	25	2	10	-	-	1	5	20	100	2.9
7	The conditions of school buildings and open spaces between various blocks	13	65	4	20	1	5	-	-	-	-	20	100	2.9

As it is indicated in table 3, the students confront problems that range from moderate to serious levels in the specific areas considered. For instance, 65% of the respondents have indicated that they face moderate and even serious difficulties in terms of the place where they sit in the classroom. In addition to this, 70% of the students have responded that they have serious challenges in terms of arrangement of materials in the classroom. Moreover, all of the participating blind students (100%) have shown that they are exposed to moderate and serious problems that resulted from lack of appropriate verbal explanation and assistance from their sighted classmates and their teachers about making use of a variety of things available in the classroom. Furthermore, 65% of the students reported that they face serious problems but only 15% of them indicated that they experience

little challenges due to the conditions of school buildings and open spaces between various blocks, rooms and other areas such as toilet room, library, teachers' offices, sport field etc.

In response to the question requiring the students to mention specific problems they encounter in terms of learning environment, they have come up with the following significant points.

The arrangement of materials in a classroom causes a lot of challenges to the learning process. First of all, the desks and the chairs are not arranged in such a way that they allow free movement in a class. They are not suitable to sit on and to accommodate all the stationery and other materials of the students. Some of them are partially broken that they do not give psychological rest while sitting on them. Because of the large number of students in each class, the desks are put very close to each other, and the passages between the rows are too narrow to permit free movement not only for blind students but also for sighted students. Since there is a shortage of chairs in each class, and most of them are mobile, the chairs of blind students are often taken away by sighted students when the blind students leave their chairs free, even for a brief period of time.

Even though the students are not supplied with any devices working with the application of electric sockets, the lack of the sockets on the walls of classrooms is another potential problem when the materials are provided.

The size of students in a class also causes discipline problems which interfere with learning processes of blind students. Disruptive sounds from classroom students and from other things in the surrounding areas frequently disturb the blind students and further complicate their learning tasks. Teachers carelessness and inability to control classroom discipline is another important factor that exacerbates the problem.

In addition to these, teachers and sighted classmates are reluctant to give helpful descriptions of classroom and its surrounding situations.

Furthermore, the positions and conditions of various school buildings, rooms and other open areas are other noticeable causes of challenges for blind students. For example, the library and the toilet room of the school are not easily accessible. Besides, the toilet room is not kept clean. So, blind students cannot move freely through it and use it safely. Moreover, the majority of routes in the school are narrow in width and zigzag in shape that they do not allow free movement from one place to another place in the school. Consequently, blind students bump into trucks and cars parked near the routes and into other objects left along the paths in the school. The routes from the homes of many students to school are still not convenient to go through, thus, blind students usually confront difficulties in using them. Some of the students have pointed out that they regularly fall into ditches when they go to school or when they go back home. Absence of orientation and mobility training, specially when they join the school has greatly intensified the overall problems related with movement in the school and its surroundings.

The respondents have put forward a range of helpful ideas so as to solve the problems treated under this particular area.

First, the conditions of the seats and their arrangement should be improved. Additional classrooms should be constructed so that the number of students in each class can be reduced and the classes are sparsely furnished so that there will be wider open gaps that allow free movement between the rows. The desks need to have wide surfaces that contain all the stationery and other materials, and give blind students full freedom of using Braille papers and other materials. The broken chairs and desks have to be repaired on time. Teachers should also be clever enough to create healthy classroom discipline which encourages effective learning conditions for the blind students.

Teachers and sighted classmates ought to be trained about giving verbal explanations of classroom and surrounding situations to blind students. Accordingly, they should help the blind students render all necessary descriptions of the mentioned situations so that the blind students can exploit the situations easily.

It is possible to solve or to minimize the problems of library and toilet room by making them more accessible either by remodeling the routes leading to them or building new discrete library and toilet room for blind students at open spaces. Keeping the existing toilet room clean is also a very crucial measure that could be taken. Trucks and cars should be parked far away from the routes inside or outside the school.

Offering frequent mobility and orientation training specially when the students join the school is still a valuable step to overcome the problems. In short, the school has to make effective communications with all concerned bodies to solve all the problems they experience in terms of learning environment.

Table 4- Problems of Curriculum Contents and Their Presentations as Perceived by Blind Student

N ^o	The area in which the problem is encountered	Responses on the Level of the Problems												
		4		3		2		1		Unfilled		Total		
		N ^o	%	N ^o	%	N ^o	%	N ^o	%	N ^o	%	N ^o	%	M
1	Learning curricular contents of regular (sighted) students	13	65	4	20	-	-	1	5	2	10	20	100	3.05
2	Learning disability specific contents such as:													
	a) Using Braille	13	65	1	5	2	10	4	20	-	-	20	100	2.6
	b) Use of slate and stylus	7	35	6	30	1	5	6	30	-	-	20	100	2.7
	c) Tactual activities	6	30	4	20	4	20	4	20	-	-	20	100	2.4
	d) Learning listening skills	6	30	4	20	5	25	5	25	-	-	20	100	2.55
3	Learning abstract ideas, concepts of colour and spatial relationships	14	70	4	20	2	10	-	-	-	-	20	100	3.5
4	Getting accurate information from teachers	5	25	5	25	4	20	6	30	-	-	20	100	2.45
5	Working and getting ready for													
	a) Exams	16	80	4	20	-	-	-	-	-	-	20	100	3.80
	b) Tests	17	85	2	10	-	-	-	-	1	5	20	100	3.89
6	Interacting with teachers and sighted students both inside and outside the classroom	7	35	6	30	4	20	3	15	-	-	20	100	2.8

The information in table 4 suggests that blind students face problems in learning curricular contents and the ways they are presented. In most of the items considered the students on average have about moderate and above moderate difficulties. It is calculated that in learning curricular contents of sighted students ($M=3.05$), in learning abstract ideas, concepts of colour and spatial relationship ($M=3.5$) and working on and getting prepared for exams ($M=3.8$) and continuous assessment test ($M=3.89$), the students confront more than moderate challenges. Eight-five percent, 90%, 100% and 95% of the students have pointed that they have difficulties ranging between moderate and serious respectively in carrying out the activities just listed above.

Even learning tactual activities, the item identified with the least difficulties, the mean value of challenges of learning the activities is still calculated to be 2.4. Fifty percent of the responding students have indicated, for example, that they have problems still in the range of moderate and serious in learning the activities. In short, blind students encounter significant problems in all aspects of curricular contents and their ways of presentation.

The respondents have presented several specific problems in this particular educational area, and their ideas are summarized as follows.

First, the students come across serious difficulties in understanding visual concepts. Most of them have reported that verbal explanations by teachers about ideas presented in the form of maps, globes, diagrams, tables, do not offer clear understanding of the issues. Absence of ready tactile maps, globes, diagrams and other related objects multiplies the intensity of the problem. In addition to this, the students are unable to take notes from classroom lectures. Most of the time, they do not actively participate in group works. As the result, they might miss a lot of key points of the discussions. Sighted students are highly reluctant to read notes for blind students. Due to huge number of students in each class, disruptive noises which interfere with the auditory activities of blind students are produced.

Blind students experience enormous difficulties in interacting with their teachers and sighted peers. The majority of teachers and sighted mates do not have acceptable attitudes towards them. So, the desire of these teachers and sighted students to interact actively with the blind students is rather limited. They are not cooperative to read notes and to copy assignments and home works from Braille paper to normal paper. Rather some teachers bombard them with some injurious words or expressions which torture them psychologically. They are sometimes ridiculed by some sighted students and this offends them much. These usually lead blind students to develop fear towards the teachers and the sighted students and finally restricts them from requesting the teachers and sighted peers frequently to help them.

In order to alleviate the challenges they face in terms of curricular contents and their presentations, the blind students have suggested the measures discussed below.

Teachers should give more specific verbal explanations in making classroom presentations. They must deliberately read the notes they write on blackboard clearly for the benefits of blind students. They also need to give detailed oral elaborations about pictures and diagrams containing abstract ideas, concepts of colour and spatial relationship. Their sound has to be loud enough so that it will be heard by the blind students clearly. Again, it is considerably necessary for them to backup their teachings with tactual maps, diagrams, globes and other helpful materials. In addition, they might design various tactual symbols representing distinct colours and include them in their lessons. They could still help the blind students by preparing notes in the form of handouts which would be read to them by their sighted mates. The students have to be permitted to record lectures of the teachers if they have any potential to do so. Teachers ought to speak clearly and slowly during the presentation in order to match the understanding pace of the students.

The other possible measure is that the school has to ensure the availability of special materials in adequate amount. It needs to incorporate the materials including Braille books and Braille papers, cassettes and tape recorders, stylus and slates and other

tactual objects in its annual budget and submit it to the concerned bodies on time. It has to make every effort to realize the provision of the materials. Other than this, it can deal with some NGOs and other charity organizations to support the blind students by supplying them with the materials or by offering them other helpful aids which enhance their learning processes.

Special care should be taken in producing exam/test items to be taken by blind students. Equal attention must be given in administering the test/exam. Items which demand application of sense of vision should be avoided. Attempts must be made to write the tests/exams in Braille, otherwise efficient readers either subject teachers or English language teachers should be assigned and paid for their service. They also need some extra time to complete the exam/tests. Moreover, conditions have to be facilitated to involve them in every progress test, to offer them the test or exam in a separate classroom, and to enable them to collect their test/exam results simultaneously with their sighted classmates.

A lot of work has to be done to develop healthy social interactions between the blind students and their seeing peers, and between the blind students and their teachers. The teachers, the sighted mates and the school community in general must be given awareness creation orientation about disabled people in general and about the blind in particular so as to help them develop positive attitudes towards the blind students. All of them need to realize the fact that blind students are capable of doing almost everything that sighted students are able to do. They must be consistently encouraged to interact actively with blind students and help them whenever the need arises. The blind students themselves should be encouraged to approach their teachers and seeing mates freely. Productive social interactions among blind students, sighted students and teachers could be promoted through the involvement of blind students in some extra-curricular activities and various clubs in the school. Assigning regular assistants to blind students, might strengthen the social relationship between the blind students and the assistants.

In response to the question requiring the blind students to indicate whether they learn natural science courses such as Biology, Chemistry, Physics and Mathematics; art and handcraft, and physical education, all (100%) of grade 11 students have reported that they do not learn any of these subjects. Similarly all (100%) of 9th and 10th graders have responded that they are not taught any of the courses but Biology.

Table 5 - Problems of Special Materials Equipment and Services as Perceived by Blind Students

N ^o	The area in which the problem is encountered	Responses on the level of the Problem												
		4		3		2		1		Unfilled		Total		M
		N ^o	%	N ^o	%	N ^o	%	N ^o	%	N ^o	%	N ^o	%	
1.1	Obtaining Braille books	20	100	-	-	-	-	-	-	-	-	20	100	4.00
1.2	Using Braille books	5	25	5	25	3	15	7	35	-	-	20	100	2.4
2.1	Obtaining Braille writer	15	75	5	25	-	-	-	-	-	-	20	100	3.75
2.2	Using Braille writer	3	15	7	35	1	5	9	45	-	-	20	100	2.2
3.1	Obtaining slate and stylus	17	85	-	-	1	5	2	10	-	-	20	100	3.6
3.2	Using slate and stylus	2	10	4	20	2	10	9	45	3	15	20	100	1.9
4.1	Obtaining tactual map and globe	20	100	-	-	-	-	-	-	-	-	20	100	4.00
4.2	Using tactual map and globe	11	55	-	-	4	20	4	20	1	5	20	100	2.9
5.1	Obtaining abacus and counting frames	18	90	2	10	-	-	-	-	-	-	20	100	3.9
5.2	Using abacus and counting frames	9	45	4	20	4	20	3	15	-	-	20	100	2.95
6.1	Obtaining measuring devices	20	100	-	-	-	-	-	-	-	-	20	100	4.00
6.2	Using measuring devices	8	40	3	15	3	15	6	30	-	-	20	100	3.05
7.1	Obtaining auditory aids such as cassettes, tape recorders, and recorded books	18	90	2	10	-	-	-	-	-	-	20	100	3.9
7.2	Using auditory aids such as cassettes, tape recorders and recorded books	4	20	6	30	3	15	7	35	-	-	20	100	2.45
8	Mobility and orientation	9	45	6	30	1	5	3	15	1	5	20	100	3.10
9	Library services	13	65	4	20	2	10	1	5	-	-	20	100	3.00

According to the data in table 5, the blind students encounter serious problems in obtaining the materials, equipment and the services considered. The mean values of the intensity of the problem in procuring the materials and equipment range in between 3.6 and 4.00. All (100%) of the respondents have indicated that they face serious challenges

in obtaining measuring devices, tactual maps and globes. Ninety percent of the respondents reported that they face serious difficulties in securing abacus and counting frames and auditory aids Braille writer, and slate and stylus. Eighty five percent and 75% of them have reported that they have serious difficulties in obtaining slate and stylus and Braille writer respectively. As it could be easily noted from the table, 85% of the students have reported that they encounter moderate to serious challenges in getting library services.

It is also clear from table 5 that contrary to what has been discussed from the table, the students have by far less difficulties in using the materials and equipment than obtaining them. The mean values of the difficulties in using the materials and equipment range between 1.9 (Using Slate and Stylus) and 3.05 (Using measuring devices). More than half (55%) of the students have described they have slight difficulties in using Slate and Stylus, but only 45% of the students have reported that they have difficulties ranged from little to very little in using measuring devices.

The respondents have listed several particular problems faced in obtaining and using the materials, equipment and services under consideration. Among the problems some are the following.

- Most of the materials and equipment are not available in the sample school. Some students even do not know some of the materials and equipment like abacus and counting frames. Most of the services mentioned are not rendered in the school. Even those services which are available in the school are highly unsatisfactory.
- The majority of students are economically too poor to purchase the materials and equipment by themselves. In addition, most of the materials and equipment are not manufactured in the country and are not easily obtained.
- Even if some blind students are able to possess tape recorders and cassettes, teachers are not willing to let the students record what they teach in the class.
- The students experience a number of problems in using the school library. There are few classroom textbooks and reference books made available in the form of

Braille books. The situations in the library are not convenient for blind students. There are no special rooms for them. The class is too narrow to accommodate all students including the blind. There are no adequately wide gaps between the rows of tables to give free access of movement between the rows. The library is not furnished with necessary materials such as tape recorders, talking books, functioning electric sockets etc.

In order to overcome the challenges, the students have made the following proposals.

- The school has to ensure the availability of the materials, equipment and services including resource room services and guidance and counseling services.
- The government must make necessary arrangements so that the materials and equipment will be produced in the country. This would maximize the supply of the materials and equipment.
- Blind students should be supplied with the materials and equipment and should be allowed to use them whenever and wherever the materials are needed.
- The library must be widened and furnished with all necessary materials and equipment for both blind students and sighted students. It must have special rooms for blind students.

The students were asked whether they have taken any trainings in some areas which are highly related with their teaching-learning processes. They were also required to mention the school or the center at which the training was offered. The results are presented in table 6 below.

Table 6- Provision of Trainings in Some Areas and the Training Centers

N ^o	The area in which the training was offered	Responses of the Students									
		Yes						No		Grand Total	
		At Soddo		At Bakko		Total					
		N ^o	%	N ^o	%	N ^o	%	N ^o	%	N ^o	%
1	Braille use and its sets	14	70	1	5	15	75	5	25	20	100
2	Mobility and orientation	13	65	1	5	14	70	6	30	20	100
3	Daily living skills	5	25	1	5	6	30	14	70	20	100
4	Using tape recorder and cassettes	4	20	1	5	5	25	15	75	20	100
5	Using paper with raised lines	5	25	1	5	6	30	14	70	20	100
6	Talking books and other recorded materials	1	5	-	-	1	5	19	95	20	100
7	Using talking calculator	2	10	-	-	2	10	18	90	20	100

As it can be observed in table 6, a significant proportion of the students has got training in only Braille use and its sets (75%), and in mobility and orientation (70%). Thirty percent of the respondents have received training in daily living skills, in use of paper with raised lines, while 25% have trained to use tape recorder and cassettes. Only 5% of them said that they have been trained in using talking books and other recorded materials, and 10% had received training in using talking calculator.

Out of 15(75%) respondents obtained training in Braille use and its sets, 14(70%) took the trainings at Soddo School for the Blind. Again, out of 14(70%) of the respondents trained in orientation and mobility, 13(65%) obtained the trainings at the same school. Similarly, out of total 6(30%), 6(30%) and 5(25%) students took trainings in daily living skills, using tape recorder and cassettes and using paper with raised lines 5(25%), 5(25%) and 4(20%) respectively got the trainings at Soddo School for the Blind. Only 1(5%) of the students took the trainings in each area considered, except in talking books and other recorded materials and in using talking calculator, at Bakko School for the Blind.

In reaction to a question asking the respondents whether they favour segregation or integration with sighted students in carrying out their learning activities, 70% favour integration and 30% prefer segregation. Both of the groups gave their own rationales supporting their views. The supporters of integration contend that it improves the development of social skills of blind students. It creates a fertile ground for active social interactions between the sighted and the blind students. Thereby it produces effective friendship between the two groups. It also helps blind students gain academic support from the sighted ones. As there are few Braille books in the school, sighted students assist their blind mates to read and explain texts from regular textbooks. Moreover, integration offers psychological strength to blind students.

Supporters of segregation, on the other hand, argue that when blind students learn in a separate class, they do not disturb other students, and at the same time, they are not disturbed by the disruptive noises of sighted students. Segregation would also improve the attention given to blind students by concerned bodies and would increase the chances of blind students in obtaining all disability-specific materials and equipment. A teacher will again give equal attention to all students in the class and treats them well accordingly.

The blind students were required to express the impact that blindness places on their self image and self-confidence, and the majority of them have replied that it doesn't have any marked effect. A few of them, however, implied that it diminishes their self-value and self-confidence as it restricts them from several visual tasks.

The students have finally forwarded the following general suggestive comments.

- The feelings of general society towards the blind should be changed through uninterrupted awareness creation programs.
- Concerned bodies should make their ultimate efforts to solve the overall problems of blind students.
- Intensive and extensive researches should be conducted on various challenges of blind students and their findings must be implemented.

4.1.2. Data Obtained through Teachers' Questionnaire

It is mentioned earlier that a questionnaire filled by regular teachers of integrated classes is also used to collect data on challenges of blind students in diverse educational sectors. The questionnaire has more or less similar contents with the questionnaire filled by blind students. The outcomes are presented in the next immediate sections.

Table 7 - personal Information of Teachers of Integrated Classes

Age (in years)	N ^o %		Sex	N ^o %		Educational Level	N ^o %	
	N ^o	%		N ^o	%		N ^o	%
30-35	5	20	M	24	96	12 + 4	18	72
36 -40	6	24	F	1	4	12 + 3	3	12
41 - 45	8	32	Total	25	100	12 + 2	4	16
46 - 50	3	12				Total	25	100
51 - 55	3	12						
Total	25	100						

The data in table 7 demonstrates that the ages of the participating teachers range between 30 and 55 years. More than half (N = 14, 56%) of them are in the age range of 36-45 years, out of which 8(32%) are in the age range of 40-45 years. There are 24(96%) male and one (4%) female teachers. As to the educational background, all of them fall in the range of 12⁺² and 12⁺⁴. Majority of them, 18(72%), have 12⁺⁴ education.

Table 8, Work Experience of the Teachers

Service in year	Teaching only regular students		Teaching integrated students		Any other service		Total service	
	Nº	%	Nº	%	Nº	%	Nº	%
1-5	3	12	11	44			-	-
6-10	8	32	9	36	*1,1**	4,4	2	8
11-25	5	20	2	8			4	16
16-20	6	24	2	8			7	28
21-25	3	12	1	4			6	24
26-30	-	-	-	-			3	12
31-35	-	-	-	-			2	8
36-38	-	-	-	-			1	4
Total	25	100	25	100			25	100

Key * One teacher who has special training in special education has 6 years experience of teaching segregated blind students.

** One teacher has 8 years experience in administrative work.

Regarding their work experience, all of the teachers have taught only regular students at sometimes and integrated students at other times. Their experience of teaching regular students runs between 1 and 25 years. Nearly half (N = 13, 52%) of the teachers have 6-15 years experience of teaching regular students. Twenty (80%) of them have 10 and below 10 years experience of teaching integrated students. Out of these 11(44%) have taught this kind of students for 5 years or less.

Only 2(8%) teachers have rendered services other than teaching regular students and integrated students. One of them had taught segregated blind students for 6 years, and the other was involved in administrative work for 8 years.

The total service years of the teachers range between 6 and 38 years. Approximately half (N =13,52%) of them have 16-25 years of teaching experience. Only 1(4%) of the teachers had 38 service years.

Table 9 - Special Training in Special Education

Responses			Type of Training
	Nº	%	
Yes	1	4	Methods of teaching blind students
No	24	96	
Total	25	100	

Of the total participating teachers, only 1(4%) has taken special training in special education, particularly about methods of teaching blind learners.

Table 10 - Educational Problems in terms of Learning Environment as Perceived by Teachers

Nº	The area in which the blind students face problems	Responses on the Level of the Problems												
		4		3		2		1		Unfilled		Total		M
		Nº	%	Nº	%	Nº	%	Nº	%	Nº	%	Nº	%	
1	Sitting position in a class	10	40	9	36	2	8	2	8	2	8	25	100	3.17
2	The height and surface of desks and chairs	7	28	10	40	7	28	1	4	-	-	25	100	2.92
3	Arrangement of materials in the class	18	72	5	20	1	4	1	4	-	-	25	100	3.6
4	Familiarizing oneself with classroom situations	15	60	6	24	2	8	2	8	-	-	25	100	3.36
5	Obtaining assistance from sighted classmates and teachers	12	48	9	36	3	12	1	4	-	-	25	100	3.28
6	Sound conditions in the learning environment	9	36	9	36	5	20	2	8	-	-	25	100	3.00
7	The conditions of school buildings and open spaces between various blocks, rooms and other areas	15	60	5	20	2	8	3	12	-	-	25	100	3.28

Table 10 gives information that is similar to the responses given by blind students, the target group of the study, the teachers have indicated that the students encounter more than moderate problems in every item considered. 92% of the teachers have replied that the students bear problems falling between moderate and serious in terms of movement in a classroom as a consequence of furniture in the classroom. In the same manner, 84% of respondents have stated that the students experience moderate and more difficulties in familiarizing themselves with various classroom situations. Similar difficulties have been reported in terms of dealing with challenges stemming from conditions of school buildings and other significant areas in the school compound by 80% of the participating teachers. Even 76% of the teachers have reported that the students encounter serious difficulties due to noises in the learning environment. The data in table 10 suggested that the teachers perceive that the blind students confront severe educational problems in terms of learning environment.

The teachers have further discussed the specific challenges encountered by the blind students in terms of learning environment. The challenges are almost similar with those presented by the students themselves on the same issue. Anyhow, some of them are stated as follows:

- The sitting positions of some blind students do not suit their personal conditions. For instance, some of them have their seats at the back of the class. There is also a lack of suitable chairs and desks in each classroom. Sometimes the existing chairs and desks of blind students are taken away by sighted students.
- There is a serious problem in terms of the arrangement of tables, desks and chairs in the classroom. In most classrooms, these materials are not arranged in an orderly manner and tend to prevent easy movement of the students in the class.
- The students do not gain adequate support of verbal explanations from their sighted mates and teachers so as to help them familiarize themselves with the school situations both outside and inside the classroom.

- The students suffer from consistent disruptive noises resulting from crowded and ill-disciplined students.
- The layout of the school causes a lot of mobility problems to blind students. Nearly similar details that were given by the blind students are also given by the teachers.

In solving the problems faced in terms of learning environment, the teachers have made many useful suggestions.

- The seating arrangement of blind students should be given due attention. It is advisable to have them sit on front desks with sighted classmates. Their desks and chairs should be kept at constant places.
- Tables, desks and chairs in classrooms have to be arranged in such a way that they meet the educational needs of blind students. There must be sufficiently wide paths between the rows of desks, and the desk arrangement must remain the same at all times. Students must be informed when it is changed.
- The blind students ought to be integrated into only a few classes which are easily accessible. The number of students in such classes has to be reasonably small and healthy classroom discipline has to be ensured. Any source of disturbing sound either from inside or outside of the classroom must be eliminated.
- The school has to make its maximum effort to encourage teachers and sighted students to give all necessary explanations of classroom or external environment situations to the blind students. Regular guides who familiarize the blind students with school situation specially when the students join the school, could be assigned by the school, perhaps with a little payment.
- Attempts have to be made by the school to make the toilet room, library, teachers' offices and other important sites be easily accessed by the students. Alternative toilet room and library could also be built for blind students. Providing continuous mobility and orientation trainings for the students would be helpful.
- The students should be educated in separate special school or classrooms

The challenges that blind students experience in terms of curricular contents and the ways they are presented, as perceived by the teachers, are presented in table 11.

Table 11- Problems of Curricular Contents and their Presentations as Perceived by Teachers

Nº	The area in which the problem is encountered	Responses on the Level of the Problem												
		4		3		2		1		Unfilled		Total		M
		Nº	%	Nº	%	Nº	%	Nº	%	Nº	%	Nº	%	
1	Learning curricular contents of regular (sighted) students	13	52	4	16	2	8	3	12	3	12	25	100	3.22
2	Learning disability specific contents													
	a) Using Braille	10	40	9	36	4	16	5	20	-	-	25	100	3.2
	b) Use of slate and stylus	8	32	5	20	8	32	3	12	1	4	25	100	2.75
	c) Tactual activities	7	28	7	28	3	12	6	24	2	8	25	100	2.65
	d) Learning listening skills	11	44	4	16	3	12	7	28	-	-	25	100	2.75
3	Learning abstract ideas, concepts of colour and spatial relationship	15	60	8	32	1	4	1	4	-	-	25	100	3.48
4	Getting accurate information from teachers	12	48	10	40	2	8	1	4	-	-	25	100	3.32
5	Working on and getting ready for													
	a) exams	14	56	8	32	2	8	1	4	-	-	25	100	3.4
	b) tests	11	44	10	40	2	8	1	4	1	4	25	100	3.3
6	Interacting with teachers and sighted students both inside and outside the classroom	10	40	10	40	4	16	1	4	-	-	25	100	3.12

Table 11 reveals that the teachers seem to perceive that the blind students confront substantial challenges in every item of curricular content considered and the way it is delivered to the students. More than 50% of the teachers argue that the students face moderate and serious difficulties in all the aspects taken into account. To mention some instances, 92% of the teachers have indicated that the students meet moderate to serious problems in learning abstract ideas, concepts of colour and spatial relationships. Eighty-eight percent of the teachers have reported that the students experience similar difficulties in getting accurate information from teachers, and 80% reported still similar difficulties in interacting with teachers and seeing peers both inside and outside the classroom.

Similar reports on the degree of the problems in dealing with the issue of exams and tests have been made by 88% and 84% of the teachers respectively.

Yet 52% of the teachers have held that the students deal with problems in the range of moderate and serious in using slate and stylus, an item identified to have the least challenges ($M=2.75$) of all the items raised here.

In response to the question which required teachers to specify the troubles that the students encounter in dealing with various curricular contents and their presentations the participating teachers have forwarded the following points.

- The students face profound challenges in obtaining disability-specific materials and equipment such as Braille books, Braille paper, talking books, tape recorder and cassettes, tactual maps, globes, diagrams etc. Regardless of this fact the students are reluctant to use tactual materials in a class when they have some.
- No program is designed by the school to help the students develop their listening skills.
- The majority of teachers are not efficient enough to give adequate and effective verbal explanations about what they present in the class, specially about visual pictures, diagrams, maps, charts etc. The teachers face more difficulties when they teach abstract ideas, colour concepts and spatial relationships, which are pretty difficult for blind students to understand. No facilities have been made in the school to aid the students to enhance their understanding of the issues.
- The students are not able to note the important points that teachers explain or write on the blackboard for lack of adequate verbal explanations.
- The students fail to make appropriate preparations for tests and exams since they do not usually get necessary books and notes as the result of the lack of special materials and equipment.
- The examiners (readers) often fail to understand personal problems of blind students that they do not read exam items properly for them. For example, they are usually unhappy to read slowly and repeatedly despite the fact that some questions

demand the readers to do this. This may also affect the psychological readiness of the students negatively.

- The students are deprived of their privileges to take progress tests. This might put an adverse impact on the subsequent learning activities of the students in that the students would refrain themselves from continuous revision of the contents covered.
- Most teachers and sighted students rarely treat blind students positively and this makes the blind students mistrust the teachers and students.

In addition to this, some personal behaviours of the blind students drive the teachers and sighted peers away from them. Most of them have such low self-esteem that they fear to approach their teachers and their sighted mates.

In overcoming the problems related with curricular contents and their presentations, the teachers have put forward several possible steps. The followings are worth mentioning.

- The students must be provided with necessary special materials and equipment which facilitate the learning of the contents. The materials and equipment include Braille books, Braille papers, talking books, tactile teaching aids like maps, diagrams, globes etc, tape recorders, cassettes, slates and stylus. Some of the materials and equipment need to be reserved in the school library. In the class, the students ought to be permitted to use cassettes and tape recorders to record the teachers' presentations.
- Teachers could include contents which develop the tactile and listening skills of blind students in their lessons.
- Teachers must be able to relate their classroom discussions with the authentic life experiences of blind students. They should also give intensive and extensive elaborations of the ideas presented through repetition and use of practical examples of real life situations.

- The school must ensure the existence of helping professionals like guidance counselor, and resource room teacher to render psychological support and remedial classes respectively to the blind students.
- Particular considerations must be given to blind students in evaluating their academic performances. Only items which fit their special conditions have to be included in their exams. Either efficient readers, particularly English language teachers, must be assigned for them or the exams/tests must be prepared in Braille and the students must read the exams themselves and write the answers in Braille.

Blind teachers can cooperate here to mark the exams/tests. Extra time must be allowed for them to work on the exams/tests. Their exam results should be given back as soon as possible as it is done to sighted students.

Teachers are often required to be frank, approachable and ready to hear, understand and accept personal problems of blind students. They must be helpful for them. They would arrange forum where the actual problems of these students are disclosed and discussed with other teachers, sighted students and other school community members. They can also facilitate opportunities to help blind students make regular contacts with others, for instance, including them in certain clubs. Anybody who meets blind students should tell his/her personal name immediately before he/she begins to talk to them.

Just like the blind students, the participating teachers have still rated the intensity of problems that the blind students deal with in various aspects of special materials and equipment. The results are put in table 12 bellow.

Table 12- Problems of Obtaining and Using Special Materials and Equipment as Perceived by Teachers

Nº	The area in which the problem is encountered	Responses on the Level of the Problem												
		4		3		2		1		Unfilled		Total		M
		Nº	%	Nº	%	Nº	%	Nº	%	Nº	%	Nº	%	
1.1	Obtaining Braille books	21	84	3	12	-	-	1	4	-	-	25	100	3.76
1.2	Using Braille books	10	40	5	20	8	32	2	8	-	-	25	100	2.92
2.1	Obtaining Braille writer	19	76	4	16	-	-	1	4	1	4	25	100	3.7
2.2	Using Braille writer	7	28	6	24	10	40	2	8	-	-	25	100	2.32
3.1	Obtaining slate and stylus	15	60	4	16	2	8	2	8	2	8	25	100	3.40
3.2	Using slate and stylus	6	24	6	24	10	40	1	4	2	8	25	100	3.78
4.1	Obtaining tactual map and globe	20	80	1	4	4	16	-	-	-	-	25	100	3.64
4.2	Using tactual map and globe	8	32	2	8	7	28	8	32	-	-	25	100	2.40
5.1	Obtaining abacus and counting frames	18	72	2	8	3	12	2	8	-	-	25	100	3.44
5.2	Using abacus and counting frames	8	32	2	8	11	44	4	16	2	8	25	100	2.78
6.1	Obtaining measuring devices	19	76	2	8	2	8	2	8	-	-	25	100	3.52
6.2	Using measuring devices	7	28	3	12	9	36	4	16	-	-	25	100	2.36
7.1	Obtaining auditory aids such as cassettes, tape recorders, and recorded books	21	84	3	12	1	4	-	-	-	-	25	100	3.80
7.2	Using auditory aids such as cassettes, tape recorders and recorded books	7	28	5	20	9	36	4	16	-	-	25	100	2.20
8	Mobility and orientation service	13	42	9	36	1	4	-	-	2	8	25	100	3.08

As to the data in table 12 suggests that similar to the students, the participating teachers have perceptions that blind students experience more difficult challenges in obtaining the materials and equipment under question than in using them. Eighty-four percent of the teachers have indicated that the blind students confront serious challenges in obtaining Braille books. Again 84% and 80% of them have indicated that the students face challenges with similar difficulties in obtaining auditory aids, and tactual map respectively. Seventy-six percent 72% and 60% of the teachers have reported challenges still with similar difficulty levels in obtaining Braille writer, abacus and counting frames, and slate and stylus respectively.

Regarding using the materials and equipment, the teachers reflect a view that the students face problems with mean values ranging in between 2.2 (using auditory aids) and 2.92 (using Braille books). Sixty percent, 48% and 40% of the respondents have

stated that the blind students have difficulties in the range of moderate and serious respectively in using Braille books, slate and stylus, and measuring devices.

In specifying the problems that blind students meet in terms of obtaining and using special materials and equipment, the teachers have listed a few recurrent points.

- The students have serious shortage of the materials and equipment. The materials and equipment are short not only in the sample school but also on the market.
- Even though some of the materials could be available, there are either no facilities to use them properly or no money to purchase them.
- The school does not have any proper interest to ensure the provision of the materials and equipment.
- There are no training opportunities to enable the students to utilize the materials and equipment. As the result, many blind students are not capable of using some of the materials and equipment, while others have no interests in using the materials.

In order to cope with the problems related to special materials and equipment the teachers have proposed the following measures.

- As much as possible, the school has to ensure the supply of the materials and equipment.
- The students must be provided with effective training that will enable them to use the materials and equipment. The students must also be continuously encouraged to use the available materials and equipment. Other than this, the reasons that the students are reluctant to make use of the materials should be investigated.
- Government needs to make optimum efforts in facilitating conditions to produce the materials and equipment within the country.

In responding to the question posed to the teachers to indicate whether they favour segregation or integration of blind students into regular classrooms, 16(64%) and 9(36%) of them have shown that they support segregation and integration of the students respectively.

The supporters of segregation contend that in special classes where only blind students are educated, teachers use teaching methods and procedures which fit the personal conditions of the students as they target only blind students. The teachers can understand their genuine personal and academic problems and go with the actual pace of the students in teaching. It can also minimize the number of students in each class and ensure the existence of conducive classroom discipline. More than this, it may widen the probability of obtaining necessary materials and equipment for the targeted students. It will still push the government to facilitate special trainings for a large number of teachers who teach persons with disabilities, including the blind and increase the number of their advocates.

In contrast with the above views, those teachers who argue in favour of integration have come up with their own pertinent justifications. In the first place, they say that it stops stigma and discrimination of the blind students. Besides, it helps the blind students gain academic and social assistance from the sighted students. Socially, the blind students can assimilate with the sighted students and thereby they develop effective social skills which help them make healthy social integrations with the general society. Academically, the sighted students may read notes from black boards or regular texts books for the blind students. They can also give them helpful descriptions of visual items both inside and outside the classroom. Moreover, integration improves the perception of blind students about their self-value and self-esteem. This in turn improves the self-confidence of the students.

The responding teachers were required to show if they have ever included concrete objects, tactile activities and field trips in the learning activities of blind students, and to rate their frequencies too. Accordingly, 40%, 32% and 16% of the teachers have replied that they include concrete objects, tactile activities and field trips respectively in the students' learning activities occasionally. Only one (4%) teacher has reported that he/she always includes concrete objects in the learning contents of the students.

The teachers believe that the -following measures would be successful in overcoming some of the educational problems of blind students though they are not able to implement them for either economical or professional restrictions.

- Offering short term trainings for teachers of integrated classes through regular workshops and seminars.
- Facilitating conditions that enable blind students to take physical education and natural science courses such as mathematics, chemistry, physics etc
- Arranging ways in which special materials and equipment are made available to the students.
- Reserving classroom textbooks and reference books in Braille in the school library.
- Conducting action researches on the real educational problems of blind students and implementing their findings.
- Rewarding outstanding blind students regularly.

Eventually the teachers have forwarded the following general remarks.

- Blind students should be provided with all necessary materials, equipment and professional services at all times.
- All school community members and other concerned bodies ought to coordinate to contribute their own shares for the overall well-being of blind students.
- Awareness creation orientations must be frequently offered to school community and general society about blind students to develop acceptable reactions towards the students.
- Pertinent researches have to be conducted on the academic and social challenges of blind students and their outcomes have to be put in to practice.

4.1.3. Data Obtained Through Observation

Five blind students (S_1, S_2, S_3, S_4 and S_5), one female and four males, were observed from March 23-30, 2004, three times each, at each of three different sites covertly. S_5 was, however, observed twice only in the class. The specific activities that each student

performed, the person with whom he/she performed the activities and the specific area at which he/she performed them were observed and recorded. The findings together with brief personal profiles of the participants are presented below.

S₁ - is a man who is 23 years old. He is from poor illiterate parents. He has been blinded by reflection congenitally.

S₁ sat in one of the corners in his classroom with his sighted classmates, one female and the other male all the three times he was observed in the class. He usually kept silent and did not participate in any of the group works while being observed. He talked a little. He was observed to pass most of his time with his blind classmate both inside and outside the school compound out of class hours. Sometimes he was also found to be alone doing some personal activities and occasionally talking with sighted classmates.

Look at the table below.

Key - A- in the school/compound (Break time)
 B- In the classroom
 C- Out of school compound (on the way to home).

Table 13- S₁'s Observation Result

	The date of Observation	Activities Performed	The Person with Whom the activities were performed	Specific areas where the activities were performed
A	23/03/'04	Talked	S ₂ + other blind student	in the class on his usual seat
	24/03/'04	Read	Alone	On his usual seat
	29/03/'04	Talked	S ₂	In front of his classroom
B	23/03/'04	Kept silent	Alone	On his seat
	24/03/'04	Kept silent + talked	Alone Female sighted student	On his seat
	25/03/'04	Read Braille book Kept silent	Alone	On his seat
C	23/03/'04	Went home talking	S ₂ + other sighted students	On the way home
	24/03/'04	Went home talking	One sighted students	On the way home
	29/03/'04	Kept silent Went home talking a little	S ₂	On the way home

S₂ - He is a man aged 25 years. Just like, S₁, he is from poor illiterate parents. He has become blind adventitiously from small pox. He sat on one of the front desks with one sighted female student all the time he was observed. He did not participate in any group works in the class while he was being observed. At times he was observed, he was usually involved in performing various individual activities while he kept silent. He was regularly seen talking with his close classmate, S₁. Moreover, S₂ was found to spend most of his time in his classroom during the school hours. He rarely talked with sighted students. The data is presented as follows.

Table 14 - S₂'s Observation Results

	The date of Observation	Activities Performed	The Person with Whom the activities were performed	Specific areas where the activities were performed
A	23/03/'04	- Talked	- S ₁ + another blind student	- In the classroom on S ₁ 's usual seat
	24/03/'04	- Read + talked	- Alone + another blind student	- On his usual seat
	29/03/'04	- Talked	- S ₁	- In front of his classroom
B	23/03/'04	- Turned his face to the wall - Kept silent	- Alone	- On his usual seat
	24/03/'04	- Read Braille book - Folded a piece of paper - Kept silent	- Alone	- On his usual seat
	29/03/'04	- Leaned on the desk - Kept silent	- Alone	- On his usual seat
C	23/03/'04	- Talked went home - Laughed	- S ₁ + other sighted students	- On the way home
	24/03/'04	- Went home silent	- Alone	- On the way home
	29/03/'04	- Went home talking	- S ₁	-On the way home

S₃ - He is a 16 years old boy. Like S₁ and S₂, S₃ is from poor illiterate parents. He is congenitally blind, but he did not specify the cause of his blindness. He attributes it to illness in general. On all the three occasions he sat on one of the middle desks of the middle rows with two sighted students. Similar to the preceding students, he did not participate in any group works in the classroom at the times he was being observed.

Unlike the two previous students, S₃ integrates well with sighted students. He was found to carry out the majority of his activities with sighted students. Although he refrained himself from group works, he actively participated in asking and answering questions in the class. Of course, he was observed doing some activities inside and outside the classroom alone. He used to spend his time outside the classroom during breaks. The data is presented below.

Table 15 - S₃'s Observation Results

	The date of Observation	Activities Performed	The Person with Whom the activities were performed	Specific areas where the activities were performed
A	25/03/'04	- Stood	- His sighted friend	- Around 9L section
	26/03/'04	- Talked - Played	- His another sighted friend	- Around 9L section
	29/03/'04	- Wandered in the school/campus	- His second sighted friend	- Different places in the school
B	25/03/'04	- Talked and laughed - Asked questions - Raised hand to answer question - Answered questions	- Classmates - Teacher - Alone	- On his seat
	26/03/'04	- Knocked at the desk - Leaned on the desk - Smiled, talked - Raised hands to answer and ask questions - Kept silent during group work	- Alone - His sighted classmates	- On his seat
	29/03/'04	- Turned back - Kept silent during group works - Leaned on the desk	- Alone	- On his seat
C	25/03/'04	- Went home silently	- Alone	- On his way home
	26/03/'04	- Went home talking - Held his sighted friend's hand	- One of his sighted friends	- On his way home
	29/03/'04	- Went home talking	- One of his sighted mates	- On his way home

S₄ - she is a girl who is 17 years old. Like S₁, S₂ and S₃, S₄ is from poor illiterate parents. She is adventitiously blind and attributes her blindness to unspecified illness. She was frequently seen doing her usual chores alone; however, she was not observed staying or performing any activity with other blind students. Rather she was found either talking or going home with a few similar sighted classmates frequently. Similar to the other students observed, she secluded herself from group discussions during all the three classroom observations. During the break times, she spent all her time in the classroom at all the three instances.

Table - 16 - S₄'s Observation Results

	The date of Observation	Activities Performed	The Person with Whom the activities were performed	Specific areas where the activities were performed
A	24/03/'04	- Read - Talked	- Alone - Her sighted female classmate	- On her seat
	29/03/'04	- Sat and leaned on her desk - Talked	- Alone - Similar classmate	- On her seat
	30/03/'04	- Read	- Alone	- On her seat
B	24/03/'04	- Covered her eyes + mouth with her hands - Kept silent	- Alone	- On her seat between two sighted classmates
	29/03/'04	- Talked a little language - Kept silent during group work - Asked and answered questions	- Alone - Her classmates (similar)	- On her seat between two classmates
	30/03/'04	- Covered her eyes and mouth with her hands - Talked a little - Laughed	- Alone - Her classmate (similar)	- On her seat between two classmates
C	24/03/'04	- Went home	- Alone	- On her way home
	29/03/'04	- Went home	- Alone	- On her way home
	30/03/'04	- Went home talking	- Her sighted female classmate	- On her way home

S₅ - Actually, he did not fill in the questionnaire, so it was impossible to find his satisfactory personal information. From his physical appearance, however, he is a mature adult man. He sat on a desk with broken surface near the door with one sighted student when he was observed. He often left the school before the break time so it was very difficult to follow up and observe his deeds in the school compound, and on his way home. Accordingly, only the data of two days' classroom observation is put below.

Table 17 - S₅'s Observation results

	The date of Observation	Activities Performed	The Person with Whom the activities were performed	Specific areas where the activities were performed
B	24/03/04	- Kept silent	- Alone	- On his seat
	29/03/04	- Kept silent - Talked a little	- Another blind student came from another section	- On his seat

From the data presented and the personal profiles of the student participants some general observations are noted.

- With the exception of S₅ whose full personal profile was not procured, all the students who took part in the observation are from poor illiterate parents.
- None of the participants took part in any group work in the classroom at the times they were observed.
- The majority of them seemed to prefer doing their routine tasks, either alone or with other blind students.
- The greater proportion of the sample students tended to stay in the classroom at break times.

In addition to the formal observation of the targeted 5 sample students in 4 distinct sections, some informal visits were made to some other integrated sections and other significant areas such as the school library, toilet room, and teachers' offices. The manners exhibited by blind students inside and outside the school territory in general

and the overall layout of the school compound were roughly surveyed. The outcomes are briefly discussed below.

The difficulties reported by the blind students and the teachers were found to be true. The setting in most classrooms do not promote effective teaching and learning processes and restricted free movements of the blind students.

The blind students are distributed in various sections of their respective grades. In each section their number varies from 1 to 4. In most sections, more than one blind students are integrated and in most cases the blind students sit together. In the classrooms, most of the students were visited not using any of the disability specific materials and equipment, may be due to shortage of the materials or lack of personal interest to use them. Even outside the classroom, most of them were usually staying or going in groups of two or more.

The general layout of the school compound does not meet the special demands of blind students. In the first place, the majority of routes in the school are narrow and covered by parallel bushy plants. Many of them are hilly that they cause difficulty to move through. The blocks of school library, most teachers' offices and some learning classrooms specially of grade 9 sections, are situated at inaccessible places. The setting inside the school library also has innumerable difficulties similar to the learning classrooms. It is narrow and highly crowded with tables and chairs. It seems pretty common even for sighted students to turn back because of the shortage of seats in the library. The library does not have any special room/service for blind students.

The toilet room is located at distant area from the classrooms and it is not easily accessible. It takes the blind students a long time to get there. Besides, it is not kept clean. Some of its rooms are covered with accumulation of faeces and other waste materials. In general, the terrain of the school compound along with the conditions of various buildings is not convenient to be used by the blind students.

4.1.4. Data Obtained through Interviews and Focus Group Discussions

It is already stated in the methodology part of the paper that interviews with the school principal and with the school librarian, and focus group discussion with 8 sighted students were administered to gather data on various educational aspects of blind students.

According to the school principal, Ato Ambessu Halabo, who is a 38 years adult man holding Bachelor Degree in History, blind students confront the following pertinent difficulties in dealing with their educational careers.

- They have neither classroom textbooks nor reference books in the form of Braille books on their hands. They have very few such books on very few subjects in the school library.
- They do not have any regular assistants to help them with routine classroom chores or to guide them both inside and outside the school compound.
- There are several flexible objects in the school compound. The students, thus, can not have any fixed image of the objects. The objects sometimes become obstacles to free mobility of the students.
- When curriculum change is made appropriate attention is not given to blind students.

The principal has explained that regardless of the above problems, there are some bright blind students in the school. There are also some students who secure material and financial support from certain charity organizations.

In reacting to the question asking him to suggest possible solutions to the already stated problems, Ato Ambessu has proposed the following few general points.

- The government has to either assign sufficient money to fulfill the educational needs of blind students or supply the students with all necessary materials and equipment.

- The government should give due consideration to blind students when curriculum changes take place.
- The government has to assign helping professionals to blind students.

A question was raised to the school director whether the school has made any efforts so that the government takes the mentioned measures or the problems are alleviated in any other means. The director has explained that the school has made very limited efforts because of limited financial capacity. The few efforts include:

- Making frequent requests to Ethiopian National Blind Association to obtain Braille books.
- Planning to prepare project proposal requesting construction of new and separate library for blind students and submitting the proposal to some charity organizations.
- Mobilizing the school teachers to include blind students in various clubs run in the school.

The school does not have any resource room and guidance and counseling services for blind students. On the necessities of the services in enhancing the educational activities of the students, the principal has admitted that resource room services are not properly known by the school. So, the school has never had any thought of it. Nevertheless, he has expressed that the school needs guidance and counseling service highly not only for blind students but also for sighted students. He also reported that the school has made frequent requests for concerned bodies to assign a professional counselor to the school, but it has not got any positive response for a long time. Recently, some volunteer teachers render the services when the need arises.

The principal still did not hide the fact that the school did not make any attempts so its teachers get any special trainings in teaching blind students. One sighted teacher has got special training on teaching blind students and has knowledge of using Braille and its set. This teacher has transferred to the school not by the request of the school; but on his own accord. In sum, the school director has a view that although blind students face

numerous educational problems in the school, the school has made very limited efforts to overcome the problems because of financial constraints.

The school librarian, Ato Amsalu K'unno was another person interviewed about the problems. Ato Amsalu is a young man of 26 years age. He holds diploma in Library Science. He has reported that he does not have any special training in serving persons with disabilities, including the blind.

Ato Amsalu has clarified that blind students meet a quite number of problems in using the library.

- There are no adequate Braille books in the library. Totally, there are only English and Civics classroom text Braille books for grades 9-12, one copy each. There are no reference Braille books at all.
- There is no special room for the blind students in the library.
- The blind students are not much interested in using the library. It seems that there are students who have never entered the library.

The professional has proposed the following measures to alleviate the problems.

- Special library should be built for blind students.
- Braille textbooks and reference books, along with other special materials and equipment have to be made available in the library.
- The students must be offered awareness creation orientations about the use of library.
- The students must be rendered consistent counseling services on effective study techniques and use of library.

The librarian has stated that he has made continuous requests to the school at least to make any possible effort to initiate the concerned bodies to ensure the provision of

Braille books and other fundamental specialized materials and equipment However, no positive response has been obtained so far.

A group discussion was held with 8 sighted students. The panelists of the discussion have listed the following practical problems encountered by blind students both inside and outside the classroom.

- Blind students are not able to take notes from classroom lectures.
- They have a serious problem of shortage of Braille books and Braille papers.
- They are not able to understand fully certain ideas presented through maps, diagrams and pictures.
- There are teachers who do not take blind learners into consideration while they are teaching.
- Most of them have acute financial difficulties.

The participants of the discussion again explained that the majority of the teachers do not use any special methods in teaching to help blind students. A few teachers, however, give special considerations to blind students and use some effective techniques to make their ideas clear to the students. This minor group of teachers feels sympathy to the students and usually develops acceptable reactions towards them both inside and outside the classroom.

Regarding the interaction between the sighted students and blind students, the panelists have expressed that the interaction varies greatly. They have stated that there are some sociable blind students who interact with their sighted classmates actively. On the other extreme, there are some silent blind students who usually remain aloof or hardly interact with sighted students. The same fact might also hold true with sighted students i.e. there are some active and cooperative sighted students who often strive to treat warmly and help the blind students. There are sighted students who have negative attitudes towards the blind students.

The majority of the group members have great doubts about the attitudes of the blind students toward the sighted students and the teachers. The members tend to view that the students have unfavourable feelings towards most of their teachers and towards the sighted students on the whole. They usually go with other blind students and this is a possible indication that they have disfavour towards the sighted students. Similarly, some of the panelists said that they sometimes heard blind students complaining against most of their teachers. This is a potential evidence that the students have unacceptable reactions towards the majority of their teachers.

On the issue of integration of blind students, the views of the participants of the focus group discussion vary much. Five of them support their integration but the rest 3 of them oppose it. The supporters of the system reason out that it promotes the development of social skills of blind students. In addition, it creates a conducive environment where blind students are assisted by sighted students in carrying out some visual academic activities in the classroom and out of the classroom as well. The opponents of the move, on the contrary, hold that in the integrated classes regular teachers do not consider the problems of blind students, so it would be more beneficial for the blind students if they are segregated. This will result the teacher to verbalize the information being presented. The teachers would use effective techniques and procedures in presenting abstract ideas and pictorial representations. Still they say that there are no well qualified teachers who teach in integrated classes. Therefore, each group advocates one of the classroom forms backing up its advocacy with pertaining reasons.

The data secured from different individual and group subjects of the study have been presented and analysed in this section. The next section discusses the relationship among the data obtained from various sources and draw some substantial inferences from them.

4.2. Discussions

In this section the data gathered from diverse subjects of the study are discussed by relating these various sets of data. The secondary data obtained from literature review are also included to enrich the discussions. The data collected through the questionnaire filled in by blind students serve as baseline data against which the discussions are made. The data secured through other instruments and through the review of related literature are administered to backup ideas reflected in the students questionnaire. Thus, the data presented in each important part of the students' questionnaire are followed by wide discussions and some related inferences reflecting the researcher's insight of the ideas. The discussions attempt to address the basic research questions stated in the introductory part of this research paper.

To commence with the problems faced in terms of learning environment, the blind students have indicated that they experience a large number of severe educational problems in the area. As table 3 indicates, in all the issues considered, the students face difficulties ranging between about moderate ($M=2.8$) and serious ($M=3.6$). Nearly similar reports have been made by the teachers who participated in the study. The teachers have also pointed out that the students have approximately moderate and more than moderate difficult problems in terms of items regarded (Look at table 10). Moreover, both of the responding students and teachers perceive the students to experience the most severe challenges in terms of classroom arrangement. Besides, all (100%) of the students have reported that they encounter moderate and even serious challenges in terms of obtaining appropriate verbal explanations and assistance from sighted students and teachers. Ninety percent and 65% of the blind students had similar reports in arrangement of classroom materials and in students' position in the classroom respectively.

The blind students and the teachers made to fill in the questionnaires have reflected more or less the same ideas in specifying the problems that blind students encounter in the learning environment.

First of all, they have reported that the arrangement of the furniture and other materials put the blind students at a great disadvantage. The chairs and desks in each classroom are highly crowded due to the large number of students. There are no adequate open spaces that enable both the blind and the sighted students to travel through the spaces easily. The desks cause the students big difficulties even to get into or out of their usual seats. The surfaces of the desks are not wide enough to accommodate all the stationery used in the class. Also some of the desks are partially broken and the students are afraid to use them. The disruptive sound produced by the huge number of students in the class and other sources in the surrounding also hampers the learning activities of the blind students. The findings of this study agree with Best's (1992) suggestion that the seat at which the blind student is positioned in the classroom has a considerable effect on the learning process of the student. If the position exposes him/her to conditions which prevent him/her from following lesson attentively, his/her learning is more likely to deteriorate.

The blind students have clearly pointed out that most of their teachers and sighted peers are usually unwilling to help them by giving fruitful descriptions and explanations of the classroom and surrounding situations. The possible cause for this lack of assistance from their teachers, and specially from their sighted classmates is the social problems the blind students have. Sack and Rosen (1994) hold that lack of vision restricts the ability of the blind to interact appropriately with others, including their sighted classmates. As the result, many of them are rejected by their seeing peers. Smith and Luckasson (1995) also state that negative experiences with peers during the school years had contributed to characteristics which are often attributed to people with severe visual impairment; social immaturity, self consciousness, isolation, passivity, withdrawal and dependency. Therefore, the sample students might exhibit any of the listed behaviours and consequently lack acceptance and assistance from their teachers and sighted classmates. The negative attitudes that some teachers have towards the mainstreaming of blind students might limit their interest in helping the students and giving ample explanations and descriptions of classroom situations.

The blind students and the teachers took part in responding to the questionnaire have indicated that the blind students encounter innumerable serious challenges in terms of the school layout in general and in terms of the placement and other related conditions of its buildings and other essential areas embracing library, latrine, classrooms and offices of certain teachers. The routes in the school on the whole cause a severe mobility difficulty to the blind students. The majority of them are covered by thick bushes. The essential areas of the school are situated at sites that are not easily accessible and blind student go through a lot of hardships to reach them. The outcomes of the researcher's rough survey of the school compound situations ascertain the reports of the teachers and the students. In favour of this view, Best (1992) says, "open spaces are usually... difficult to understand and to travel through". (P. 63).

The blind students and the teachers suggested measures to for overcoming the problems faced in the learning environment.

The position of the students and the way furniture arranged in the classroom must be given particular attention. The child's work position has to enable him/her to work without strain. The heights of the chair and desk and the surfaces of the desks must allow the student to work comfortably. The furniture must be arranged so as to provide wider free routes between the rows of desks to allow blind students to walk easily through them. In relation with these issues, Best (Ibid) still states that the height of the chair and the desk has to enable the child to place his/her feet on the floor and to bend over the desk without stretching. He still argues that the work surface need to be larger than usual to offer ample space to arrange large Braille writing equipment, Braille books and tactile diagrams. "It can... be helpful if a child with visual impairments has simple routes to travel between desks. "(P. 71). As it is mentioned earlier this is a highly difficult issue to ameliorate easily because of the large number of students in each class of the sample school, but the teachers and the students have proposed the following measures to be taken.

The students and the teachers have forwarded that blind students should be integrated into only a few regular classes in which reasonably small number of students are taught. In these classes, the problem of disruptive sounds, a vital variable thwarting effective learning, is minimized and better learning is realized by blind students. "Totally blind children ... will use listening as an important source of information. The sound environment therefore needs controlling and the child may be best helped in a position where he/she can hear the teacher very clearly and work with a minimum of distracting sounds" (Best, 1992: 71-72). When the disruptive sound in the classroom is appropriately controlled more likely it realizes effective classroom discipline.

The students and the teachers, supported by Gearheart et al (1988), have shown that sighted students can play vital roles in assisting blind students by orienting them to classroom situations orally. They can give detailed verbal descriptions of various items available in the class. They can direct them to exploit the relative position of each item with respect to the other items. They can offer them continuous helpful elaborations of new changes in the class and out of the class as well. The principal of the school also shares this view as one possible step to solve educational problems of the students.

Making the particularly important school settings including library, latrine, learning classrooms, teachers' offices and play grounds easily accessible is another measure proposed by both the blind students and the teachers participated in the study. They also suggested that alternative latrine and library should be built for the blind students, constructing a separate library, was similarly proposed by the school librarian as a means of lowering the students' library disadvantages. The teachers and the students still forwarded mobility and orientation training as a potential successful measure in reducing the student problem connected with mobility. Hill (1986) cited in Smith and Luckasson (1995) confirms the need of the training saying that mobility and orientation training is a demanding issue which plays a significant role in assisting the blind to move around safely and independently. Despite this fact there is no such training in the sample school for the main possible reason that there is no professionally qualified

person to offer the training. The little attention given to blind students by the school is another suspected rationale for the unavailability of the training.

To summarize, the participating teachers and blind students have pointed out that the students undergo various difficulties in learning environment such as in terms of sitting position, conditions of classroom furniture and its arrangement, familiarizing themselves with the classroom situations, sound conditions in the learning environment and significant school settings, big buildings and wide open spaces. They have also recommended that the students should be positioned at places, and on chairs and desks that ensure their effective learning. The furniture must be arranged in such a way that the students can easily move through them and explore the whole class. The learning environment should be with distraction-free sounds. The school building containing the significant settings and the open spaces should be easily accessed etc. The view of the students and the teachers are backed up by views of other subjects of the study and ideas of some authorities in the field.

According to data portrayed in tables 4 and 11, the teachers and the blind students involved in responding to the questionnaires have implied that the blind students face not less challenges in terms of curricular contents and their presentations than in terms of learning environment. In the majority of the items considered in both the students' and teachers' questionnaire, the mean values of the extent of the difficulty of the items are computed to be about moderate and more than moderate. In the table prepared on the students' responses, for instance, the mean value of difficulties of working on and getting ready for exams and tests is calculated to be 3.8 and 3.89, of learning abstract ideas, concepts of colour and spatial relationship is found to be 3.5. The corresponding mean values for similar items in the teachers' questionnaire are 3.4, 3.3 and 3.48 respectively, still big values running between moderate and serious difficulties in dealing with the items. Regarding the proportions of subjects rated great difficulties in handling the items, 80% and 85% of the students have replied that they undergo serious difficulties in dealing with the works of final exams and progress tests respectively. Ninety percent of the students have reported that they have difficulties in the range of

moderate and serious in learning abstract ideas, concepts of colour and spatial relationships. Similarly, 92%, 88% and 84% teachers have reacted that the students experience challenges in similar range in learning abstract ideas, concepts of colour, and spatial relationship; in working on and getting ready for final exams; and in working on and getting ready for progress tests respectively. In learning tactual activities, an item with the least mean value of difficulty level ($M=2.4$), yet 50% of the students have indicated they encounter moderate and serious difficulties. In learning the activities, 65% of the teachers have reported that the students deal with challenges with the same level of difficulty.

Both the students and teachers have assigned relatively a little difficulties to using slate and stylus and learning listening skills. This could be because these activities are continuously applied by the students that they can easily master them.

In the specification of the problems they meet in curricular contents and their presentations, the blind students have reflected that they suffer a lot from having no adequate understanding of issues which need the application of visual channels. Most of them blame their teachers for being inefficient in making coherent presentations of the issues. The students also attribute some of the difficulties to lack of tactual teaching aids like tactile maps, globes, diagrams, tables and pictures. Besides, the students, supported by the participating teachers, have identified their inability to take notes from classroom lectures and to participate in group work as a key hindering factor for efficient understanding. Both the students and teachers hold that distracting noises interfering with the teachers' presentations exacerbate the students' understanding of the points presented. The actual observations made to the integrated classes of the sample school by the researcher prove some of these facts. For instance, the researcher found none of the observed students participating in group work or taking notes from lecture in the classroom. No tactual aid is available in the school too.

In line with the presentation of subject matter, Gearheart et al (1988) say that the information presented should be accurate and teachers have to avoid visual expressions

which cannot be understood by the students. The understanding of the point presented should be frequently checked by raising relevant questions in the middle or at the end of the discussion. Nevertheless, during the observation, no teacher was seen asking questions targeted at checking blind students' real understanding of the concepts discussed. This could be due to lack of orientation about teaching integrated blind students or lack of interest to do so altogether.

The students and the teachers have also maintained that the students encounter remarkably severe challenges in obtaining special materials and equipment, which enhance the learning tasks of curricular contents of regular students. The students, the teachers and the school director have reported that the students barely have classroom textbooks and reference books prepared in the form of Braille books. The school librarian has also confirmed their views that there are very few textbooks in Braille reserved in the school library. The students revealed that they have a critical shortage of Braille papers, tape recorders, cassettes, stylus and slate etc, and without these they cannot have easy access to the curricular contents of sighted students. Gearheart et al (1988), in their discussions have implied that without having adapted educational materials and equipment, it is quite difficult for blind students to access the curricular contents of regular students.

The students and the teachers have indicated in data presented in tables 3 and 8, and in their discussions following the tables, that the students experience a wide range of serious problems in dealing with final achievement exams and continuous assessment tests. They stated that blind students do not procure sufficient textbooks, reference books and ready notes to get ready for the exams and tests. Usually they are not able to cover all the items of the exams and tests within the allotted time. The students have reported that usually inefficient readers who are often unwilling to do the reading properly are assigned for them. Some items do not consider special needs of blind students that the items demand the application of visual avenue. Most of the time, they are excluded from continuous assessment tests. They usually collect their exam papers later than their sighted classmates.

The blind students of the sample school and most likely of other similar schools are made to learn similar curricular contents with their sighted counterparts except that they are exempted from natural science courses and physical education. This directly opposes the ideas of some educators like Ysseldyke and Algozzine (1995) and Best (1992) that the curriculum of blind learners demand some modifications and adaptations in terms of both contents and teaching approaches to meet their special needs. and curricular areas like natural sciences, maths, art and craft and physical education should be indispensable parts of its contents. Emphasizing the drawbacks of lack of physical education exercises, Best (1992) states, "If children lack access to a full program of physical education activities and are also unable to monitor their activities in relation to other children clearly, then they will have difficulties with posture which can affect their comfort while working, health and appearance." (P. 69)

Though Gearheart et al (1988) strongly argue that concrete objects, tactile activities and field trips should be important component elements of the main contents of blind students' daily lessons, the majority of responding teachers have not denied the fact that they do not include these issues in the usual learning activities of the students. A small portion of the teachers have indicated that they include the items very occasionally. This problem has also a great propensity to make its own outreaching contribution to the challenges that the students encounter in various educational areas.

Best (1992) makes clear that exams and tests are among the non-visual educational tasks that leave blind students with additional challenges and obviously need extra time to get through the same amount of work as sighted students. From this, it seems plain that it is inevitable for blind students to confront such troubles in dealing with exams and tests unless the school and the body that sets the exams are competent enough to take proper precautions. In the sample school, however, it appears that because of limited knowledge of teachers about testing blind students, limited financial capacity, limited supply of adapted instructional materials and equipment and limited attention to the students by the school in general the students are forced to bear all these burdens.

Many scholars hold that appropriate social interactions lay foundations for successful academic performances of blind students. Irrespective of this fact the blind students and the teachers who took part in questionnaire filling have said that the blind students encounter a great deal of challenges in interacting with their teachers and their sighted peers. The students attribute the challenges to the negative attitudes of the teachers and sighted mates towards the blind students. In addition to unfavourable feelings of teachers and sighted students towards the blind students, the teachers attribute the worsened interactions to the blind students' lowered self-esteem and unacceptable personal behaviours.

The ideas of the panelists of focus group discussion on the issue of social interaction between the blind students, sighted students and their teachers seem to support some of the teachers views. For instance, the panelists argued that the blind students usually spend their times with other blind students, and most of them often complain against their teachers. Some of their unacceptable personal characteristics might be read from these points. Sack and Rosen (1994) contend that vision imposes a lot of social problems on young children with severe visual disability. It limits their ability to interact effectively with their peers, parents, siblings and significant others. Many children with visual disability are rejected by their sighted peers, possibly because of their poor social interactions. The unfavourable peer reactions of sighted children towards the blind children might result in some unacceptable personal behaviours by the blind. This is in agreement with the findings of this study with reference to the rationale given by both the blind students and the teachers.

In order to solve the difficulties that the blind students experience in terms of various areas of curricular contents and the ways they are delivered to the students, the teachers and the students have forwarded various measures with overlapping ideas discussed below.

First, teachers should stress on verbal explanations of their classroom points of discussions, specially of pictures and diagrams consisting of abstract ideas, colour

concepts and spatial relationships. Secondly, the school has to make its ultimate efforts to realize the existence of the special instructional materials and equipment in the school.

Thirdly, special demands and difficulties of blind students have to be taken into consideration in constructing test/exam items and in conducting the test/exam as well. Grounds that facilitate effective social interactions among the blind students, their non-blind peers and their teachers should be promoted.

Some educators have reflected views supporting distinct ideas of the key subjects of the study on the ways of coping with the challenges of this particular area. Concerning oral presentation, Best (1992) notes "the words will have to carry all meaning that the teacher needs to convey as the additional information from body language (non-verbal clues) may not be accessible.... Giving information with accuracy and using voice control may well result in all the children being offered better teaching." (P:77) Gearheart et al (1988) also support this idea saying "when writing on the chalk board, the teacher should be certain to explain verbally the concept or actual writing being presented. In general, any highly visual instructions or lessons should be supplemented with verbal explanations".

The discussions clearly depict that detailed verbal elaborations are indispensable parts of classroom discussion of instructional activities of blind students.

Regarding test items and their administration procedures, Best (1992) and Gearheart et al (1988) again strongly recommend the modification of the items, and either the extension of the amount of time for the completion of the test or the reduction of the number of the test items.

As to the interaction of the blind students with classroom teacher and with their sighted classmates, Bishop (1986) in Kirk et al (1993) has pointed out that attractive personal behaviours of regular classroom teacher and favourable sighted peers approach and interaction are very important variables for successful integration. Kekelis and Sells

(1988) in Kirk et al (1993) further confirm that one of the activities of an itinerant teacher observing a child with visual loss is checking whether the child actively interacts with his/her sighted peers in classrooms, in playfields and during breaks. So, healthy social interactions between the blind students and the sighted peers and their regular teachers should be assured if effective integration is to be attained.

The respondents of the two sets of questionnaire have indicated that the blind students have more serious challenges in obtaining special materials and equipment than using them. To illustrate this fact, as you see from tables 5, the mean values of items corresponding to obtaining the materials and equipment, as perceived by the students, are calculated to be 3.6 and above. In table 12, which indicates the teachers' perception, except obtaining slate and stylus, the values are found to be 3.4 and above too. As you can still see from the tables, all (100%) of the responding students have stated that they have serious difficulties in obtaining Braille books, measuring devices, and abacus and counting frames. Eighty-four percent, 76% and 72% teachers have perceived that the students have equal difficulties as perceived by the students themselves in obtaining materials listed respectively. The variations seen in the mean values of difficulties and the proportions of the two groups of key respondents might be attributed to the fact that as the students are the real sufferers of the problems, they might have really confronted the challenges and valued them more than the teachers did. All the other participants of the study: the school principal, the school librarian and the panelists of the focus group discussion have explained that the students have critical challenges in obtaining necessary materials and equipment. The fact that the researcher himself found the blind students using very few of the materials in classrooms very occasionally may prove the high scarcity of the materials and equipment.

As you can still learn from tables 5 and 11, the blind students have displayed that they have difficulties of using the materials and equipment with mean values in between 1.9 (using slate and stylus) and 3.05 (using measuring devices). The teachers, on their side, have shown that the students face challenges of using the materials and equipment with mean values ranging between 2.2 (using auditory aids) and 2.92 (using Braille books).

The possible cause for these large gaps between the students' and the teachers' perceptions is the teachers' lack of knowledge and experience in using the materials and equipment.

As mentioned previously, all the subjects of the study together with the researcher himself have realized that the students experience acute difficulties in obtaining the materials and equipment under question. Despite this fact scholars like Shea and Bauer (1994) and Gearheart et al (1988) stress that these materials and equipment are indispensable elements of the education of the blind. The students, the teachers and the school director have further clarified that the scarcity of the materials and equipment is intensified mainly because the materials and equipment are not manufactured within the country. Moreover, the majority of the students are not able to afford them even if the materials are sometimes available on the market.

Although Hill (1986) cited in Smith and Luckasson (1995) and other educators claim that mobility and orientation training is an essential component of the instructional programs of blind learners, the key subjects of the study (the teachers and the blind students) have replied that the blind students have never been offered such training since they have joined the sample school. There is no mobility and orientation specialist or itinerant teacher who is the right person to render the training. And this could be the primary reason for the total absence of the training in the school. Gearheart, et al (1988), nevertheless, contend that regular sighted students could be trained to offer the trainings. Thus, lack of attention by the school seems to be the predominant rationale for the lack of the training in the school.

The blind students have declared that among the general services they deserve: resource room services, guidance and counseling services and library services, they are able to obtain only library services. They have yet claimed that the library services themselves are rather meager and associated with a lot of difficulties. There are no sufficient Braille books and other special materials such as tape recorder/player, cassettes, talking books, electric sockets etc. The room is too small even to accommodate sighted students. So, it

is usually highly crowded. The report of the school librarian definitely agrees with the complaints of the students. Contrary to what is stated here, scholars such as Velleman (1977) and Hunsicker (1977) emphasize the necessity of special library services and the adaptations made in the area of exceptionality for blind students.

Ensuring the availability of the special materials and equipment in the school, making attempts to realize the production of the materials within the country by the government, permitting the blind students to use the materials in the classroom when needed, arranging appropriate conditions for provision of mobility and orientation trainings, resource room services, and guidance and counseling services and improving the library services, are suggested as potential fruitful measures to alleviate the problems faced in terms of special materials, equipment and services. With regard to the need of necessary material reserves for handicapped learners, including the blind in the school library, Velleman (1977) says that the school book collection has to include the best standard and new materials in the areas of fiction, non-fiction, biography and references. A particular effort should be made by the librarian to give individual reading guidance to all students particularly to those experiencing certain disabilities. Hunsicker (1977) also implies in his discussion that blind students should be adequately provided with Braille books, special tapes, cassettes and talking books that entertain their reading needs.

Shea and Bauer (1994) hold a view that resource room service should be available in parallel with integrated classroom education. Finch and Yowell (1950) and Jordan and Hunter (1965) assert that guidance and counseling services are inseparable elements of educational programs of the handicapped including the blind, as the services enable these group of learners to accept their limitations which cannot be avoided and to develop feasible and satisfying goals within the existing limitations. In spite of this plain fact, these services are not available in the sample school totally. The school director, for instance, has admitted that resource room services are entirely unknown by the school. He has also explained that irrespective of the attempts that the school made to secure a guidance and counseling professional at the school, all the efforts remained

in vain. Consequently, the blind students are made to suffer from a wide range of challenges they experience in various educational sectors.

Regarding trainings in some areas which are particularly related with their instructional programs, majority of the students have indicated they had the trainings in Braille use and its sets (75%) and in mobility and orientation (70%) when they were at elementary school level.

A small proportion of the students have indicated that they have the trainings in daily living skills, in using paper with raised lines, in using tape recorder and cassettes; in using talking calculator, talking books and other recorded materials. The majority have pointed out that they took the trainings at Soddo School for the Blind and the rest indicated that they were trained at Bakko School for the Blind (see table 6). Therefore none of them has received any training in such areas at his/her current school. Actually, the existing literature portrays that these skills must be learnt at the early stages of schooling. For instance, Gearheart et al (1988) say that Braille and other compensatory skills are usually taught by special education personnel at an early age. Regardless of this fact, mobility and orientation training needs to be offered whenever a child with visual loss joins a new environment and should be continued throughout the whole time of his/her school life. Concerning this idea Gearheart and his associate say, "The resource room or itinerant teacher is responsible for familiarizing or orienting the student to a new classroom or school building and supplementing the instruction of the orientation and mobility specialist. Throughout the student's education program, orientation and mobility training should be systematically provided." (P. 179) As it has been stated earlier, the blind students who participated in this study received no mobility and orientation training either at the time they joined the school or at any other subsequent times. For this reason they are suffering from tremendous difficulties of mobility in and around the school.

On the issue of integration, there are large variations in the views of the group of participating students and teachers. Still within each group, there are disagreements on the issue. Seventy percent of the students and 36% of the teachers support integration. On the other hand, 30% of the students and 64% of the teachers favour segregation. The supporters of integration from both the groups argue that it must be promoted for healthy academic, social and psychological development of the blind students. Supporters from group discussion panelists have the same justifications to favour this mode of classroom setting. One of them has said the following. "In the integrated classroom setting, blind students are helped by sighted students who are sitting beside them. Sighted students sometimes read notes from blackboard or from their own note books for blind students. The sighted students sometimes tell the blind what happens in the class when the majority of students laugh at any curious event. They sometimes exchange their personal experiences on some social phenomena. Blind students are sometimes motivated to answer and ask questions following the foot steps of their sighted mates." Though the majority of the blind students claim that they favour integration for the stated advantages it offers, the ways that most of the students behave appear not to permit the students to gain the advantages properly. Most of them seem to segregate themselves from their sighted peers. Most of them are usually observed spending their times either alone or with other blind students. This condition, therefore, necessitates certain steps to be undertaken in order to narrow the barrier separating the blind and the sighted for effective integration.

The opponents of integration from all the groups of teachers, students and participants of the focus group discussion contend that in educating blind students segregated classroom system should be exercised for the simple reasons that it ensures effective classroom discipline; it captures remarkable attention of classroom teachers and other concerned bodies, it realizes better treatment for the blind students by their teachers; and it attains effective learnings as the teachers go with the pace of students under the same category. Lack of teachers possessing adequate knowledge about teaching integrated students is mentioned as another important factor for their preference.

The teachers' lack of proper knowledge about how to handle the blind students, the limited class participation of the students and inconvenience of classroom situations could also be among the determinant reasons that the greater proportion of the teachers disfavour the mainstreaming of the students in to regular classroom settings.

Similar to the view of the main subjects of this study, the views of the authorities in the field vary much. Just like the subjects, the proponents of integration focus on the social and academic advantages of the children with disabilities, including the blind. In this line, for example, Vandercook, Fleethan Sinclair and Tetlie (1988) cited by Stainback and Stainback (1990:19) note "in integrated classroom all children are enriched by having the opportunity to learn from one another, grow to care for one another and gain community cooperation to support the inclusion of all citizens." Stressing on the social development skills Tirussew (1999) says in the integrated classrooms, there is a range of active social interaction behaviours to which they are able to react. Their social behaviours are also reacted to by other students.

The opponents of integration have great hesitations about its attainability. McKinney and Hoccut (1988) cited in Smith et al (1994) view that integration is a challenging process that requires great efforts and struggle of several bodies to be implemented. The capacity of regular classroom teachers to implement its theories and satisfy the educational needs of the students with disabilities calls for considerable investigations. Hence, as integrated class system already functions in the sample school, the school has to make maximum effort to overcome the existing challenges and enable the blind students to become the real beneficiaries of the advantages of integration already mentioned.

It has already been stated before that the majority of the blind students indicated that blindness has no significant effect on their self-value and self-confidence. But from their attitudes and f behaviours, it would be inferred that they have not expressed their real feelings, for example, they were observed that they did not take any part in group discussions. They were usually visited spending their time either alone or with their

blind peers. They seem to have unfavourable reactions towards their teachers and the majority of their sighted peers.

Contrary to the feelings the students claim to have, Cooper-Smith (1967) cited by Dodds (1993) found out that many of his visually impaired clients have critical problems of low self-esteem resulting from a lack of sense of self-worth and competence. Jordan and Hunter (1965) reported that blind individuals are increasingly reserved in communicating their actual internal feelings, and that during interactions with their peer groups and teachers superficial relationships are commonly recognized.

In a nutshell, from the data supplied by various participants of the study and discussions made so far it is obvious that blind students experience a wide range of challenges in terms of learning environment, curricular contents and their presentations interacting with their sighted mates and teachers, obtaining and using special materials, equipment and services. It is also understood that various possible measures, proposed by the distinct subjects of the study supported by the pertinent arguments of various authorities in the field, could be implemented to help them cope with the challenges. In the sample school, however, it seems that no significant attempts are being made in taking any of the measures discussed.

PART 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Based on the literature revised, the data collected, the analyses made, the findings obtained and discussions held the following relevant conclusions are drawn.

- Blind students of the sample school, as inferred from the data gained from various subjects and confirmed by the formal and informal observations made by the researcher, deal with numerous severe challenges in their learning environment. The arrangement of materials in the classroom, noise levels from large numbers of students in the classes and from other sources in the surrounding areas, and the layout of the school compound on the whole place the students at marked disadvantages. These environmental factors adversely affect the teaching- learning situations of the students.
- Blind students appear to face several acute problems in terms of curricular contents and the ways the contents are presented to the students. In the first place, no modifications and adaptations are made to the curricular contents of the regular sighted students. The blind students learn the same contents except that they are exempted from some courses like natural sciences and physical education. These courses are very helpful for the overall well-being of the students, however. All regular teachers but one of the school have not had any training in teaching integrated blind students. The response of the majority of teachers have implied that the teachers rarely incorporate concrete objects, tactual activities and field trips in the educational programs of the blind students although they are supposed to be the important components of the programs, according to some scholars in the field. The teachers on the whole seem to be inefficient in making appropriate explanations and giving accurate information. The students are not able to take appropriate notes either because of the lack of assistance from their teachers and sighted peers, shortage of special materials or because of lack of personal interest to take notes.

- Blind students of the sample school encounter serious difficulties in obtaining and using specialized materials and equipment. It has been indicated that the students meet more serious difficulties in obtaining the materials and equipment than in using them. In the school, there is an acute shortage of disability- specific materials and equipment like Braille books, Braille paper, tactual as well as auditory aids. Very few students were seen using Braille paper. Most of the students also seem not to have any trainings in the use of the materials and equipment.
- Although the layout of the school does not permit the students to move easily in the compound and access many significant areas, the blind students have never received any mobility and orientation trainings since they have joined the school.
- There are no resource room and guidance and counseling services offered in the school. Resource room services are even not known by the school. Although library services are rendered to blind students, they are extremely insufficient. Only a few Braille textbooks are reserved in the library collection.
- The views of the informants of the study about the integration of the blind students into regular classrooms give different pictures. Seventy percent of the blind students, and 62.5% of the discussion group participants favour integration for academic and psychosocial improvement of the blind students while only 36% of the teachers favor integration. The remaining proportions of these groups of subjects argue for the segregation of the students for simple reasons that there are lack of teachers who teach well in the integrated classes and no adequate attention is given for integrated blind students by all the concerned bodies.
- Even though the blind students of the sample school are mainstreamed into regular classes, they still seem not to integrate well with the regular sighted students. The majority of them are usually observed in the classroom, in the school compound, and outside of the school compound spending their times either alone or with other blind students.

To sum up, the government and some professionals in the field of Special Needs Education strongly argue that the integration of people with disabilities, including the

blind, into regular classroom settings should be realized in our country for the improvement of academic and psychosocial status of the children with disability. But practically, it seems that it is quite difficult to realize it as few of its preconditions are fulfilled yet. The learning environment needs a great amendment. There are almost no adequately trained teachers to implement the integration of the people. No adequate disability-specific materials and equipment are available. Attitudes of regular teachers and sighted students towards the integration need to be dealt with a lot. Thus, it seems that there is a great discrepancy between theory and practice.

The efforts of the school to tackle the problems that blind students face in all the stated areas appear to be highly limited though many feasible actions could be taken at school level and some of them are included in the recommendations below.

5.2 Recommendations

The findings of this research indicate that the integrated blind students of the sample school experience numerous profound challenges in various educational fields. Different measures that could be taken to overcome the challenges have also been proposed by the distinct subjects of the study. Based on the proposals of the subjects and ideas extracted from related literature, the following prospective measures are recommended to be taken by the government, the school, and the classroom teachers.

Besides, the integration of children with disabilities, including the blind into regular classroom settings is a contemporary motto of the government. For its successful implementation, therefore, all the necessary facilities must be fulfilled first. In order to realize effective learning of blind students, the government has to take the following helpful steps.

- It must ensure the availability of special materials and equipment in the schools rendering educational services to blind students.
- It should make every possible arrangement to equip regular teachers of integrated classes, through effective training in special education, with special skills and aspirations to cater for the educational demands of the blind students

- It has to offer long-term and short-term mobility and orientation trainings at regional or central level to some regular teachers who will offer the trainings to blind students at school level. The trained teachers could also give the trainings to some sighted students who might give the trainings to the blind students.
- It should facilitate conditions to enable blind students to obtain special services such as resources room services, guidance and counseling services and sufficient library services in parallel with regular classroom instruction. It must assign the right professionals to render the services at the school level.
- It needs to give considerable attention to special educational needs of blind students and make all necessary modifications and adaptations to curriculum contents and its teaching approaches when curriculum changes are made.

The following feasible measures are suggested to be effected at the school level by the school itself.

- The routes in the school compound have to be made wider and be clear of hindering objects.
- The school has to build discrete special library and latrine at open spaces for blind students by using its own internal source of income. Alternatively it can mobilize the local community to raise fund and build the rooms itself (the community). Efforts should be made to furnish the library with all necessary materials and equipment.
- It can assign the blind students in a few easily accessible classes where the total number of students is fairly minimized. This most likely diminishes the marked effect of disruptive noises to a great extent.
- The school should give public orientations to school community in general and to sighted students and teachers in particular to be helpful for blind students in giving descriptions of classroom situations and visual lesson contents, in reading notes from blackboard and from regular text books, in guiding them inside and outside the school compound etc.

- A particular attention must be offered to blind students in preparing test/exam items and in administering them. As a first measure, the number of items has to be reduced. The items should also be modified in such a way that they fit the special difficulties of the students. Efficient readers, possibly with payment, should be assigned. Extra time could be allotted if necessary.
- The school ought to exploit effectively the special knowledge of the teacher who has special training on the methods of teaching blind students. For example, he could share his knowledge with other regular teachers. He might also offer mobility and orientation trainings to blind students or still serve as resource room teacher. The school would further arrange conditions for blind teachers to share their experience with the blind students.

As members of significant school community, the teachers are also expected to play some roles in tackling the educational challenges of the blind students. The steps listed below are recommended to be taken by them.

- Bishop (1986) in Kirk et al (1993) has pointed out that attractive personal behaviours of regular classroom teacher and favorable sighted peers approach and interaction are very important factors for successful integration. This has a clear implication for the regular teachers of the sample school that they ought to be free, polite and friendly to approach and help the blind students.
- The teachers should be competent enough in controlling classroom discipline to ensure productive learning of the blind students.
- They should encourage blind students to sit with sighted students usually on the front desks if the classroom is over crowded to overcome the difficulty of mobility between the rows of desks. Teachers could give responsibilities for class monitors to take care of chairs of blind students so that they will not be taken away by other students.
- They need to incorporate concrete objects, field trips and other practical experiences of blind students into their (students') daily lessons.

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Appendix A

አዲስ አበባ ዩኒቨርሲቲ የድህረ-ምረቃ መረጃ ግብር የትምህርት ሳይኮሎጂ ክፍል

በማየት ለተሳናቸው ተማሪዎች የሚሞላ መጠይቅ

ውድ ተማሪ፤

የዚህ መጠይቅ ዋና ዓላማ ማየት የተሳናቸው ተማሪዎች በመማር ማስተማር ሂደት ውስጥ በተለይም ከአይናማ ተማሪዎች ጋር ተቀላቅለው በሚማሩበት በመደበኛ ክፍል ውስጥ በሚያጋጥማቸው ችግሮች ላይ መረጃ ለመስጠትና ችግሮቹን ለመቅረፍ (በያንስ ለመቀነስ) የመፍትሔ ሐሳቦችን ለመጠቀም ነው።

ለተጠቀሰው ዓላማ መሳካት ያንተ/ያንቺ መልስ ጠቀሜታው በጣም የጎላ በመሆኑ ለተከታዮቹ ጥያቄዎች ትክክለኛውና እውነተኛውን መልስ በመስጠት እንድትተባበር/ሪ በትህትና እጠይቃለሁ። በመጠይቁ ውስጥ ስምህ/ሽ ያልተካተተ ከመሆኑም ባሻገር ማንኛውም ዓይነት መረጃ ከተፈለገበት ዓላማ ውጪ ምስጢራዊነቱ የተጠበቀ እንደሚሆን ከወዲሁ ላረጋግጥልህ/ሽ እወዳለሁ።

ለመልካም ትብብርህ/ሽ በቅድሚያ አመሰግናለሁ!!

I. የግል መረጃ

ሀ/ ዕድሜ ----- ለ/ ያታ ----- ሐ/ የክፍል ደረጃና ሴክሽን-----

መ/ የወላጆች ወርሃዊ ገቢ (በብር) 1. ከ150 በታች 2/ ከ150-300 3/ 300 በላይ

ሠ/ የወላጆች የትምህርት ደረጃ 1/ አባት ----- ለ/ እናት-----

ረ/ የማየት ችግር የተከሰተበት ጊዜ (አንዱን በማክበብ መልስ/ሺ)

1. ከመወለዴ በፊት 3. ከተወለድኩ ከሦስት ዓመት በኋላ

2. ከተወለድኩ በኋላ ከሦስት ዓመት በፊት

ሰ/ የችግሩ መንስሐ ባጭሩ -----

II. ከዚህ በታች የተዘረዘሩና በተለያዩ የትምህርት መስኮች ውስጥ የሚያጋጥሙህ/ሽ ችግሮች ሊነበቡ ካዳመጥክ/ህ በኋላ እንደየክብደታቸው መጠን በተሰጡት የክብደት ደረጃዎች መሠረት ማለትም

ከባድ = 4 ቀላል = 2
 መካከለኛ = 3 በጣም ቀላል = 1 በማለት ይመድቡ፡፡

ማሳሰቢያ ለአካባቢ

የተማውን ትክክለኛ ምርጫ ካዳመጡ በኋላ በትክክለኛ ቦታ ላይ የ'X' ምልክት በማድረግ፣ ምርጫው(ዋ)ን በመክበብ ወይም አጫጭር መልሶችን በባዶ ቦታዎች ላይ በመላክ ይተባበሩ፡፡

ሀ/ የመማሪያ አካባቢ /Learning Environment/ በተመለከተ

ተ.ቁ	ችግሩ የሚታይበት መስክ	የችግሩ ደረጃ			
		4	3	2	1
1	በክፍል ውስጥ የምትቀመጥበት/ጨበት ቦታ ሁኔታ				
2	የዴስክና የወንበር ከፍታ/Height/ ገጽታ /Surface/ ሁኔታ				
3	በክፍል ውስጥ የተለያዩ ነገሮች አቀማመጥ ሁኔታ /በቀላሉ ለመንቀሳቀስ የነፃ መተላለፊያዎች መኖር፣ በመደዳዎች መካከል በቂ ስፋት መኖር				
4	ራስህ/ሽ ከክፍሉ ሁኔታዎች ጋር የማለማመድ ሁኔታ				
5	በክፍል ውስጥ ያሉትን ነገሮች በትክክል ለመጠቀም የክፍል ጓደኞችህ/ሽ ወይም የመምህራን የገለፃ ሁኔታ				
6	በመማሪያ አካባቢ የሚሰማ የድምፅ ሁኔታ				
7	በሕንፃዎች ሁኔታና በት/ቤት ውስጥ በሚገኙ ቦታዎች ለምሳሌ በሽንት ቤት፣ በመማሪያ ክፍሎች በመምህራን ቢሮዎች፣ በቤተመፃሕፍት፣ በእስፖርት ሜዳ በመሳሰሉት አቀማመጥ ሁኔታ				

8/ በመማሪያ አካባቢ ማለትም ሰንጠረዥ ውስጥ ከ1-7 በተጠቀሱት ሁኔታዎች የሚያጋጥሙህ/ሽ ችግሮችና የመፍትሔ ሐሳቦች ይሆናሉ የምትላቸው/የምትያቸው ባጭሩ አስቀምጥ/አስቀምጪ
 ሀ/ የሚያጋጥሙህ/ሽ ችግሮች -----

ለ/ የመፍትሔ ሐሳቦች -----

ለ/ የትምህርት ይዘቶችና አሰጣጥ ሁኔታዎች

(Curriculum contents and Presentations)

ለአንባቢ፡- የተማሪውን ትክክለኛ መልስ በማክበብና በባዶ ቦታዎች ላይ ትክክለኛውን መልስ ባጭሩ በመጻፍ ይመልሱ፡፡

1. በአጠቃላይ ከመደበኛ ተማሪዎች ጋር የትምህርት ይዘቶችን የመማር ችግሮች

4 3 2 1
2. በተራ ቁጥር 1 በተጠቀሰው ሁኔታ የሚያጋጥሙህ/ሽ ችግሮች በዝርዝር አስተምህ/ጩ፡ -----

3. ለችግሮቹ የመፍትሔ ሐሳቦች -----

4. የብራይል አጠቃቀም ሁኔታ 4 3 2 1
5. የእስታይሊስና የእስሊት አጠቃቀም ሁኔታ 4 3 2 1
6. የዳበሳ ሥራዎች የመማር ሁኔታ 4 3 2 1
7. የማዳመጥ ክህሎትን የመማር ሁኔታ 4 3 2 1
8. ከተራ ቁጥር 4-7 በተጠቀሱት ሁኔታዎች የሚያጋጥሙህ/ሽ ችግሮች በዝርዝር -----

9. ለተራ ቁጥር 8 ችግሮች የመፍትሔ ሐሳቦች ባጭሩ -----

10. የማይታዩ፣ የማይጨበጡና የማይዳሰሱ ሐሳቦችን፣ የቀለም ሁኔታና፣ የቦታዎች አቀማመጥና ግንኙነት ሐሳቦችን የመማር ችግሮች 4 3 2 1
11. በተራ ቁጥር 10 ሁኔታዎች የሚያጋጥሙህ/ሽ ችግሮች በዝርዝር -----

12. በተራ ቁጥር 11 ለዘረዘርካቸው ችግሮች የመፍትሔ ሐሳቦች ባጭሩ -----

13. ከመምህሩ የሚተላለፈውን ሐሳብ በትክክል የመቀበል ችግር 4 3 2 1
14. በተራ ቁጥር 13 ለተጠቀሰው ሁኔታ ችግር በዝርዝር -----

15. በተራ ቁጥር 14 ለዘረዘርካቸው ችግሮች የመፍትሔ ሐሳቦች ባጭሩ -----

16. ለፈተናዎች የመዘጋጀትና የመሥራት ሁኔታ 4 3 2 1
17. መከራዎችን (Continuous assessment tests) የመሥራት ችግር 4 3 2 1
18. በተራ ቁጥር 16 እና 17 በተጠቀሱት ሁኔታዎች የሚያጋጥሙህ/ሽ ችግሮች በዝርዝር -----

19. በተራ ቁጥር 18 ለተዘረዘሩት ችግሮች የመፍትሔ ሐሳቦች -----

20. ከአይናማ ተማሪዎች ከመምህራን ጋር ከክፍል ውስጥም ሆነ ከክፍል ውጪ የመገናኘት ችግር 4 3 2 1

21. በተራ ቁጥር 20 ለተጠቀሰው ሁኔታ የሚያጋጥሙህ /ሽ ችግሮች በዝርዝር -----

22. በተራ ቁጥር 21 ለተዘረዘሩት ችግሮች የመፍትሔ ሐሳቦች ባጭሩ -----

23. ከሚከተሉት የት/ዓይነቶች የምትማራቸውን/የምትማራያቸውን ተናገር

1. የተፈጥሮ ሣይንስ ትምህርቶች ለምሳሌ ባዮሎጂ፣ ኬሚስትሪ፣ ሌዘክስና ሒሳብ
2. ሥነ-ሙጢትና ዕድ-ጥበብ
3. የሰውነት ማጉልመሻ ትምህርት

ሐ) በልዩ መሣሪያዎችን፣ ቁስቁሶችንና አገልግሎቶች የአጠቃቀም ሁኔታዎችን በተመለከተ
(Special Materials, Equipment and Services)

- | | | | | |
|---|---|---|---|---|
| 1.1. የብሬይል መጽሐፍት የማግኘት ሁኔታ | 4 | 3 | 2 | 1 |
| 1.2. ብሬይል መጽሐፍት የመጠቀም ሁኔታ | 4 | 3 | 2 | 1 |
| 2.1. የብሬይል መጻፊያ መሣሪያ የማግኘት ሁኔታ | 4 | 3 | 2 | 1 |
| 2.2. የብሬይል መጻፊያ መሣሪያ የመጠቀም ሁኔታ | 4 | 3 | 2 | 1 |
| 3.1. የእስታይሌስና የእስሌት የማግኘት ሁኔታ | 4 | 3 | 2 | 1 |
| 3.2. እስሌትና እስታይሌስን የመጠቀም ሁኔታ | 4 | 3 | 2 | 1 |
| 4.1. የዳበሳ ካርታና ሉል የማግኘት ሁኔታ | 4 | 3 | 2 | 1 |
| 4.2. የዳበሳ ካርታና ሉል የመጠቀም ሁኔታ | 4 | 3 | 2 | 1 |
| 5.1. የሒሳብ መማሪያ ዕቃ (Abacus) እና የቁጥር ማሽኖች የማግኘት ሁኔታ | 4 | 3 | 2 | 1 |
| 5.2. የሒሳብ መማሪያ ዕቃ (Abacus) እና የቁጥር ማሽኖች የመጠቀም ሁኔታ | 4 | 3 | 2 | 1 |
| 6.1. የመለኪያ መሣሪያዎችን የማግኘት ሁኔታ | 4 | 3 | 2 | 1 |
| 6.2. የመለኪያ መሣሪያዎችን የመጠቀም ሁኔታ | 4 | 3 | 2 | 1 |

7. ከተራ ቁጥር 1-6 ለተጠቀሱት ሁኔታዎች የሚያጋጥሙህ/ሽ ችግሮች በዝርዝር -----

8. በተራ ቁጥር 7 ለተጠቀሱት ችግሮች የመፍትሔ ሐሳቦች ባጭሩ -----

9.1. የመስማት መርጃ መሣሪያዎችን ለምሳሌ ካሴቶችን፣ ቴፓችን፣ የተቀረው መጽሐፍትን የማግኘት ሁኔታ

4 3 2 1

9.2. የመስማት መረጃ መሣሪያዎችን ለምሳሌ ካሴቶችን ቴፓችን የተቀረጹ

መጽሐፍትን የመጠቀም ሁኔታ

4 3 2 1

10. በተራ ቁጥ 9 በተጠቀሰው ሁኔታ የሚያጋጥሙህ/ሽ ችግሮች በዝርዝር -----

11. ለተራ ቁጥር 10 ለተጠቀሱት ችግሮች የመፍትሔ ሐሳቦች ባጭሩ -----

12. የእንቅስቃሴና የቦታዎችንና አቅጣጫዎችን የመገንዘብ (Mobility and Orientation)

ሁኔታ

4 3 2 1

13. በተራ ቁጥር 12 በተጠቀሰው ሁኔታ የሚያጋጥሙህ/ሽ ችግሮች -----

14. በተራ ቁጥር 13 ለተጠቀሱት ችግሮች የመፍትሔ ሐሳቦች ባጭሩ -----

9. ከሚከተሉት ውስጥ የትኛውን አገልግሎት ታለፍለህ/ሽ? መልሱ ከአንድ በላይ ሊሆን ይችላል። አገልግሎት የምታገኝበት/ኚበት ከለየህ/ሽ በኋላ አገልግሎቱን በማግኘት ረገድ የሚያጋጥምህ/ሽ የችግር ደረጃን በአገልግሎቱ ፊት ለፊት ከተሰጡት ቁጥሮች አንዱን በማክበብ አመልክት/ቺ።

1. የአካል ጉዳተኞች የማዕከል ክፍል አገልግሎት

(Resource room service) 4 3 2 1

2. የአመራርና የምክር አገልግሎት (Guidance and counseling service) 4 3 2 1

3. የቤተመጽሐፍት አገልግሎት (Library service) 4 3 2 1

10. የተመረጠውን/የተመረጡትን አገልግሎት/ቶች በማግኘት በኩል የሚያጋጥምህ/ሽ ችግሮች በዝርዝር -----

11. የችግሮች መፍትሔ ባጭሩ -----

መ/ ከዚህ በታች በተጠቀሱት መስኮች ሥልጠና ወስደህ/ሽ ታውቃለህ/ሽ? ከወሰድክ/ሽ፣ የት? 'አዎን' ወይም 'አይደለም' ካልክ/ሽ በኋላ መልስህ/ሽ 'አዎን' ከሆነ የወሰድክበት ቦታ ተናገር።

አንባቢ - ቦታውን በባዶ ቦታው ላይ ይሙሉ።

1. በብራይል አጠቃቀምና ከሱ ጋር በሚጠቀሙ መሣሪያዎች ፤ አዎን /አይደለም-----

2. በእንቅስቃሴና በቦታና በአቅጣጫ ግንዛቤ (Mobility and orientation) ፤ አዎን/ አይደለም፤-----

3. በዕለታዊ ኑሮ ክህሎች /daily living skills/ ፤ አዎን/አይደለም፤ -----

4. በቴኘና በካሴት አጠቃቀም፤ አዎን/አይደለም-----

5. ሊዳበስ በሚችል መስመር ባለው ወረቀት መጠቀም፤ አዎን/አይደለም፤-----

6. በካሴት በተቀረጹ መጽሐፍት/ talking books/ እና ሌሎች በተቀረጹ መሣሪያዎች መጠቀም ፤ አዎን አይደለም -----

7. በሚናገር ካልኩሉተር /talking calculator / መጠቀም፤ አዎን አይደለም -----

ሠ/ ከሚከተሉት ውስጥ ይልጥ የምትወደው የምትወጂው የትኛውን ነው?

1) ከአይናማ ተማሪዎች ጋር በመደበኛ ክፍል ውስጥ መማር

2) በልዩ ክፍል ውስጥ ከሌሎች ማየት የተሳናቸው ተማሪዎች ጋር ብቻ መማር

ረ/ ከሁለቱ አንደኛውን ይልጥ የምትወድበት/ የምትወጅበት ዋና ዋና ምክንያቶች ምንድን ናቸው?-----

ሰ/ አይነ ስውርነት ለራስህ/ሽ በምትሰጠው/ጪው ዋጋና በራስ የመተማመን ስሜትህ/ሽ ላይ ያለው ተጽዕኖ ባጭሩ ግለፅ/ግለጪ -----

ሸ/ አጠቃላይ አስተያየት ባጭሩ -----

II. ከዚህ በታች የተዘረዘሩና በተለያዩ የትምህርት መስኮች ማየት የተሳናቸው ተማሪዎች ከመደበኛ /አይናማ/ ተማሪዎች ጋር ተቀላቅሎ በሚማሩበት ጊዜ የሚያጋጥማቸው ችግሮች እንደየክብደታቸው መጠን በተሰጡት የክብደት ደረጃዎች መሠረት ማለትም

ከባድ = 4 ቀላል = 2
 መካከለኛ = 3 በጣም ቀላል = 1 በማለት ይመድቡ፡፡

እንደየአስፈላጊነቱ በትክክለኛ ቦታ ላይ የ'X' ምልክት በማድረግ፣ ትክክለኛ ምርጫዎን በመክበብ ወይም አጫጭር መልሶችን በመስጠት ይመልሱ፡፡

ሀ/ የመማሪያ አካባቢ /Learning Environment/ በተመለከተ

ተ.ቁ	ችግሩ የሚታይበት መስክ/ ማየት የተሳናቸው ተማሪዎች ችግር የሚገኝምባቸው መስኮች	የችግሩ ደረጃ			
		4	3	2	1
1	በክፍል ውስጥ በሚቀመጡበት ቦታ ሁኔታ				
2	ማየት ለተሳናቸው ተማሪዎች የዴስክና የወንበር ከፍታና/Height/ ገጽታ /Surface/ ሁኔታ				
3	በክፍል ውስጥ የተለያዩ ነገሮች አቀማመጥ ሁኔታ /በቀላሉ ለመንቀሳቀስ የነፃ መተላለፊያዎች መኖር፣ በመደዳዎች መካከል በቂ ስፋት መኖር				
4	ራሳቸውን ከክፍሉ ሁኔታዎች ጋር የማለማመድ ሁኔታ				
5	በክፍል ውስጥ ያሉትን ነገሮች በትክክል ለመጠቀም የክፍል ንደኞቻቸው ወይም የመምህራን የገለፃ ሁኔታ				
6	በመማሪያ አካባቢ የሚሰማ የድምፅ ሁኔታ				
7	በሕንፃዎች ሁኔታና በት/ቤት ውስጥ በሚገኙ ቦታዎች ለምሳሌ በሽንት ቤት፣ በመምህራን፣ ቢሮዎች፣ በቤተመጽሐፍት በአስፖርት ሜዳ አቀማመጥና በመሳሰሉት ሁኔታዎች				

8. ማየት የተሳናቸው ተማሪዎች በመማሪያ አካባቢ ማለትም በሰንጠረዥ ውስጥ ከ1-7 በተጠቀሱት ሁኔታዎች በኩል የሚያጋጥማቸው ችግሮችና የመፍትሔ ሐሳቦችን ባጭሩ ያስቀምጡ፡፡

ሀ/ የሚያጋጥማቸው ችግሮች -----

ለ/ የመፍትሔ ሐሳቦች -----

ለ/ የትምህርት ይዘቶችና አሰጣጥ ሁኔታዎች

(Curriculum Contents and Presentations)

ትክክለኛውን የችግር ደረጃ የሚገልፅ ቁጥር በመክበብና በባዶ ቦታዎች ላይ አጫጭር መልሶችን በመስጠት ይመልሱ፡፡

2. አይነ ሥውራን ተማሪዎች ከመደበኛ ተማሪዎች ጋር የትምህርት ይዘቶችን የመማር ሁኔታ 4 3 2 1

3. በተራ ቁጥር 1 በተጠቀሰው ሁኔታ ዓይነ ስውራን ተማሪዎች የሚያጋጥማቸው ችግሮች በዝርዝር -----

4. ለችግሮቹ የመፍትሔ ሐሳቦች -----

5. የአይነ ስውራን ተማሪዎች የብሬይል አጠቃቀም ሁኔታ 4 3 2 1

6. የእስሌትና የእስታይሌስ አጠቃቀም ሁኔታ 4 3 2 1

7. የዳበሳ ሥራዎችን የመማር ሁኔታ 4 3 2 1

8. የማዳመጥ ክህሎቶችን የመማር ሁኔታ 4 3 2 1

9. ከተራ ቁጥር 4-7 በተጠቀሱት ሁኔታዎች የሚያጋጥማቸው ችግሮች በዝርዝር -----

10. በተራ ቁጥር 8 ላይ ለተዘረዘሩት ችግሮች የመፍትሔ ሐሳቦች ባጭሩ -----

11. የማይታዩ ፣ የማይጨበጡና የማይዳሳሱ ሐሳቦችን፣ የቀለም ሁኔታና፣ የቦታዎች አቀማመጥና ግንኙነት ሐሳቦችን የመማር ሁኔታ 4 3 2 1

12. በተራ ቁጥር 10 በተጠቀሱት ሁኔታዎች የሚያጋጥማቸው ችግር በዝርዝር -----

13. በተራ ቁጥር 11 ለዘረዘሩት ችግሮች የመፍትሔ ሐሳቦች -----

14. ከመምህሩ የሚተላለፈውን ሐሳብ በትክክል የመቀበል ሁኔታ 4 3 2 1

15. በተራ ቁጥር 13 ለተጠቀሰው ሁኔታ ችግር በዝርዝር -----

16. በተራ ቁጥር 19 ለተዘረዘሩት ችግሮች የመፍትሔ ሐሳቦች ባጭሩ -----

17. ለፈተናዎች የመዘጋጀትና የመሥራት ሁኔታ 4 3 2 1

18. መከራዎችን (continuous assessments tests) የመሥራት ሁኔታ 4 3 2 1

19. በተራ ቁጥር 16 እና 17 በተጠቀሱት ሁኔታዎች የሚያጋጥማቸው ችግሮች በዝርዝር -----

20. በተራ ቁጥር 18 ለተዘረዘሩት ችግሮች የመፍትሔ ሐሳቦች ባጭሩ -----

21. ከአይናማ ተማሪዎችና ከመምህራን ጋር እክፍል ውስጥም ሆነ ከክፍል ውጪ የመገናኘት ሁኔታ 4 3 2 1

22. በተራ ቁጥር 20 ለተጠቀሰው ሁኔታ የሚያጋጥማቸው ችግሮች በዝርዝር -----

23. በተራ ቁጥር 21 ለዘረዘሩት ችግሮች የመፍትሔ ሐሳቦች ባጭሩ -----

ሐ/ ልዩ መሣሪያዎችን፣ ቁሳቁሶችንና አገልግሎቶችን የአጠቃቀም ሁኔታዎችን በተመለከተ
/ Special Materials, Equipment and Services/

- | | |
|---|---------|
| 1.1. የብሬይል መጽሐፍት የማግኘት ሁኔታ | 4 3 2 1 |
| 1.2. የብሬይል መጽሐፍት የመጠቀም ሁኔታ | 4 3 2 1 |
| 2.1. የብሬይል መሣሪያ መሣሪያ የማግኘት ሁኔታ | 4 3 2 1 |
| 2.2. የብሬይል መሣሪያ መሣሪያ የመጠቀም ሁኔታ | 4 3 2 1 |
| 3.1. የእስታይሊስና የእስሊት የማግኘት ሁኔታ | 4 3 2 1 |
| 3.2. እስሊትና እስታይሊስን የመጠቀም ሁኔታ | 4 3 2 1 |
| 4.1. የዳበሳ ካርታና ሉል የማግኘት ሁኔታ | 4 3 2 1 |
| 4.2. የዳበሳ ካርታና ሉል የመጠቀም ሁኔታ | 4 3 2 1 |
| 5.1. የሒሳብ መማሪያ ዕቃ (Abacus) እና የቁጥር ማሸኖች የማግኘት ሁኔታ | 4 3 2 1 |
| 5.2. የሒሳብ መማሪያ ዕቃ (Abacus) እና የቁጥር ማሸኖች የመጠቀም ሁኔታ | 4 3 2 1 |
| 6.1. የመለኪያ መሣሪያዎችን የማግኘት ሁኔታ | 4 3 2 1 |
| 6.2. የመለኪያ መሣሪያዎችን የመጠቀም ሁኔታ | 4 3 2 1 |
7. ከተራ ቁጥር 1-6 በተጠቀሱት ነገሮች የሚያጋጥማቸው ችግሮች በዝርዝር -----

8. በተራ ቁጥር 7 ለተጠቀሱት ችግሮች የመፍትሔ ሐሳቦች ባጭሩ -----

- | | |
|--|---------|
| 11.1. የመስማት መርጃ መሣሪያዎችን ለምሳሌ ካሴቶችን፣ ቴፓችን፣ የተቀረጹ መጽሐፍትን የማግኘት ሁኔታ | 4 3 2 1 |
| 11.2. የመስማት መረጃ መሣሪያዎችን ለምሳሌ ካሴቶችን፣ ቴፓችን የተቀረጹ መጽሐፍትን የመጠቀም ሁኔታ | 4 3 2 1 |
12. በተራ ቁጥር 8 በተጠቀሰው ሁኔታ የሚያጋጥማቸው ችግሮች በዝርዝር -----

13. በተራ ቁጥር 10 ለተጠቀሱት ችግሮች የመፍትሔ ሐሳቦች ባጭሩ -----

14. የእንቅስቃሴና፣ የቦታዎችና የአቅጣጫዎችን የመገንዘብ /Mobility and orientation/ ሁኔታ 4 3 2 1

15. በተራ ቁጥር 12 በተጠቀሰው ጉዳይ ተማሪዎቹ የሚያጋጥማቸው ችግሮች በዝርዝር -----

16. በተራ ቁጥር 13 ለተጠቀሱት ችግሮች የመፍትሔ ሐሳቦች ባጭሩ -----

መ/ በእርስዎ አመለካከት ከሚከተሉት ውስጥ ይበልጥ ውጤታማ የትኛው ነው?

1. ማየት የተሳናቸው ተማሪዎች ከአይናማ ተማሪዎች ጋር ተቀላቅሎ መማር
2. ማየት የተሳናቸው ተማሪዎች ለብቻቸው በአንድ ክፍል ውስጥ መማር

ሠ/ ከሁለቱ አንደኛው ከሌላው ይበልጥ ውጤታማ የሚሆንበት ዋና ዋና ምክንያቶች ምንድን ናቸው ብለው ያስባሉ? -----

ረ/ የሚከተሉት ጉዳዮችን በአይነ ስውራን ተማሪዎች ትምህርት ውስጥ አካተው ያውቃሉ? መልስዎ 'አዎ' ከሆነ በምን ያህል ጊዜ ድግግሞሽ (Frequency)

እንደሆነም ከተጠቀሱት አማራጮች አንዱን በመምረጥ ይመልሱ::

- | | | | |
|--------------------------|---------|------------|------------|
| 1. ተጨባጭ ነገሮች፤ አዎን/አይደለም | ሀ/ ሁልጊዜ | ለ/ ብዙውን ጊዜ | ሐ/ አልፎ አልፎ |
| 2. የዳበሳ ድርጊቶች፤ አዎን/አይደለም | ሀ/ ሁልጊዜ | ለ/ ብዙውን ጊዜ | ሐ/ አልፎ አልፎ |
| 3. የመስክ ጉዞ፤ አዎን/አይደለም | ሀ/ ሁልጊዜ | ለ/ ብዙውን ጊዜ | ሐ/ አልፎ አልፎ |

ሰ/ የአይነ ስውራን ተማሪዎችን የተለያዩ ትምህርታዊ ችግሮች ይፈታሉ ብለው ያመነብት፤ ነገር ግን በኢኮኖሚ እና በሙያ ማነስ ምክንያት እስካሁን ድረስ እንደመፍትሔ ያልተጠቀሙበት ዘዴዎች አሉ? ካሉ ቢዘረዘሩ -----

ሸ/ አጠቃላይ አስተያየትዎ ባጭሩ -----

Appendix C

በቦታ ላይ የተመሠረተ የምልከታ ቅጽ/ form/
የተማሪው የምስጢር ቁጥር (Student Code) -----

ተማሪው/ዋ የሚመለከትባቸው /የምትመለከቱባቸው ቦታዎች

	ተማሪው/ዋ የተመለከተው ቦታ	በት/ቤት ትጥር ግቢ ውስጥ (በአረፍት ጊዜ)	በመማሪያ ክፍል ውስጥ (ሲሰራ/ ስትሰራ ወይም ሲሠራ/ ስትሠራ)	ከት/ቤት ትጥር ግቢ ውጪ (ወደቤተ/ት ሲሄድ/ስትሄድ)
I ተማሪው/ዋ የሚፈፅማቸው/የየምትፈጽማቸው ድርጊቶች				
II ተማሪው/ዋ ከላይ የተጠቀሱት ድርጊቶች ከማን ጋር ነበር የሚፈጽመው/ የምትፈጽመው				
III ተማሪው/ዋ ድርጊቶችን በትክክል የት ነበር የሚፈፀመው/ችው				

Appendix D

ከት/ቤቱ የቤተመጽሐፍት ባለሙያ ጋር በሚደረገው ቃለመጠይቅ ውስጥ የሚካተቱ ጉዳዮች

I. የግል መረጃ

1. ዕድሜ
2. ፆታ
3. የት/ደረጃ
4. የሠለጠነበት የሥራ መስክ
5. ስለ ልዩ ተማሪዎች የቤተመጽሐፍት አገልግሎት የወሰዱት ሥልጠና

II. በመጠይቁ ጊዜ የሚነሱ ጉዳዮች

1. ለአይነ ስውራን ተማሪዎች የተዘጋጁ ልዩ መጽሐፍትና ሌሎች መሣሪያዎች
2. አይነ ስውራን ተማሪዎች የሚያገኙት አገልግሎት?
3. አይነ ስውራን ተማሪዎች ወደ ቤተመጽሐፍቱ የሚመጡበት የጊዜ ድግግሞሽ ሁኔታ
4. አይነ ስውራን ተማሪዎች በቤተመጽሐፍት አጠቃቀም በኩል የሚያጋጥማቸው ችግሮች
5. ችግሮቹ ሊፈቱባቸው የሚችልባቸው መንገዶች
6. ሌሎች

ከት/ቤቱ ር/መምህር ጋር በሚደረገው ቃለመጠይቅ ውስጥ የሚካተቱ ጉዳዮች

I. የግል መረጃ

1. ዕድሜ
2. ፆታ
3. የትምህርት ደረጃ
- የሠለጠነበት የስራ መስክ
4. የሥራ ልምድ

ሀ) በር/መምህርነት

ሀ1. በተመሳሳይ ት/ቤት

ሀ2. በሌላ ት/ቤት

ለ) በመ/ርነት

ሐ) በሌላ ሥራ

(ይጥቀሱ)

መ) ጠቅላላ አገልግሎት

II. በመጠይቁ ጊዜ የሚነሱ ጉዳዮች

1. አይነ ስውራን በመማር ማስተማር የሚገጥማቸው ችግሮች
2. ችግሮቹን ለማቃለል ት/ቤቱ ያደረገው ጥረት
3. ት/ቤቱ አይነ ስውራን ተማሪዎችን በተለያዩ ክበቦችና የሙያ ዘርፎች ውስጥ የማሳተፍ ጥረት
4. የአይነ ስውራን ተማሪዎች የአመራርና የምክር አገልግሎት ሁኔታ
5. የት/ቤቱ መ/ሀራን በልዩ ትምህርት ሥልጠና እንዲያገኙ የት/ቤቱ ጥረትና ውጤት
6. ሌሎች

ከአይናማ ተማሪዎች ጋር በሚደረገው የቡድን ውይይት ውስጥ የሚከተቱ ነጥቦች

1. አይነ ስውራን ተማሪዎች በክፍል ውስጥና ከክፍል ውጪ የሚያጋጥማቸው ችግሮች
2. መምህራን የሚስተምሩትን ሐሳብ ለአይነ ስውራን ተማሪዎች ግልፅ ለማድረግ የሚጠቀሙት ልዩ ድርጊቶችና የማስተማሪያ ዘዴዎች
3. የመምህራን ግንኙነት ከአይነ ስውራን ተማሪዎች ጋር በክፍል ውስጥና ከክፍል ውጪ
4. የአይነ ስውራን ተማሪዎች ግንኙነት ከክፍል ውጪም ሆነ ከክፍል ውስጥ ከአይናማ ተማሪዎች ጋር
5. የአይነ ስውራን ተማሪዎች ለመምህራኖችና ለአይናማ የክፍል ተማሪዎች ያላቸው አመለካከት /Attitudes/ ምን ይመስላል
6. ባጠቃላይ የመምህራን፣ የአይነ ስውራን ተማሪዎችና የአይናማ ተማሪዎች የአይነ ስውራን ተማሪዎች ከመደበኛ ተማሪዎች ጋር ተቀላቅሎ በመማር ላይ ያላቸው አመለካከት /attitudes/

Appendix E

List and Descriptions of Special Materials and Equipment by Gearheart, Weishahn and Gearheart (1988).

- a) **Braillewriter**- it is a six- key machine manually operated and types Braille
- b) **Slate and stylus**- The slate is a metal frame with openings of the size of the Braille dots; the stylus is a pointed object used to emboss the dots.
- c) **Raised- line paper**- it is a special paper that allows the visually impaired student to write script or a raised line, and to draw a graph.
- d) **Cassette tape recorder**- used to take notes, formal compositions, listen to recorded texts or record assignments
- e) **Talking book and other recorded programs**- records and tapes recorded materials such as text books and leisure readings and offer on disks and cassettes
- f) **Variable speed attachment**- used to vary the speed at which the student listens to tape
- g) **Portable Braille recorder**- is interfaced with a computer and converts Braille to standard print and vice- versa
- h) **Speech compressor**- is a modified tape recorder in which the pause between each recorded word is electronically removed
- i) **Optacon**- an instrument that scans printed material and converts it to tactually read print format
- j) **Talking calculator**- an electronic calculator that presents results visually and auditorily
- k) **Closed- circuit television**- a system that enlarges printed material on a television screen
- l) **Kurzweil reading machine** - a computer based device that provides direct access to typed or printed material by converting it to synthetic speech.
- m) **Echo commander**- it is a device attached to a computer and converts visual representation into speech.

Declaration

I, the undersigned, declare that this thesis is my original work, has not been presented for a degree in any other university and that all sources of material used for the thesis have been duly acknowledged.

Name _____

Signature _____

Date _____

Approved by:

Dr. Teka Zewdie _____

(Advisor)

Signature

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