ATTITUDES OF TEACHERS AND STUDENTS REGARDING THE INTEGRATION OF HEARING IMPAIRED STUDENTS INTO REGULAR CLASSES

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June/ 2000
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A thesis submitted to the School of Graduate Studies of Addis Ababa University in partial fulfillment of the requirements for the Degree of Masters of Arts in Special Needs Education in Addis Ababa University

June, 2000
Addis Ababa
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Acknowledgement

I acknowledge my debt of gratitude to the Amhara Region Education Bureau and East Gojam Zone Education Office for giving me an opportunity in Studying for M.A degree.

My advisor Dr. Teka Zewdie exceptionally deserves a specific mention for his immense concern and encouragement. I thank him for his invaluable comments and unreserved assistance to accomplish this study. I would like to thank Dr. Habtegiorgis Berhane for all efforts he made to me to settle the problems in getting this educational opportunity. I express my gratitude to Dr. Eskinder Tafesse for his constructive suggestions and help with the necessary materials that were relevant for my research. I would also like to thank Ato Tsegaye Cherinet and Ato Amakelew Cherkosie for their high concern and readiness to share my problems during my study. My heartfelt thanks goes to W/ro Abebech Mulugeta, Ato Ambachew Lemessa and to Ato Alebachew Mekonnen for their continuous encouragement and willingness to extend their support when ever requested. I would also like to thank Ato Demekel Tsehay for his kind assistance in processing the collected data for the research.

My father Gebreselassie kidane, my mother Birknesh Gebretsadik, my brothers Belay G/selassie and Damtew G/Selassie and my sisters Woinshet G/selassie and Asnakech Glselassie also share my heart-felt gratitude for their moral support.

My heart-felt thanks go to W/ro Yeshi Mengistu for her humble hospitality and motherhood treatment. I express my appreciation to my wife Misrak Tafesse for her continuous encouragement, sense of humor and support. I also appreciate my son Binyam Abebe, my daughters, Hanna Abebe and Betelihiem Abebe for their patience till I complete my study. Last, but not least, I express my heart felt thank to my instructors, to the Librarians (in A.A.U. and MOE), participants in the study, colleagues and to those whose name is not mentioned here for they have contributed in some way to enrich this study.
# Table of Content

Acknowledgement ........................................................................................................... 1  
List of Tables ..................................................................................................................... 4  
ABBREVIATION ................................................................................................................ 5  
ABBREVIATION ................................................................................................................ 5  
ABSTRACT .......................................................................................................................... 6  
Chapter One ....................................................................................................................... 8  
  1. INTRODUCTION ........................................................................................................ 8  
    1.1 Background Information ............................................................................................. 9  
    1.2 Significance of the Problem ......................................................................................... 11  
    1.3 Statement of the Problem ........................................................................................... 13  
    1.4 Objectives of the Study ............................................................................................ 15  
       1.4.1 General Objective .............................................................................................. 15  
       1.4.2 Specific Objectives ............................................................................................ 15  
    1.5 Operational Definition of Terms ............................................................................... 16  
    1.6 Delimitation and Limitations of the Study ................................................................. 16  
Chapter Two ....................................................................................................................... 18  
  2. Review of Related Literature ....................................................................................... 18  
    2.1 History of Special Education ...................................................................................... 18  
       2.1.1. Historical Development of Special Education - General Overview ................. 18  
       2.1.2. Education of the Hearing Impaired .................................................................. 21  
       2.1.3. Some Educational Outlooks contributing to the Development of Integration Education .............................................................................................................. 26  
    2.2 Hearing Impairment (Meaning, Classification, Causes and Prevention) ................ 29  
       2.2.1. Meaning/definition of Hearing Impairment ......................................................... 30  
       2.2.2. Classification of Hearing Impairment .................................................................. 32  
       2.2.3 Causes of Hearing Impairment ............................................................................. 32  
       2.2.4 Prevention of Hearing Impairment ...................................................................... 34  
       2.2.4 Prevention of Hearing Impairment ...................................................................... 36  
    2.3 Developmental profile of the Hearing-Impaired ....................................................... 38  
       2.3.1. Language Development ..................................................................................... 39  
       2.3.2 Cognitive Development ...................................................................................... 41  
       2.3.3 Social and Emotional Development ................................................................... 44  
       2.3.4. The Need for Early Intervention ...................................................................... 47  
    2.4 Attitude ..................................................................................................................... 49  
       2.4.1 Impact of Attitude on Integration ....................................................................... 49  
       2.4.2 Attitudes of Teachers towards Integration ......................................................... 53  
       2.4.3 Attitudes of Students towards Integration ......................................................... 63  
Chapter Three .................................................................................................................... 66  
  3. Methodology ............................................................................................................... 66  
    3.1 Study Method ............................................................................................................ 66  
    3.2 Participants ............................................................................................................... 67
3.3 Instruments

3.4 Instruments and their Administration Procedures

3.5 Plan of Data Analysis

Chapter Four

4. Results

4.1 Background Profile of the Participants

4.2 Results of Attitudes towards Integration

4.2.1 Responses of the Participants on Attitude Scale Items

4.2.3 Groups’ Mean Differences on Integration

4.2.4 The Relation of Some Demographic Variables to Attitudes towards the Integration of HI Students (Multiple Regression Analysis)

4.2.5 Some Perceived Factors that Contributed to Favor or Disfavor the Integration of HI Students

4.2.6 Analysis of the Focus Group Discussion healed with Hearing and Non hearing students

4.2.7 General Information from Key Informants

Chapter Five

5. DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Discussion

5.2 CONCLUSION

5.3 RECOMMENDATION

5.3.1 Measures to be taken by the Government

5.3.2. At School Level

5.3.3. Teachers

REFERENCE
List of Tables

Table - I Groups' Mean Values on attitudes towards Integration ...........................................83
Table - II Groups’ Mean values and Standard Deviation Distribution by Sex .........................84
Table - III t-test Results for Mean Differences between groups in their Attitudes towards the Integration of HI Students ..........................................................................................84
Table - IV The Relation of Predictor Variables to Attitudes of Hearing-impaired Students towards Integration. ........................................................................................................85
Table - V The Relation of Predicator Variables to Attitudes of Regular Class Students towards the Integration of HI Students into Regular Classes .........................................................86
Table - VI The Relation of Predictor Variables to Attitudes of Special Class Teachers towards The Integration of HI Students into Regular Classes ..................................................87
Table - VII The Relation of Predictor Variables to Attitudes of Regular Class Teachers towards the integration of HI Students ...................................................................................87
ABBREVIATION

dB - decibel
FDRE - Federal Democratic Republic of Ethiopia
HI - Hearing-Impaired/hupairment
MOE - Ministry of Education
PHCE - Population and Housing Census of Ethiopia
SPSS - Statistical Package for Social Sciences
TGE - Transitional Government of Ethiopia
UNICEF - United Nations International Children's Emergency Fund
ABSTRACT

The purpose of this study was to examine the attitudes of students and teachers towards the integration of hearing-impaired (HI) students by employing the survey method and a focus group technique. The study also aimed to reveal the main perceived factors to favor or disfavor the integration of HI students and the mean difference between groups was checked by a t-test. The relation of some demographic variables to attitude towards integration was also examined by using multiple regression analysis.

To achieve the purpose of the study, 39 grades 5 and 6 hearing-impaired students, 40 grades 5 and 6 regular class students, 20 special class and 20 regular class teachers (a total of 119, m=56, f=63 participants), were included in the study. The participants were selected from the two purposely-selected Governmental Primary Schools Menelik-II School in Addis Ababa and Adama No. 2 School in Nazareth).

A three-point attitude scale questionnaire consisting of 20 items with some open-ended items) and a focus group discussion technique had been used to collect the data. General information was also secured from the key informant teachers. The obtained result indicated that the majority of hearing-impaired students (87.2%), special class teachers (70%) and regular class teachers (90%) have negative attitude towards integration. The study has also confirmed that there was no smooth relationship between HI and regular class students. The mean scores of HI students (1.70), regular class teachers (1.78) and that of special class teachers (1.98) were below the average value (62): indicating their negative attitude towards integrations. However, regular class students (67.59%), appeared to have a somewhat positive attitude towards the integration of HI student’s.

The major perceived factors to disfavor integration were related to communication problem, perception of the participants about situations in the school and to feeling of incompetence in facing challenges that may be encountered in the integration process. The mean difference between the hearing-impaired and regular class students was statically significant (t = -7.260, df = 77, p: 0.001). On the other hand, the mean
difference between special versus regular class teachers, pre-lingual versus post-lingual HI students, and between male and female participants in each group was not statistically significant at \(a=0.05\) levels.

The relation of some demographic variables (age, sex and grade level) to change of attitude was not statistically significant in case of HI and regular class students. However, the overall contribution of the independent variables (27.29\%) to change of attitude was statistically significant in case of regular class students. The relation of the independent variables (age, sex, qualification level and work experience) to change of attitude was not statistically significant cant in case of special and regular class teachers.

While the relationship of the independent variables can be seen as interactive, the degree to which each variable has contributed to change of attitude did not appear clearly. Hence, the result suggests that effective measures need to be taken to reduce barriers and cultivate positive attitudes towards integration by establishing a harmonious relationship between and among teachers and students. Further research is also required to examine the relative contribution of the demographic variables to attitudes towards integration.
Chapter One

1. INTRODUCTION

The integration of students with disabilities (including the hearing impaired) seems to be a global trend; of course, without denying the existing controversy over it. As noted by many educators, one of the reasons for integrating handicapped students into the regular classroom was to facilitate positive interactions among handicapped and non-handicapped students (Warren, 1979, as cited by Horne, 1985, p.19).

However, the attainment of this goal, as stated by Horne, (1985, p.19), "is highly dependent" on the attitudes of teachers and peers towards handicapped students. Moreover, it is pointed out that it would be "realistic to suppose that many handicapped students (specially the hearing impaired) will be subjected to a negative school experience" unless the attitudes of peers and teachers are changed (Horne, 1985,p23).

The study conducted by Elser (1959) as cited by Horne (1985, p.69), indicated that hearing-impaired students were not positively welcomed by their classmates. Conversely, in the study conducted by Kennedy & Bruininks, 1974, cited in Horne (1985,p.71), "students with severe hearing losses were chosen significantly more often as friends than non-disabled students".

Thus, from what has been mentioned, it is possible to assume that the effect of integration may vary from place to place depending upon circumstances under which it was practiced. Concerning this same issue, Gearheart & Weishhan (1992,p.127) stated that
information concerning the effects of mainstreaming integration appears to be contradictory and confusing.

Therefore, what ever the case might be, if integration is to be favored and practiced as an educational modality, then, attitudes of regular class students, teachers and that of hearing impaired students should be assessed in advance.

1.1 Background Information

At present, the number of persons with disability appears to be at an alarming rate of growth. As it is indicated in the reports of surveys, "the estimated global population of persons with disability amounts to over 500 million". It is believed that "in most countries at least one person out of 10 has sensory, mental, or physical impairment (Tirusew, 1996, page 42, see also International Rehabilitation Review, 1988).

It has also been predicted that by the year 2000 (in which we are now), the number of persons with disabilities in the world would at least be 600 million of which 150 million children (under age 15 years) will be with disability living in developing areas (Tirusew, 1996, UNICEF, 1989).

The prevalence of disabilities in developing countries seems to be higher than it is in the developed countries. Moreover, studies indicated that about 80 percent of all persons with disabilities live in isolated rural areas in developing countries (Ibid.). African countries seem to share the same problem; even worse. For instance, according to the National
Disability Survey of Zimbabwe (1981) out of its total population (which is 10 million), one million (10%) persons were classified as disabled out of which 25% (250,000) were of school age children (Fred, 1996). As Tirusew (1996) noted it, "the situation of persons with disabilities in Ethiopia is not far from the global conditions, but even severe" (p.42). According to the 1994 Population and Housing Census of Ethiopia (PHCE), out of the total population (53,073,322) there were 988,853 (1.9%) persons with disability (excluding the homeless) and out of this figure 131,359 persons have hearing problems and 58,415 have hearing and speaking problems (PHCE, 1994,p.62). The released statistical information indicated that, of the total persons with disability, 17.7 percent are in the age group 0-14 years and 48 percent in the age group 15-49 years (Ibid. p.60).

From historical point of view, sensory disabilities, like hearing impairment, have existed "since the beginning of the human race" being accompanied by misunderstanding and superstitious beliefs about the nature of disability and the disabled persons (Gearheart and Weishahn, 1992,p.6). As a result, until the 16th century, individuals with disabilities were not seen as human beings and hence "were misunderstood, mistreated, or put to death" (Gearhart and Wieshan, 1992, p.7).

In the latter part of the 16'h century, the picture about persons with disability began to change with the need to provide special education for individuals with hearing impairments, visual impairments and mental retardation particularly in France (Ibid.). Thus, residential schools, special schools, special classes and integration (with its cascade model of alternative forms) have been used respectively as educational modalities for the
provision of special education (Gearhart and Weishan, 1992, pp. 6-10). Although a move towards integration and/or inclusive education appears to be a global phenomenon, maintaining "positive attitudes reflected in a commitment to encouraging the progress of students with disabilities" through the realization of full integration/mainstreaming had been a critical academic issue (Ibid). As noted by researchers, integration "inevitably requires radical changes in thinking" about special education, and hence it was not always valued with positive attitudes by some persons that are "most closely involved" (Jenkinson, 1997, p. 29).

However, some previous research outcomes have affirmed that most progress has been achieved in integrating hearing-impaired students into regular classrooms (Croll and Moses, 1985, p. 97). To Biklen (1992, p. 104), integration is an educational model that "breeds acceptance among students" and more physical integration is believed to lead to greater acceptance of children with disability by the "normal" students.

On the other hand, some researchers seem to have a common agreement that integrating/mainstreaming students with special needs in regular classes/education "depends crucially" on the attitude and the actions of the regular class teachers, students and the school team (Milward and Dyson, 1995, p. 10).

1.2 Significance of the Problem

The history of special education in Ethiopia is noted with "no written documents ... about the conditions of the disabled and their education in the traditional system" (Tibebu,
It is further stated that "the strong influence of religion, the low literacy level of the society and the dominance of myths... attributed to disability" have played a significant role in the mystification of the nature of disability and its effects (Ibid.).

Nevertheless, referring to the nature of the traditional educational system, it is assumed that some disabled groups, like the visually impaired might have possibly attended church education. Of course, no document is accessible that indicates the place of the hearing impaired children in the traditional church school.

Today, in the Ethiopian context, in the Education and Training Policy (1994) special education appears to be favored. In this policy, emphasis is given to the provision of education both to the handicapped and to the gifted "in accordance with their potential and needs" (TGE, 1994,p.9) and further confirming that "special education and training will be provided for people with special needs" (TGE, 1994,p.17). In addition to what has been stated in the education policy, the constitution of the Federal Democratic Republic of Ethiopia (FDRE) under article 90, declared that "to the extent the country's resources permit, policies shall aim to provide all Ethiopians access to public health and education (FDRE, 1995,p.13).

As a matter of fact, though efforts are made to formulate new educational policy that allows equal access to all citizens, the number of special needs children that benefit from special education is very scarce. According to the released information in the Education Master Plane of Ethiopia (Zero draft), it is only 0.08 percent that are enrolled in the
special education program. Research activity in the area of special education also appears to be very limited.

The negative attitude of the society towards disability, at least in part appears to be one of the reasons for the least enrolment of special needs children in schools (Tilahun, 1991, E.C. In fact, to materialize integration as an effective educational practice in the Ethiopian context, teachers and students should develop positive attitudes towards the integration of hearing-impaired students into regular classrooms.

Therefore, it is highly pertinent to examine the attitudes of teachers and students towards the integration of HI students to come up with information which may be helpful for designing better academic intervention.

1.3 Statement of the Problem

The educational movement undertaken with the aim to integrate special needs children into general education classrooms is firmly established in various countries. This can be taken in itself as "a world-wide movement in educational reorganization" (Milward and Dyson, 1995, p.1091. As seen from the general trend, although some evidences indicate that integrating hearing-impaired students into regular classes seems to win the trust of some educationalists, its implementation is not yet fully achieved under all circumstances for various reasons.

Even though the concept and provision of special education services seem to have a
relatively short history in Ethiopia, recently, the development of the provision of special education to children with handicaps (which includes the HI children) appears to be at a growing rate. In the 1995 UNESCO's report, Ethiopia is included in the list being one of the countries with a policy that encourages integration education.

The zero draft document "Education Master Plan of Ethiopia" (MOE, 1994,p.72), has confirmed the shortfall in the provision of special education services. This indicates that "the education and training needs of the majority of children with handicaps cannot be met by special schools", which "can also be a major barrier to achieve integration".

Constraints related to shortage of sufficiently trained human power, scarcity of special teaching materials and instruments (like hearing aid), the existing possible misconceptions about the academic potentiality of children with hearing -impairment are some of the problems that may be obstacles for integration.

As a matter of fact, special education itself is a relatively new phenomenon in Ethiopia. Consequently, there seems to be lack of clear vision concerning the relevance of integration and factors that hinder its promotion. Hence, a systematic study particularly in the area of attitude assessment towards the integration of hearing- impaired students appears to be very important.

Hence, the following research questions were formulated that the study should answer

a) What is the attitude of hearing-impaired and regular class students towards the integration of HI students?
b) What is the attitude of special class and regular class teachers' attitude towards the integration of hearing impaired students?

c) What are the perceived factors that may affect preferences of the respondents in favoring or disfavoring the integration of hearing-impaired students into regular classes?

d) Is there an attitude difference between groups? (i.e., hearing-impaired students versus hearing students and special class teachers versus regular class teachers).

e) What is the relation of some socio-demographic factors to the attitudes of the participants towards integration?

1.4 Objectives of the Study

The study has the following general and specific objectives:

1.4.1 General Objective

- To examine the attitudes of special class and regular class teachers, and that of Special class (HI students) and regular class students towards integration.

1.4.2 Specific c Objectives

a) To identify the participants' attitudes along the continuum of the measuring scale.

b) To identify factors that is perceived as threatening or rewarding to the idea of integration.

c) To assess the relation of some demographic variables (age, sex and grade level) to attitudes of students towards integration and also to see the relation of age, sex teachers' work experience and qualification level to the attitudes of teachers towards integration.
d) To check the mean differences between groups on attitudes towards integration.
e) To describe the situation and then suggest the possible measures to be taken to minimize problems that are detected by this study.

1.5 Operational Definition of Terms

- **Attitude** - refers to special and regular class teachers' and students, Response/reaction in favoring or disfavoring the integration of hearing-impaired students into regular classes.

- **Integration** - refers to the situation where the hearing-impaired and the hearing students are placed together in the same classroom to attend their education.

- **Hearing-impaired** - refers to grades 5 and 6 special class students whose hearing loss was assumed to be from 41 dB to 91+dB? Enrolled in the two selected governmental elementary schools in 1992 E.C.

- **Regular classes** - are classes where the hearing students attend their general education in the selected governmental elementary schools.

- **Special classes** - are classes located within the selected two primary governmental schools set up where the hearing-impaired students are attending their education.

- **Teachers** - refers to the special unit teachers and the regular class teachers assigned to teach in the two selected governmental primary schools.

- **Students** - refers to grades 5 and 6 hearing-impaired and the hearing regular class students enrolled in 1992 E. C. in the two selected governmental primary schools.

1.6 Delimitation and Limitations of the Study

- For practical reasons, only two schools (one primary school from Addis Ababa and the other school from Nazareth/Adama) with special units were purposely selected as a study site. Limited number of participants was also included in the study. Therefore, a better picture would have been obtained if more schools and participants had been included in the study.
Special education, itself, is a relatively new phenomenon in Ethiopia. Hence, locally written literature particularly on attitudes towards the integration of HI students is scarcely available. The researcher therefore, feels that sufficient evidences were not presented to supplement the study in the Ethiopian context.

1 The time constraint, resulting from the delay in the release of budget, has created pressure on the part of the researcher. Hence, it would have been possible to undertake some other additional activities to enrich the study.
Chapter Two

2. Review of Related Literature

2.1. History of Special Education

2.1.1. Historical Development of Special Education - General Overview

From historical point of view, the attitudes of community members towards persons with disability in terms of willingness to attend to their special needs has been greatly influenced by the existing socio cultural philosophy, medical knowledge and by the perceived causes of 'disability (Roessler and Rubin, 1995, p.1).

History tells us that "prior to the late 1700s the fate of disabled individuals was likely to be a -cruel one" and "the Greeks, Romans and other early cultures" are often cited by their practices of killing the unwanted children (Tibebu, 1995, p.13).

As time went on, there came a conviction which considered children with special needs as rent from the rest of children with a sense to develop separate educational systems (Hegarty and Pocklington, 1988, p.8). Moreover, some professionals initiated the concern he educational rights of children with disability and as a result, residential schools, special day schools and special classes were opened respectively (Moores, 1996, p.1).

At the beginning, although opinions may differ on reasons for establishing segregated Schools for special needs students, it was assumed that such educational models could
serve proper utilization of instructional equipment and for maintaining a one to-one attention. Such a model was also assumed to encourage feeling of security among special needs children by avoiding unfair comparison with those who are believed to be more competent students (Jenkinson, 1997, p.11).

Fish (1985, p.23) on his part informed that ideas about special education have been confused by many people. This was partly "due to its history, due to changing professional responsibilities (a change from medical to educational approach) for children with disability and partly because of recent change in its relationship to ordinary education,'.

However, the growing public awareness, the achievement in the technological advancement and the improved legislation in some countries have opened the way for better provision of education to children with special needs (Moores, 1996, p.1). Particularly in 1950s and 1960s, people came to be aware of a continuous history and practices of segregation in their own societies with the acknowledgement that had "strong value implication". This condition, in return has brought the idea of the integration of special needs children with their natural peers with "a wish to move away" from segregated educational practices (Millward and Dyson, 1995,P.44)

According to Fish (1985, p.vii), it was in 1980s that revolutionary changes took place in special education with the aim to educate children with special needs. Similarly, it was indicated that one of the 1960s significant achievements in the area of special education
was e conceptualization of the delivery of special educational services as a continuum of
vices known as the "Cascade model", Viewing the regular school classroom as the most

As noted in several sources, the historical development of special education seems to
differ from country to country. For instance, special education for pupils with special
needs was a relatively recent development in Great Britain (Hegarty and Pocklington
(1988, p.8), and in the United States it was at the beginning of the nineteenth century
(Meijer and Hegarty, 1994, p.60).

As reported by Jenkinson, (1997,p.10), at the beginning, centers for the provision of
special education were set up by Voluntary Organizations for students with specific
disability till governments increasingly assumed responsibility for the education of all
students.

Regarding the historical development of special education in Ethiopia, it has a relatively
closer point of time reference with the establishment of the first regular school in the
country. It was within a time gap of less than a decade since the establishment of the first
regular school (Menilik II school) that special education for the disabled was opened in
its modern form in Ethiopia (Tibebu, 1995).

Like in the case of other countries, the first special school was started by Missionaries
from jrope - the first special school being opened for blind children in 1917 (MOE,1990,

Unfortunately, the educational system that had just begun to emerge was seriously disrupted; by brief Italian invasion (Tekeste, 1990, p.3). Thus, the first special school was closed I reopened in 1955 in Addis Ababa. Additionally other special schools were opened for Idren with other disability types in 1960s and 1970s (Tibebu, 1995, p.24). As noted by Tibebu (1995), it was in the 1980s that the Ethiopian government, through Ministry of Education, began to take part in the provision of special education.

The new educational policy enacted in 1994, has considered the provision of education to special needs children. Under its specific objective, it is stated as: "To enable both the handicapped and the gifted learn in accordance with their potentials and needs" (TGE 1994, p.9). As to the educational training, the educational policy further confirmed that "special education and training will be provided for people with special needs (TGE, 1994, p.17).

Aside from what has been stated in the educational policy, the Ethiopian constitution under Article 41, declared that "Every Ethiopian national has the right to equal access to publicly funded social services" (FDRE, 1995, p.15). Moreover, under Article 90, it is stated as follows: "To the extent the country's resources permit, policies shall aim to provide all Ethiopians access to public health and education" (FDRE, 1995, p.13).

2.1.2. Education of the Hearing Impaired
Due to limited knowledge about the nature of disability, the consequences of physical and sensory impairments were conceived as "an unalterable/static characteristic of the child" (Hegarty and Pocklington, 1988, p.8). Moreover, it has been believed that sensory disabilities were caused by evil sprits and the reaction of society in those times was more of inhuman (Millward and Dyson, 1995, p.44).

In early times, Greek philosophers, like Aristotle, considered the ear as an organ of instruction and hearing was taken as a major factor contributing to intelligence (Moores, 1996, p.32). As a result, owing to misconceptions attached to hearing impairment, hearing impaired children had been denied of their educational rights for many years (Moores, 1996, 32, see also Deland, 1931).

Initially, the major concerns were centered on defining the legal and religious rights of the hearing impaired and "Education for the deaf/hearing impaired was not a consideration in ties in which the majority of the population was illiterate" (Moores, 1996, p.32).

In the long run, educators and other professionals began to have an insight in to the possibility of educating the hearing-impaired children. As noted by Goldstein (1989,p.4), in the 16th century, there was a renewed interest in Europe and institutions were opened to educate even the profoundly deaf children. As a result, most deaf/hearing-impaired children began to attend their education separately "either in residential schools or in day school for the deaf" (Moores, 1996, p.8).
As reported by Smith and Luckasson (1995,p.461), Pedro Pone de Leon (1520-1584), a Spanish monk, was known to be the first teacher of hearing impaired students, and by the 1700s schools for the hearing-impaired/deaf were opened in England, Edinburgh, France and in Germany. In 1871, the first school for the deaf was opened in the United States.

However, around the beginning of 1968, their came a reaction against increasingly segregated educational provisions for hearing impaired children (Moores, 1996, p.17). In fact, referring to its historical background "for more than three hundred years, the primary emphasis among educators of the deaf hearing impaired has been communication" by giving secondary attention to academic achievement. Today, the majority of deaf/hearing impaired children are educated in schools where hearing students are attending as well (Moores, 1996, p,8). Currently, legislation, technological advances, improved educational services, and the towing public awareness have brought a remarkable progress in the area of deaf education (Moores, 1996, p.1).

However, in spite of the achieved progress, the field of deaf education has been full of "bitter controversy and conflict" and the educational achievement is said to be far below what it should be (Moores, 1996,p.3). Furthermore, Smith sand Luckasson, (1995,p.478), on their part stated that "The best educational methods for students who are deaf/hearing-impaired are still matters for debate by those who are deaf and by professional educators". It is believed that hearing-impaired children deserve to be placed in an environment where they can communicate with peers, and meet their "academic, social,
emotional and cultural needs". They deserve to be in an environment where they are truly included in every aspect of the school" (Smith and Luckasson, 1995, pp.482-483; see also Hawkins, 1993, p.7).

On the other hand, Smith and Luckasson, 1995, p.483) noted that for students who use sign language as their primary means of communication, "the regular school environment where administrators, teachers, and classmates are not fluent in sign language can result in considerable isolation".

As a general truth, "the progress of ideas through educational research has been slow, particularly in the field of education for the deaf (Powell & Finitzo et al., 1985, p.3). Education for the deaf itself has also been the subject of many disputes (Swain and Finkelstein, 1994, p.146).

Aside from the existing constraints, depending upon the severity and type of disability, regular education classrooms, resource rooms, special classes, special day schools and residential schools" were used as placement options to educate children with special needs (Smith and Luckasson, 1995, p.482).

Croll and Moses (1985, p.97) on their part claimed that it was perhaps in the field of hearing impairment that most progress has been achieved "towards integration of handicapped children into regular schools". While discussing about this same issue, Smith and Luckasson, 1995, p.477) informed that "Along with acquiring educational
benefits, students with hearing impairment acquired social skills in regular classrooms”.

As noted by Biklen (1992, p.104), being integrated into regular classes can play a crucial role in advancing better academic performance - for children with disability will do better when they sense that they are accepted and valued by their "normal" peers. This suggests that there can be a situation where the hearing-impaired students can benefit from their being integrated into regular classes; provided that the situations are well structured to facilitate social interaction.

As to the deaf/ hearing-impaired education in Ethiopia, special schools for the hearing impaired were first opened by the non-governmental organization, in 1956 E.C. (in Addis Ababa -Mekanisa) and 1959 E.C.(in Addis Ababa-around Bole) by the Church of Christ Mission and by the American Mission respectively (Tilahun, 1991, E.C. p.7).

Recent evidence (as mentioned by Tilahun, 1991 E.C., p.15), shows that residential schools, special schools, special classes and regular classes are forms of educational provision available for hearing-impaired students in Ethiopia. Currently, it appears that the opening of special classes for hearing-impaired students is at a growing rate bringing students into closer physical proximity for a possibly better social interaction.

However, as Stainback and Stainback, (1990, p.19) indicated it, "care must be exercised to ensure that any organized grouping of people does not violate their interests, needs, and basic rights". Hence, to ensure better educational provision it will be highly pertinent
to examine the attitudes of teachers and students in order to make fair educational placement.

2.1.3. Some Educational Outlooks contributing to the Development of Integration Education

To reexamine previous educational outlooks can help to visualize the main ideas that have served as basis for the development of new educational modality. As seen from history, the idea of "Education for all" and particularly the educational concern for students with disabilities is not a recent phenomenon as such; but was an issue for the past many years.

It appears true that the inhuman living conditions of the disabled people, the shortcomings of the instruction offered by the special classes and movements that opposed the inappropriate use of tests in classifying students with disability have served as basis for the development of the idea of integration. Moreover, the growing concern about the social life of individuals with disability and the existence of different support systems designed for the regular teachers have also contributed to the emergence of the concept of integration as an educational modality (Tibebu, 1995, pp. 18-19.

In addition to the above-indicated facts some early educational/philosophical out-looks related to the nature of human learning and education of students with disabilities are likely to have their own contribution to the development of new educational approaches. The desire to educate people, to mold and shape their character and develop the
potentiality of the learners to the "highest standard of excellence" was one of the most important of the Greek ideals (Osborne & Dimattia, 1993, p. 107).

This early Greek educational Philosophy, as indicated by Osborne & Dimattia (1993, p.107), is currently incorporated in the legislation of such countries as the USA:. Moreover, the Greeks were considered as important educators due to "their awareness of the position of the individual in the community" with due regard to individual values and freedom (Jaeger, 1939, cited by Osborne & Dimattia, 1993, p.1073.

However, in spite of the efforts that have been made to develop the potentiality of the learners, the "wonderful vision" of the Greeks about "the fullest possible human development" was not translated into 'practical educational strategies" to be applied in educating the masses (Ibid.).

As to the idea of" Education for all" it was in the early seventeenth century that the first call for the universal education of all children has been made by John Amos Comenius (1923), but no attention was given to him. He declared that, "Not the children of the rich or the powerful only, but of all alike, boys and girls, both noble and ignoble, rich and poor ….should be sent to school" (Osborne & Dimattia, 1993, p.107).

Similarly, Mortimer J. Adler (1982) cited in Osborne & Dimattia, (1993, pp.108-109), called for "Universal Education of all children" thereby forwarding a philosophy (a philosophy drawn from fourth century B.C.) which was based on classical theories of
knowing. Adler's initial premise was that "All children can learn, that there are no uneducable children; rather some schools, teachers and parents fail to teach them".

Adler (1982), cited in Osborne & Dimattia, (1993, p. 108), on his part considered children as they are all the same in their human nature. He further stressed that "Each individual possesses the common traits of our species; the differences that makes each child a unique individual are differences in degree not in kind".

Regarding the nature of education, Adler argued that (on the basis of theories of human knowing) "there is only one education for all children" and his theory suggests that "the distinction between general education and special education is an artificial one (Ibid.). Supporting the view forwarded by Adler, Stainback and Stainback have stated as follows: "There are not two distinctly different types of students, that is, those who are special and those who are regular. Rather, all students are unique individuals, each with his/her own set of physical, intellectual and psychological characteristics" (cited by Osborne & Dimattia, 1993, p.108).

This is to say that, regardless of differences among individuals, every child has his/her own potentiality that can be cultivated and maximized through appropriate educational approach. Therefore, though it may not be applicable to all individuals, segregating children due to their certain limitations appears to be denying their rights to grow up in an environment where they can learn from their "normal" peers.
Adler, once again noted that the school personnel and other concerned figures can make their own contribution by "establishing a positive and constructive attitude among the staff towards the idea that all children can learn and should learn in the same environment" (Osborne & Dimattia, 1993,p.11). Therefore, the idea of providing education to children with and without disability within the same environment is not a recent phenomenon as such.

2.2 Hearing Impairment (Meaning, Classification, Causes and Prevention)

Researchers usually agree that listening is an important tool for the child to learn and acquire information from his/her environment through the auditory channel. It is through hearing that the child "learns to discriminate between loud and soft, high and low, and disturbing and pleasant sounds". Additionally, hearing is instrumental for the child to "determine the direction, distance and meaning of sounds" by analyzing the human voice (Gearhart and Weishahn, 1992, p.140).

It is believed that hearing impairment can negatively affect the normal pattern of speech and language development thereby arresting the child's ability to develop such as communication skills - reading' writing, listening and speaking (Ibid., p. 141).

With this brief information in mind, the meaning, classification and causes of hearing impairment will be treated shortly in the following sub-headings.
2.2.1. Meaning/definition of Hearing Impairment

In defining hearing impairment, two extreme points of view are represented by professionals adhering to different philosophical orientations, namely the physiological and the educational approach. According to Hallahan & Kauffman (1991, p.266), persons who strictly maintain physiological view points are "interested primarily in the measurable degree of hearing loss" where as educators who favor educational viewpoint are concerned with "how much the hearing loss is likely to affect the child's ability to speak and develop language". The most commonly used and accepted set of definitions related to educational orientation are presented as follows:

- **Hearing-impairment** - is defined as a generic term indicating a hearing disability, which may range in severity from mild to profound - includes the subsets of deaf and hard of hearing.

- **Deafness** - is understood as a condition when a person's "hearing disability precludes successful processing of linguistic information through audition, with or without a hearing aid.

- Hard of hearing - is a person who, "generally with the use of a hearing aid has residual hearing sufficient to enable successful processing of linguistic information through audition (Hallahan & Kauffman, 1991, p.266, See also Brill MacNeil, & Newman,1986,p.67).

Most importantly, educators are highly concerned about the age of onset of hearing impairment and its relationship with language development. As a matter of fact, deafness (like in the case of hearing impairment) "has no a universally accepted definition" and it
will be unfair to define deafness "in terms of a single etiological agent" (Cleve, 1987, p.25).

According to the explanation given by the Executives of American Schools for the Deaf (Frisina, 1974), "A deaf person is one whose hearing is disabled to an extent that it precludes the understanding of speech through the ear alone, without or with the use of hearing aid". A hard of hearing person is one "whose hearing is disabled to an extent that makes difficult, but does not preclude, the understanding of speech through the ear alone, without or with a hearing aid" (cited in Reynolds and Janzen, 1990, p.300).

On the other hand, the definition that was adopted by UNESCO experts' committee (1985, p.5), cited in Reynolds & Janzen (1990,p-300), views deafness as a relative phenomenon. For instance, it is indicated that children, who are considered as deaf owing to their severe hearing impairment combined with lack of proper training, may not be included to the deaf group if "adequate resources for diagnosis, training and provision of hearing aids" are available to them. As a whole, the extent of hearing impairment and the date of onset "relative to language acquisition" were taken as important factors to determine whether the given individual is a deaf or not (Reynolds & Janzen, 1990, p.301).

From physiological perspective, in hearing threshold classification/measured hearing loss, there is lack of consistency in setting the limits for different levels of hearing loss in different categories (Refer to Hallahan & Kauffman, 1991, p.266, Reynolds & Janzen,
As Hallahan and Kauffman (1991, p. 266), put it "It is best not to form any hard-and-fast opinions about individuals ability to hear and speak solely on the bases of a classification of his/her hearing disability".

2.2.2. Classification of Hearing Impairment

As stated by Gurallnick & Bennett (1987, p. 325), hearing impairment (HI) may be classified by type (conductive - a hearing loss caused by interference with the transmission of sound home the outer ear; sensorineural - a hearing loss associated with damage to the sensory end organ or dysfunction of the auditory nerve or mixed - both conductive and sensorineural hearing loss), time of onset (at birth or after birth), by severity (on a continuum from mild to profound) and by etiology; all these being interactive in their nature. It is suggested that the type of hearing loss mainly determines the nature of hearing impairment and by the part of ear that is affected (Schulz & Carpenter, 1991, p. 69).

According to Gearhart and Weisthan (1992, p. 141), "The loudness or intensity with which a person hears speech is affected/impaired with a conductive type of hearing loss" as a result of the blockage in the transmission of sound from the outer ear to inner ear.

2.2.3 Causes of Hearing Impairment
As noted by Hallahan and Kauffman (1991, pp.271-272), otitis media (the accumulation of fluid in the middle ear), malformation of the ear channel, foreign object in the external ear, excessive buildup of earwax, perforation of the ear drum due to excessive pressure are common causes of conductive hearing loss.

On the other hand, the type of hearing loss that affects “frequency, intelligibility and clarity of the sounds that a person hears” is known as sensorineural hearing loss (Gerhart & Wishahn, 1992, pp.141-142). Heredity (which is the most frequent cause of childhood deafness), bacterial infections (such as meningitis), prematurely, viral infection (such as measles), deprivation of oxygen at birth are frequently observed causes. Additionally, prenatal infection of the mother (such as rubella, congenital syphilis), Rh incompatibility, blows to the head, some antibiotic drugs and excessive noise levels are identified as causes for the sensorineural hearing loss (Hallahan and Kauffman, 1991, p.272).

Signifying the effect of loud sound on hearing, research evidences have indicated that “Sustained levels of noise at about 70 dB can cause some sensor/neural hearing loss”. For instance, 10 million of the 28 million Americans with hearing impairments are believed to be victims of exposure to loud sounds (Ibid, p. 466). Of course, referring to the level of technological advancement, this type of problem may not be considered as a major issue to our local condition.

Other than the type of hearing loss, the age at which the hearing loss takes place is taken as a critical factor, particularly due to the influence of hearing on the acquisition of
language (Schulz & Carpenter, 1991, p.70).

According to Reynolds & Janzen (1990, p.300), due to "the interference of deafness with language acquisition, prelingually deaf children and adults markedly differ from the postlingually deaf children. It is further noted that the postlingually deaf /hearing-impaired children have "a sensory-impairment that interferes with their ability to receive speech and other sounds", but having "normally and completely developed language function" -which is not possessed by the prelingually deaf children.

As confirmed by the Executives of American Schools for the Deaf, though inner ear damage is irreversible, for most deaf /hearing-impaired children the hearing disability can be reduced by appropriate hearing aid fitting, training and education (Reynolds and Janzen, 1990, p.300).

It is reported that in most cases, hard of hearing children can acquire language skills efficiently without too much difficulty and hence "most of the postlingually deaf who possess language do not join the deaf community" (Ibid.). In other words, they can easily be integrated with their hearing peers.

### 2.2.4 Prevention of Hearing Impairment

Many researchers have agreed that hearing impairments can be corrected or prevented. Of course, as it is noted by some professionals, "the steps needed for prevention" can be simple technological advancement; this type of problem may not be considered as a
major issue to our local condition.

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2.2.4 Prevention of Hearing Impairment

Many researchers have agreed that hearing impairments can be corrected or prevented. Of course, as it is noted by some professionals, "the steps needed for prevention" can be simple in some cases, while in some situations "complicated medical technology" may be required (Smith & Luckasson, 1995, p.467).

It is further noted that, although many preventive measures appear to be simple and seem to be "common sense", other preventive measures are complicated and costly" (Ibid.). Medical technology, early identification and awareness among the community members are said to be major areas of concern in taking preventive measures.

Medical technology, as noted by many researchers, plays an important role "in the threatening and prevention of hearing problems". These days, "most conductive hearing losses that involve the middle ear can be treated either medically or surgically" (Boone, 1987, cited by Smith and Luckasson, 1995, p. 468).

On the other hand, until recently, the damage to the inner ear, which may result in sensorinueral hearing impairments, was believed to be an irreversible problem. It was believed that the hair like cells contained within the cochlea would never regenerate" once they are damaged. However, a new research finding conducted on animals indicated that there is a possibility to grow new auditory hair cells to replace the damaged ones (Recer, 1993, cited by Smith and Luckasson, 1995, p.468). Therefore, the indicated research outcome appears to give a new insight towards the "potential solutions" to
The other important area of interest in preventing hearing impairment is early detection/identification. As stated by Smith and Luckasson, (1995, p.468), "For cases of hearing impairments that can be prevented, early detection is a key factor". It is believed that once a hearing problem is detected and diagnosed, medical treatment and educational services can be provided at an early age of children.

However, for various reasons, efforts made in early detection are not found being much successful. For instance, even in developed countries, like the United States of America, many children are not identified until they are close to three years old" (Goldberg, 1993, cited by Smith & Luckasson, 1995, p.470). Concerning this issue, the Ethiopian situation can be even worse for there seem to be lack of awareness on the part of the community about the nature of hearing impairment.

As indicated by Smith and Luckasson (1995, p.470), "The benefits of early identification are great"; but parents, pediatricians and preschool and other educators need to be alert to signs of hearing impairments.

Another way to prevent some hearing losses is creating public awareness. For instance, public awareness about the importance of proper immunizations can help to reduce the negative effect of maternal rubella drastically (Ibid.). Of course, in addition to raising public awareness, the necessary resources (including vaccinations) should be readily
As a whole, the level of development in technology, the extent of practices in early identification and the level of public awareness about the overall nature of hearing impairment seem to play a determinant role in reducing the number of hearing impaired children in a given country.

### 2.3. Developmental profile of the Hearing-Impaired

The study of developmental profiles of children in general and that of the hearing-impaired in particular had been the concern of educationalists for many years. For instance, the work of Psanuneticus I, an Egyptian pharaoh of the 7th century B.C. who conducted a study on language development to know the "natural" language of human beings signify the fact that exploration of developmental profiles of children is not a recent phenomenon (Owens, 1988, p. 25). According to Owens (1988), though there are "Predictable stages and ages" for certain developmental tasks, the range of "normality" appears to be broad. Therefore, it would be unfair to expect the child to conform to all sets of developmental standard. However, there are "orderly, predictable phases in which certain areas of development are emphasized" (p.65)

In general, deep knowledge in the developmental profile of children with disability in terms of their language, cognitive, social and emotional development will enable educators to develop a better image of hearing-impaired students.
2.3.1. Language Development

Many studies had been conducted over years concerning the nature of language development of the hearing-impaired (HI) children and their hearing peers. As a general rule, "children move through a series of developmental stages" in their acquisition of language (Webster, 1986, p.52).

As to HI children's language development, it is noted that "the vocalization of hearing-impaired babies at months of age are similar to those of hearing infants" (Ibid). Similarly, Eisenson (1986, p.17) informed that "deaf or hearing-impaired children begin to babble at about the same age and under the same conditions as children who hear normally". Moreover, it is further stated that deaf babies sound much the same as compared to the "normal" ones, with of course making fewer sounds "at the end of fifth or sixth month" than the hearing-children (Ibid).

Lack of adequate and normal feedback "from hearing their own speech and that of others" is assumed to be the main constraints that hinder the transformation of babbling stage to the next successive developmental stages (Ibid, p.18). Berger (1983, p.161) on his part indicated that although "deaf babies babble the same sounds at 6 months as hearing babies", lack of reinforcement from their own sounds and others' responses tend to lead the deaf child to "communicate with gestures rather than sounds". As a result, the "early babbling disappears rather than turning into speech".

Harris and Butterworth (1994, p.136) on the other hand reported that children borne
hearing-impaired or who become hearing-impaired deaf in the first year of life have considerably more difficulty in language development than children who became hearing impaired/deaf after the first year. It is suggested that "deaf children with deaf parents are generally far better than deaf children with hearing parents", for the reason that "deaf parents have a much greater insight into the communicative needs of the deaf child, particularly in the child's early years" (Ibid).

As to the rate of language acquisition, in hearing impaired children, recent studies indicated that HI children grown up "in a signing environment from birth, appeared to acquire at much the same rate as spoken language" (Ibid., p.137). It is further stated that "the learning of early sign combination is also comparable to the learning of early word combination"; and it has been observed that "the first signs appear at a similar time to first words" (Ibid).

The creation of unique signs for objects at the same time that normal hearing children speak their first word is taken as an indication that "genetic program appears to propel" the hearing impaired child to create a symbol that represents an object (Gleitman, 1986, cited in Meisels & Shonkoff, 1993, p.207).

In fact, when hearing children (around age 2) are in a position to add "crucial closed classed words (such as: in, on, the, and) to their production, the untrained hearing-impaired/deaf children do not create them" (Ibid).
Educators generally believed that there should be an appropriate language input using sign language as an alternative system being applied at the same age as in oral languages (Meisels & Shonkoff' 1993, pp.206-207).

2.3.2 Cognitive Development

In the first part of the twentieth century, hearing-impaired/deaf individuals were perceived as "inferior in intelligence" (Moores, 1996, p.160). As Hallhan and Kauffman (1991, p.275), put it, "The intellectual ability of hearing-impaired children, particularly those classified as deaf, has been a subject of much controversy over years". It is indicated that some professionals were also equating conceptual ability deficits to children's language deficit (Ibid.).

When the work of researchers on the issue of cognition and deafness is consulted, there appear to be different out-looks about the cognitive abilities of hearing impaired children. As noted by Moores (1996, p.160) the line of thinking which considered the deaf/hearing impaired child as inferior had a great influence on people's perception in the first part of the twentieth century.

Adhering to this same view, Pintner and Patterson (1917), cited in (Moores, 1996, p.160), claimed that hearing-impaired/deaf children lag behind hearing children in "lower digit-span memory". Pintner and his associates too, went on to say that "deaf children are inferior in intelligence" (cited by Moores, 1996, p.160).
On the other hand, by reviewing the research outcomes conducted since the time of Pintners summary, Myklebust and Burtton (1953,p.351), as cited by Moores (1996, p.160), confirmed that "deaf/hearing impaired children are not generally inferior in intelligence". In fact, though Myklebust appears to consider hearing impaired children as generally not inferior in their intelligence, he "qualified his stand by arguing that even if deaf children are quantitatively (in terms of IQ points) equal to hearing children, ... they are not necessarily qualitatively equal" (Moores 1996, P.160). He insisted further saying that "it is difficult for the deaf / hearing-impaired child to function in as broad and in as subtle and abstract a manner as the hearing child" Ibid.).

As Moores (1996, p.161) indicated it, although Myklebust's opinion "is a welcome improvement over Pinter’s summary, in essence Myklebust perceives deaf/ hearing impaired individuals as being quantitatively equal to hearing persons but qualitatively inferior". He considered the deaf/ hearing impaired children as "concrete" and hence less "abstract" in the nature of their intelligence (Ibid.). Unfortunately, as reported by Moores (1996, p.161), mainly due to the influence of Myklebust, the idea of considering the deaf /hearing-impaired children as "concrete" was accepted by some educators of the deaf/ hearing impaired.

Conversely, after examining several studies on the hearing impaired children, it was reported that "no differences had been found between deaf and hearing subjects in conceptual performance when the linguistic factors presented were within the language experience of the samples of deaf children" (Moores, 1996 p.161). It was further noted
that "the sphere of abstract thought is not closed to the deaf" for they were considered as intellectually normal, (Ibid). Similarly, after the survey of literature related to language and cognition, Furth (1964), as cited by Moores (1996, p.161), arrived essentially at the same conclusions. Furth, "reasoned that the poorer performance of the deaf/ hearing impaired individuals on some tasks may be explained simply either by lack of general experience that is no longer manifested in adulthood or by specific task conditions that favor linguistic habits".

Using a somewhat different approach, Vernon, (1967d) as cited by Moores (1996, pp.161-162), reviewed a total of thirty-one research studies conducted on intelligence (involving more than 8000 deaf children from age 3 to 11 years) and came up with mixed results. In thirteen of the experiments, the deaf subject's scores were superior to either test norms or control group where as in the eleven studies they were inferior as compared to the test norms or control group scores. This indicates that deafness may not necessarily be related to poor intelligence in all cases.

Thus, as pointed out by Moores, 1996, p.162), by the 1960s, "leading researchers had concluded that deaf/ hearing-impaired people are not intellectually deficient". After grasping important points from studies of intellectual functioning of the hearing impaired children, Moores (1996, p.165) concluded that "in cases where the deaf/ hearing impaired have shown inferior performance, the simplest explanation may be neither lack of language nor experiential deficiency. The very real possibility appeared to be that the experimenters were unable to communicate effectively with the deaf subjects".
The performance of the matched groups of hearing-impaired and hearing children on four Piagetian conservation problems was examined by Rittenhouse, Morreau, and Iran Nejad (1981), and no significant performance differences either qualitative or quantitative, were seen between the two groups when standard Piagetian procedures were modified by substituting new phraseology. Hence, it was believed that "previous research showing a cognitive deficit in deaf children was likely marked by instructional problems; particularly problems of a linguistic nature" (Moores, 1996, pp.166-167).

In general, results obtained from recent investigations in the area of cognition and deafness supported "the idea that deaf/ hearing-impaired individuals have normal intellectual capabilities, although performance deficits may sometimes appear" (Moores, 1996, p. 169; see also Martin, 1985, 1991).

Therefore, referring to the research outcomes, it is possible to say that some deficits may appear in some activity areas not due to deafness itself in its strict sense but due to inappropriate instructions/ procedures that are employed in the testing process.

**2.3.2 Social and Emotional Development**

Whether the hearing-impaired child will develop a sociable or an impulsive behavior seems to depend largely on how parents (and the society at large) value his disability. As it is noted by the researchers, "it is not the hearing impairment itself but how individuals in the child's environment, particularly parents, respond that largely determines" the
child's emotional state and his inclination towards social interaction (Hallhan & Kauffman 1991, p.277).

As Moores (1996, p. 178) noted it, an important factor that should be underlined while talking about the social and emotional state of the hearing-impaired is the cultural values prevailing within the environment of the deaf child. It is suggested that in many cases, deaf/ hearing impaired persons "have faced rejections and hostility from their families. Their sense of worth has been affected by evil sayings due to unclear speech patterns. They also faced "social and economic discrimination" which in return will have a negative consequence on their personality adjustment.

Referring to such negative experiences, Knapp (1968), and Zeckle (1953), as cited by Moores, (1996, p.178), argued that a feeling of mistrust in deaf/ HI individuals is "a healthy, not a psychopathological reaction". This is because hearing impaired persons have good reason to react in that way due to the humiliation that they face from the hearing society. As a matter of fact, the "impact of deafness hearing impairment per se on an individual can never be measured/ treated in isolation but only within the context of a complex social variables (Ibid.,p.174).

Goetzinger et al, (1966) cited in Moores, (1996,p.177) on their part characterized the hearing impaired subjects as "emotionally immature, rigid, and possessing restricted interests". On the aspect of developmental patterns, after considering all obstacles that hearing impaired individuals face in their development, Altshulex (1974) cited in Moores
(1996, p.180), noted that most hearing impaired individuals "develop along predictable lines".

While assessing the effect of parental hearing status on hearing impaired children's social and emotional development, it has been noticed that "Deaf hearing-impaired children of hearing parents were ... less compliant, less attentive, and less responsive than were the hearing children with whom they were compared" (Guralnick & Bennett, 1987, p.336).

On the other hand, research evidence produced by Meadow et al. (1981), as cited by Guralnick & Bennett (1987, p.337), indicated that "the deaf child deaf mother and hearing child-hearing mother dyads were shown to have the most frequent and most complex interaction". It is further confirmed that children who are exposed to "oral and total communication (the combination of oral and sign language) had a significantly higher percentage of spontaneous communication (37%) than did oral children (20%)". It has been noticed also that children who experienced simultaneous communication appeared to be "more sociable and co-operative" in their behavior (Ibid.).

Conversely, the oral-only deaf/HI child hearing mother dyads "had the least frequent and least complex interactions" indicating the total communication as a necessary precondition for better social and emotional development (Ibid.).

In general, results of previous studies suggested that, other efforts being there, total
communication in a school or social set up can be taken as a useful mode of communication to promote healthy development of the hearing-impaired child in many aspects of his/her life. It has to be noted also that hearing impaired children "have the same social needs" as other "normal" children; with a need to take part in games, in academic and extracurricular activities (Schulz and Carpenter, 1991, p.75).

2.3.4. The Need for Early Intervention

Many researchers seem to have a common understanding on the issue that certain events occurring during "discrete early critical periods may have irreversible effects on later behavior". From developmental perspective, it appears to be an acceptable fact that "early plasticity and response to stimulation" can possibly be replaced by "later rigidity and resistance to change" unless appropriate intervention is taken on time (Reynolds and Mann, 1987, p.561).

There is a wide recognition that better understanding about the nature of disability and effects of environmental factors have enabled persons to develop new approaches in place of "genetic determinism". Thus' environmental factors were considered as important components in designing early intervention programs (Meisels & Shonkoff, 1993, p.374).

Understanding the importance of early experiences for children's healthy development and insight into the possibility of reducing individual deficits by maximizing their potentiality are taken as rationales for early intervention program. Similarly, the
anticipation of enhanced children's developmental progress, due to their participation in the early intervention program, knowledge about the necessity of trained personnel for the provision of "early experiences to compensate for developmental problems", and awareness about the need to offer "more and/or different early experiences" for children with developmental problems (including the hearing impaired) are the theoretical assumptions for the development of early intervention.

In many aspects, the child's success usually "depends on the willingness and ability of other people to interpret the child's efforts" in a developmentally meaningful manner (Berger, 1983, p.161). It is noticed that "sound family functioning is essential for providing a supportive and developmentally appropriate environment for the child with special needs". Furthermore, it is believed that "a family truly becomes a more prominent and direct focus of early intervention program" in order "to yield developmental benefits to children" (Guralnick & Bennett, 1987, p.368). In other words, the early parent-child relationship can be taken as "basis for children's socially competent functioning" (Ibid).

Concerning the effect of child-parent relationship modality, current evidences suggested that "a relationship-focused model" is a preferable approach to attain a "warm, reciprocal and supportive parent-child relationships" rather than "a rigid emphasis on the teaching roles of parents", especially in the preverbal stages of the hearing-impaired child (Ibid).
Next to the family, intervention at preschool level can play an important role to facilitate children's development in its multi-form. As an effective educational unit, it is noted that preschool program should provide academic and cognitive training, emphasize parental involvement and employ both oral and manual techniques to teach deaf/ hearing impaired children (Hallhan & Kauffman, 1991, p.292). As it is reported in some studies, in some countries (like in the USA) special education is given for hearing impaired children at preschool levels by the age of 3, and in other situations it is even conducted "from birth onwards" (Guralnick & Bennett 1987 p.331).

To see the effect of early intervention in facilitating the integration of hearing impaired students, Nashville as cited by Moores (1996, p.346) reported that children who began to use a hearing aid before 3 years of age were easily integrated in a class with their hearing peers. On the contrary, children with later intervention were in a special self-contained class thereby demonstrating lower language levels (Ibid., p.346).

As a whole, teaching hearing-impaired children "to speak and lip-read to acquire language", facilitating "social and interaction skills", promoting "emotional and cognitive Development", improving parent-child communication" and "reducing family stress" are components of the intervention program to be undertaken at the preschool level (Guralnick & Bennett, 1987, p.33)

2.4. Attitude

2.4.1 Impact of Attitude on Integration
Previous research outcomes, in the area of special education, particularly in integrating the hearing impaired students, suggested that attitudes play a key role in achieving successful social interaction among various groups of teachers and students and win their attention in favor of the required educational modality.

With regard to the contribution of positive attitudes for healthy development, research evidences have confirmed that open and positive attitudes with perceptions that match with the reality result in greater interaction with enhanced social and emotional development (Hegarty and Pocklington, 1988, p.455).

Similarly, while discussing about the role of social and cultural factors and the effect of attitudes in relation to the educational systems of a given country, Meijer and Hegarty (1994, pp.135-13G), pointed out that each country's educational system is the reflection of the social and cultural identity. This may be responsible for the existence of different practices of integration among countries, which may be directly related to differences in attitudes towards integration.

Looking back to the global trend of integration/inclusive education, several countries seem to practice different forms of integration (such as physical integration, functional (Integration) by working out a policy that supports the realization of integration education in line with the capacity and interest of a given country.

recently "more than 70% of all children with disabilities (including the hearing impaired) are now fully or partially integrated into regular classrooms" while other disabled students are enrolled in special classes within the regular school set up. It is further reported that "A firm commitment" to place all children with disabilities, which includes the hearing impaired, within the general educational system is practiced not only by the developed countries but also is extended to the developing countries "as a suitable means of providing education for disabled children (See also UNESCO, 1988).

However, some research outcomes indicated that in the absence of effective measures to improve the attitudes of teachers, and non-handicapped classmates, only few changes are likely to take place simply by placing students with disability in the regular school system,(Gottlieb, 1990; Johnson and Johnson, 1982; Coutnange & Jaben, 1985, as cited by Tibebu, 1995, p.44).

Similarly, while discussing on the issue of integration, Turnbull and Carpenter (1991,p.413), pointed-out that "mainstreaming/integration should be viewed not as an arrangement to be imposed on handicapped students, but rather as a process involving reciprocal information sharing and responsibility." This implies that unless much effort is paid to cultivate positive attitudes among the school community, the integration of hearing-impaired students may not be realized by imposition.

Hence, school environments should be carefully planned by giving due attention to teachers' attitudes and to the use of appropriate materials and methods if hearing impaired students are to be integrated (Sprinthall and Sprintholl, 1994, p.602).
According to Webster and Wood (1995, p.27), for integration to be well perceived by the hearing impaired and hearing students, and by the staff who teach them, certain conditions (including the existence of positive attitudes) have to be met. Otherwise, as noted by Turnbull and Carpenter (1991, p.413), "positive social integration of non-handicapped and handicapped children ... is unlikely to occur spontaneously in mainstreamed classrooms". In other words, social integration, similar to academic matters, demands a systematic approach to intervention.

While treating the effect of attitude as teacher variables, Turnbull and Carpenter (1991, p.413), went on to say, "Teachers' views of students are a strong force in determining the nature of interaction between teachers and students". This is because teachers consistently pass on important "attitudinal messages to students about individual differences" (see also Brophy & Good, 1974; Good, 1970; Purkey, 1970; Rosenthal & Jacobson, 1968). By further stressing on this same issue, Turnbull and Carpenter (1991, p.416) has stated the following: "They (teachers) know a student's level of performance, particular disability, curriculum needs, and learning styles; but that is not enough. It is also important to know the student as an individual and furthermore, to find joy and naturalness in the relationship".

Moreover, by emphasizing the impact of attitude on integration, Sarason and Doris (1979), as cited by Padeliadu and Lampropoulou (1997, p.173), noted that "the effectiveness of any program is dependent on the attitudes of the people" taking part in its implementation. This appears true mainly due to the fact that individuals with positive
attitudes will be willing to invest their effort depending on how much they positively value the program and how they think it is going to be functional (see also Happe, 1983).

To sum up, to maintain the positive impact of attitude on the integration of hearing impaired students, schools as a social environment should have the concern to fulfill the necessary preconditions that will allow hearing impaired students to attend their education with their natural peers.

2.4.2 Attitudes of Teachers towards Integration

Although the issue of integration and its implications for education appears to be debatable during the past thirty years, societies have become increasingly concerned with ensuring the educational rights of all children irrespective of the severity of their disability. As a result, the integration of students with handicaps (including the hearing impaired) into the regular educational setting as ordinary/regular class students has become the concern of educators, governments and the society at large (Millward and Dyson, 1995, p.42).

As a matter of fact, several studies that had been conducted so far have failed to produce a clear-cut picture of the most appropriate educational placement of students with disabilities, particularly to the hearing impaired children. (Choate, 1997, pp.13-14).

According to Padeliadu and Lampropoulou (1997,p.174), "One of the major arguments that has often been used in the debate about the integration of students with special needs
...has been the attitudes of teachers towards the integration of students with special needs". It is further pointed out that teachers' attitudes have been considered as one of the major affecting factors guaranteeing the success of integration of students with special educational needs (Ibid.).

Similarly, Millward and Dyson (1995, p.59), reported that "maintaining students with special needs (which includes the hearing-impaired) in regular education depends crucially on the attitudes and the actions of the regular teacher (which includes the special education teacher) and the school team". They further noted that, although organization, financing, regulations, teacher training and so on can all play their own part to facilitate/enable integration, the placement of students with special needs in regular settings will remain problematic unless teachers actively, support the effort to achieve integration (Ibid.).

Sharing the same view, Turnbull and Carpenter (1991, p.414) also affirmed that "teacher attitudes have been identified as being crucial to the success of any mainstreaming program" (See also Alexander & Strain, 1978; MacMillan, Jones & Meyers, 1976; Madden & Slavin, 1983).

Referring to the effect of teachers' attitudes on student's perception, Turnbull and Carpenter (1991), further declared that teacher attitudes "not only set the tone for the relationship between teachers and handicapped students, but they also substantially influence the attitudes of non handicapped classmates (Ibid.). Additionally, it is noted
that the attitudes and knowledge teachers have concerning children with handicaps "are highly influential in determining the social, intellectual and emotional adjustment of these children,' (Tibebu, 1995, p.46).

When previous research outcomes are closely examined, regardless of the fact that confirms e significance of teachers' attitudes for effective integration, the available research evidences in the area of teachers' attitudes are not consistent (Padeliadu and Lampropoulou, 1997, p.174).

Studies conducted by Hayes and Gunn, (1988), Thomas (1985), as cited by Padeliadu & Lampropoulou (1997, P.174), revealed that regular educators "do not hold positive attitudes towards integration of students with special educational needs. According to Pastor and Jimenez (1994), cited in Padeliadu & Lampropoulou (1997, p.174), the majority of regular education teachers prefer not to teach students with special educational needs partly by associating the presence of special needs student (which includes the hearing impaired) in their class with trouble.

Furthermore, in a study using focus group interviews undertaken by Vaughn et al. (1996), cited by Padeliadu & Lampropoulou (1997, P.174), it was found that the majority of regular education teachers had a negative attitude towards integration. In fact, it is stated that regular education teachers may not appear more negative than their special education teachers (Padeliadu and Lampropoulou, 1997).
On the other hand, in the comparative study conducted by Leyser, Kapperman and Keller (1994) on teachers' attitudes indicated that teachers in most countries (with the exception of teachers in USA, and Germany who were mostly positive) had a neutral attitude towards integration (cited in Padeliodu & Lampropoulou, 1997, P.174). As cited by Padeliodu & Lampropolou, 1997, (in Bouman, 1986, Paster and Jimenez, 1994) it has been found that, though teachers agree theoretically on the idea of integration, they were holding negative attitude towards its implementation.

On the contrary, some research findings have indicated that regular education teachers are becoming more positive towards integration (see also Wood, 1992). In some cases, it has been reported that some regular educators have even displayed "an enthusiastic professional dedication to the development and implementation of inclusive school practices" (Giangreco et al.,1993, Hollow wood, et. al., 1994, as cited by Padeliodu & Lampropoulou, 1997, p.174).

The survey conducted by Padeliodu and Lampropoulou (1997), evaluated the attitudes of a total of 377 regular and special education teachers towards integration (in Greece) and came up with findings that show the relation of some variables with attitudes.

The study indicated that although both regular and special education teachers appeared to show neutral attitudes towards integration, the regular education teachers were more positive than the special education teachers. Additionally, younger and less experienced teachers were more positive towards integration though no differences had been found
between male and female teachers' attitudes.

Regarding the benefits that students with disabilities can acquire from integration, the two groups of teachers (regular and special education teachers) differed in few areas; the special education teachers accepting/perceiving only the social benefits of integration. Both groups in their few choices mostly refereed to the vocational areas to students with sensory disabilities (PP.173-179).

Padeliau and Lampropoulou (1997, p.180), further stressed on the point that the less positive 8ard of special education teachers towards integration is a worrying condition that marks the deprivation of integral supporters in the realization of integration. It is believed that, regardless of the reasons for their lack of positive attitudes, special education teachers need to show positive attitudes for effective implementation of integration (p. 180).

Other studies, as reported by Millward and Dyson (1995, p.59), conducted in different countries (Sweden, the USA, England and the Netherlands), seem to furnish relatively similar information on the attitudes of teachers. It is reported that teachers in regular education, though they agree in the idea that students with special needs should attend classes and grow up with their natural peers, began to worry and make objections when integration is put into practice (Ibid., pp.59-60).

The main reasons for their objection are related to the perception of their own
professional competence and to the perceived effects of integration on other students. This is because, teachers were afraid that their knowledge and skills are insufficient to treat special needs students and that the placement of students with disability will have negative effects on other students (Ibid. p.60; see also Semel, Abernathy, Butera and Lesar, 1991; Whinnery, Fuchs and Fuchs, 1991).

The other outstanding feature reported in the study was that teachers who were experienced in the education of special needs students in regular settings seemed to develop a positive and "more self-confident attitude" (Millward and Dyson, 1995, p. 60; see also Leyser, Kapperman and Keller, 1994).

In another study, carried out by Croll and Moses (1985, p.54), teachers' opinions on integration of handicapped children in their own classrooms was examined. The result showed that out of 92 teachers (having experience with handicapped students), 32.6 percent of them favored the placement of hearing impaired students enthusiastically, and 51.1 percent responded as fairly favorable and non of them refused to accept the placement of hearing impaired students in their classroom. Correspondingly, out of 330 teachers, (having no experience with handicapped students), 20.3 percent of them rated as "Enthusiastic", 41.8 percent of them responded as "Fairly favorable" and only 3.3 percent of them refused to accept hearing impaired students in their classrooms.

However, the researchers warned that teachers' relatively favorable responses to children with sensory handicaps are not necessarily based on realistic need assessment as to know
what the regular classroom can offer to the child (Croll and Moses, 1985, p.58).

On the other hand, Hegarty and Pocklington's (1988), review of some studies seem to paint a negative picture concerning the attitudes of regular education teachers towards mainstreaming/integration. It is stated that "attitudes reported were generally unfavorable to mainstreaming/integration and many teachers and other professionals were found to perceive pupils with special needs particularly the hearing impaired, in a negative light (P 456).

Tobin (1972), as cited by Hegarty and Pocklington (1988, p.456), in his exploration of attitudes of teachers, discovered that both experienced and trainee teachers had least preference for accepting hearing impaired students in their classes.

Conversely, in other studies, ordinary teachers were asked whether they feel appropriate or not to place handicapped students in their school and 90 percent of all respondents felt that the placement was appropriate (Hegarly & Pocklington, 1988, p.457). In fact' as it is already mentioned elsewhere, it is noted that "while teachers generally accepted the presence of pupils with special needs in their classes, this did not mean that they always took them seriously for teaching purposes" (Ibid. p.460). It was also reported that teachers considered themselves as ill-equipped to teach students with special needs or lack time to teach them in a large class (Ibid.).

Scruggs and Mastropieri (1996,pp.59-74) made a research synthesis based on 28
published reports beginning from 1958 to 1995 in order to summarize and examine the consistency of teachers' attitudes towards mainstreaming integration. Respondents included 10,560 persons out of which 1,173 were special education teachers, while 6,459 were identified as general education classroom teachers. Teachers included in the study were from different parts of the United States, New South Wales, Australia; and Montreal, Canada.

Accordingly, in eight surveys, 65 percent of teachers were found supporting the concept of mainstreaming/integration in principle. In the Berryman and Berryman (1981) investigation 86.9% out of 2,549 teachers were in favor of mainstreaming students with sensory and other physical disabilities. In the Diebold and Voneschenbach (1991) study, 92.0 percent out of a sample of 25 teachers expressed willingness to teach students with a variety of disabilities (including the hearing impaired (Scruggs and Mastropieri, 1996, p.62).

Concerning the benefits of both disabled and non disabled students from integration, 54.4 percent of the teachers agreed that students with and/or without disabilities could benefit from integration experiences. The report also indicated that special education teachers (66.6%) agreed more frequently than general education teachers (50.8%) that mainstreaming/ integration will provide benefits to the students (Ibid). On the other hand, on this same issue, responses of general education teachers were similar in the Houck and Rogers (1994) investigation.
Another area that has been assessed in the survey was about the possible negative effects of placing students with disabilities in the regular classrooms. According to the survey result, overall, 30.3 percent out of 363 teachers responded that students with disabilities could be harmful to the classroom (Scruggs and Mastropieri; 1996, p.68).

Regarding the perceived work-load of teachers, Reynolds, et al. (1982), reported that 81.6 percent of 610 regular classroom teachers agreed that mainstreaming/integration would create "additional work" (cited by Scruggs & Matropieri, 1996, p.68).

On the issue of professional competence, results in 10 surveys indicated that, overall' 29.2 percent of 2900 respondents agreed that general education teachers had sufficient training for mainstreaming and 22.8 percent of 355 special education teachers responded that general education teachers had sufficient training (Ibid.).

As to the effects of placement of students into regular classrooms, 60 percent of teachers were in support of the opinion that mainstreaming of handicapped students into the regular classroom can be beneficial to regular students. On the other hand, 70.3 percent of 128 teachers agreed that "placement in the regular education classroom will hurt the educational progress of the handicapped students". In other aspect, 63.7 percent, out of 777 teachers, believed that the integration model will reduce the negative social stigma attached to disabilities (Scruggs & Mastropieri, 1996, p.66).
It is assumed that separate socialization is a "breeding ground" for "attitudes of prejudice, intolerance, and self depreciating feelings" and early integration is believed to avoid the possible social barriers that keep the disabled and non-disabled children apart (Tirusew, 1999, p.6). It is generally agreed that "non-disabled students who have had the opportunities to interact with students with severe disabilities hold more positive and accepting attitudes than non-disabled students" who lacked that same opportunity (Tirusew, 1999, pp.6-7; see also Booth and Potts, 1987, Voeltz, 1982).

Gearheart and Weishan (1992, p.127), on their part informed that results obtained from different studies suggested that the placement of students with disability (including the hearing-impaired) in regular classrooms "may result in greater prejudice, stereotyping and rejection". Similarly, it is reported that social acceptance, particularly in the case of the hearing-impaired, is not easily achieved for it demands creating the opportunities where the hearing and non-hearing students can make interaction with each other (Webster and Wood, 1989, p.27).

Yet, research evidences about the attitudes of children with disability, particularly attitudes of the hearing impaired children towards integration or regular class students seem to be very limited. Concerning this issue, Turnbull and Carpenter (1991, p.418), informed that most of the research and general literature related to the "subject of social integration among handicapped and non-handicapped students is aimed strictly at improving the attitudes of non-handicapped children and youth towards handicapped peers".
In discussing about the feelings of students, with special needs, Stainback and Stainback (1990, pp.20-21), reported that when students in the special classes were asked about the hearing impaired) in to regular classrooms appears to be favored positively. This is in part for it helps to secure social and academic benefits to children with special needs.

2.4.3 Attitudes of Students towards Integration

It is suggested that integration experience will be more effective and enables handicapped children develop a positive feeling about their personal values if their peers in the school socially accepted them (Tibebu, 1995.p.50).

However, as indicated by Tibebu (1995, p.50), the majority of study evidences/data indicate that positive acceptance is not always the case. Confirming this fact, a research done by Elser (1959), cited in Horne (1985 p.69), indicated that hearing impaired students were not accepted by there hearing classmates. It is noted that "the degree to which an individual is accepted by his/her peers and teachers during his/her early years at school is of special importance" for it will have a significant consequence on his/her "subsequent adjustment" Tibebu, 1995,p.50).

According to Turnbull and Carpenter (1991, p.425), "Integration among handicapped and non-handicapped students usually does not occur spontaneously in mainstreamed classes" for it requires structuring experiences systematically to create favorable conditions under which students can work or enjoy leisure activities together.
Moreover, it is believed that social integration could be facilitated when due attention is
given to developing positive attitudes toward handicapped students and to establishing a
class atmosphere that allows "open and honest communication, success and respect"
(Ibid. p.433).

In the Ethiopian context, a research conducted concerning attitudes of teachers and
students towards the integration of hearing-impaired students into regular classrooms
appears to be very scarce.

However, the study conducted by Tibebu (1995, p.93), to examine the attitudes of regular
class and special class teachers; regular class students and parents towards persons with
different types of disability categories gives a hint about the nature of teachers' and
students attitudes towards integration in general. His study generally revealed that the
special and regular teachers have a mean below the neutral value, thereby indicating their
negative attitudes towards the integration of children with disabilities.

Further more the study indicated that, age, experience and presence of the disabled child
in the family, had significant differences on attitudes towards integration. The
comparison that had been made among the four age levels indicated that the younger the
age the more positive attitude toward integration had been observed (Ibid.). As to the
attitudes of the respondents to the specific disability groups, hearing-impaired group (but
not the deaf) was positively rated (Ibid. p.96).
Additionally, from the discussion held with school personnel, special class teachers and hearing impaired students on the general condition of special education in Ethiopia, it has been reported that some school principals and some special education teachers were not in favor integration principle (Tilahun, 1991 E.C.,PP.23-28).

As a whole, though there seem to be lack of consistency in studies on teachers' attitudes, the global trend towards the integration of students with different disability types (including mainstreaming/integration, they were hesitant and unsure of it by perceiving integration "as a place where they may feel unwelcome and uncomfortable".

Furthermore, a research conducted by Johanes, 1985, as cited by Bench (1992, p.208), indicated that the attempts of hearing-impaired children "at social interaction are rejected relatively often by the potential hearing peers". Another observer has also noted that a "consistent theme in the literature is that handicapped students are frequently rejected and alienated in regular class setting" partly by their "normal" peers (Turnbull and Carpenter, 1991, p.411). In some instances, possibly, there can be negative reactions on the part of hearing students in the social interaction, which may predispose hearing impaired students develop negative attitude towards integration.

Locally, though no reliable document is accessible, regular students, in a school with a special unit were found showing positive attitude particularly towards the integration of the hearing-impaired students but negative attitude towards the deaf students (Tibebu, 1995, p.96). Another study conducted in Zimbabwe (By Fred, 1996, p.1) showed that
regular students have more positive attitudes towards the integration of students with disabilities (including the hearing impaired).

In some situations the nature of social environment within the school set up can lead students (especially the hearing-impaired) to react unfavorably towards integration. Related to this same issue, Kirk and Gallagher (1993, p.48), noted that "the social context or environment in which the exceptional individual exists can play an important role in causing problems as well as in determining the individuals behavioral outcomes". Therefore, the overall school situation should be considered while assessing the attitudes of non-hearing and hearing students towards integration.

Chapter Three

3. Methodology

3.1 Study Method

The study employed a survey method and a focus group discussion technique (to confirm the quantitative results) to examine the attitude of teachers and students towards the
integration of hearing impaired students. An interview was also used to get general information from the key informants.

3.2 Participants

Selection of the Participants

The population of the study has included special class and regular class students who are currently attending in grades 5 and 6; and also special and regular class teachers that are assigned in the two purposely selected Governmental Primary Schools (in Addis Ababa and Nazareth -Adama). The availability of special units for HI students with a relatively higher-grade level (from the nearby schools) was the reason for selecting the two j Governmental Primary schools as a study site. Grades 5 and 6 students were selected as participants of the study for it was believed that they (particularly the HI students) may better understand the essence of the attitude scale questionnaire and elicit dependable information than students at a lower grade level.

Hearing impaired students enrolled in grades 5 (23 students) and 6 (16 students) in the two selected schools were totally included in the study. Similarly (with the exception of one teacher-who was not available), all special class teachers (20) assigned in the two schools were also participants in the study.

Regarding regular class students, 46 grades 5 and 6 students attending in the same shift with HI students were selected using simple random sampling method in proportion to the numbers of grades 5 and 6 students both at school and grades level. Accordingly, 24
students (out of 678 grades 5 and 6 students) from Menelik II Primary School, and 22 students (out of 630 grades 5 and 6 students) from Adman No 2 Primary School were selected randomly. Eventually, by discarding the incomplete questionnaires, the number of participants in the study was reduced from 46 to 40 (refer to appen. A).

Concerning regular class teachers, 24 teachers (out of 120 teachers assigned in the two schools in shift one) were selected using simple random sampling method. Finally, the number of teacher participants included in the study was reduced from 24 to 20 (refer to appen. B). That is, two teachers did not return the questionnaire on time and the remaining two questionnaires were discarded for they were incomplete.

After screening and discarding the incomplete attitude questionnaire, the distribution of participants among the different study groups was as follows:

1. 39 (m=16, f=23), hearing impaired students (whose hearing loss is assumed to be from 41 to 91 +dB),
2. 40 (m=18, f=22), regular students,
3. 20 (m=12, f=8), special class teachers and
4. 20 (m=10, f=10), regular class teachers.

**Socio-demographic Background of the Participants**

The age of 39 (m=16, f=23) hearing impaired students ranges from 11 -27 years with a mean age of 15.9 years. The mean age for males and females is 15.9 and 15.8 years respectively (which is similar to the mean age of the group).

The age distribution of regular class students (40- m=18, f=22) included in the study
ranges from 10-15 years with a mean age of 12.4 years. The mean age for males and females is 12.4 and 12.5 years respectively.

Regarding the age distribution of 20 (m=12, f=8) special class teachers, it ranges from 26-31 years with a mean age of 36.1 years. The males and females' mean age is 36.9 and 35 years respectively. The total work experience of special class teachers ranges from 4 to 31 years with a mean of 16.4 years. Teachers' year of experience in the special unit ranges from 1-12 years with a mean of 5.8 years of experience. Out of 20 special class teachers, 3 females did not take training in special education. As to their qualification level, 3 teachers (m=1, f=2) are holders of diploma and above; whereas 17 (85%) teachers (m=11, f=6) are with a qualification level of 12+1 and below.

As to the age of (20, m=10, f=10) regular class teachers, it ranges from 28-52 years with mean age of 43 years. The mean age for males and females is 45.9 and 40.2 years respectively. Their work experience ranges from 11-32 years with a mean of 23.6 years. As to their qualification level, 8 teachers (m=5, f=3) have a 12+2 qualification level; and 12(60%) teachers' (m=5, f=7) qualification level was 12+1 and below.

3.3 Instruments

Attitude Scale

On the basis of the obtained ideas, a three point attitude scale, with a continuum "Agree", "Uncertain" and "Disagree" was constructed in Amharic language to examine the attitudes of hearing-impaired students, regular class students, special class and regular class teachers towards the integration of hearing impaired students into regular classes.
A clear written instruction was attached to the instrument. To understand the possible perceived factors that may affect the participants' attitudes, some open-ended items were also included in the instrument.

The measuring scale consists of 20 items and the participants were asked to indicate the extent of their agreement with each statement using a three-point attitude scale. The given scale values were, 3=agree, 2=uncertain, 1=disagree to the positively stated items.

In 10 of the items that were negatively stated the scoring was reversed (1=Agree, 2=Uncertain, 3=Disagree) so that the higher scores would indicate a more positive attitude towards integration.

**Focus Group**

To confirm the quantitative results obtained through the attitude scale, focus group discussion was used as an instrument for confirmation purpose. Hence, two focus group discussions were held (one with the hearing and the other with non hearing students) with 12 volunteer students (6 hearing impaired and 6 hearing students) to get more information related to the issues treated by items in the attitude scale.

To generate more ideas, some items related to issues in the attitude scale were prepared as main points of discussion. The two focus group discussions were conducted separately and the obtained information is used to supplement the quantitative results. Two key informant teachers (those who are believed to be informative about the school situation owing to their participation in the school activity) from each school were also interviewed to get general information.
Validation of the Instrument

Before applying the instrument to the main study, a pilot study was conducted in Tekle Haymanot primary school, located in Debre Markos in East Gojam Zone, to check and improve the reliability and content of the instrument.

The total number of participants in the tryout study was 34 (m=16, f=18); that is, 8 hearing-impaired and 10 regular class students in grades 5 and 6; and 6 special Class and 10 regular class teachers were included in the pilot study. After administering the instrument, some participants were asked for feedback and hence unclear items were modified accordingly to minimize item ambiguity.

On the basis of the given responses, the internal consistency of items was tested by using a split half method (by applying Pearson product moment correlation coefficient formula and then the Spearman Brown) formula was used to check the reliability of the full length of the measuring attitude scale.

In split half method had been used to test the internal consistency and the reliability of attitude scale by Larrivee & Cook (1979,p.317) while assessing the variables affecting her attitude towards mainstreaming.

The obtained results from the tryout study showing the internal consistency of the odd and even items among the four groups ranged from 0.80 to 0.92; that is, 0.80 for hearing impaired students, 0.81 for special class teachers, 0.86 for regular class students and 0.92 for regular class teachers. The reliability of the attitude scale ranged from 0.88 to
0.95; that is, 0.88 for hearing-impaired students, 0.89 for special class teachers, 0.92 for regular class students and 0.95 for regular class teachers.

Thus, the instrument was found valuable to collect the data for the main study and hence it was administered as scheduled. The obtained data in the main study was tabulated and organized for further analysis.

3.4. Instruments and their Administration Procedures.

Contacts have been made with the school principals and unit coordinators in order to establish a smooth relationship to achieve the purpose of the study. Preliminary information was also secured from the selected schools to determine the number of participants to be included in the study from each school. Pilot study (using 34 participants both from students and teachers) was also conducted to improve the quality of the instrument to collect data for the main study.

Accordingly, to administer the constructed attitude scale questionnaire with some additional open-ended items, all grades 5 and 6 hearing impaired students (39) and all special class teachers (20) in the two schools were totally included in the study (for they were less in number). Additionally 46 regular class students and 24 regular class teachers re selected by using simple random sampling method from both schools as participants. regular teachers failed to return the questionnaire on time. After screening and discarding the incomplete questionnaires the number of regular students and regular class teachers was reduced to 40 and 20 respectively.
Referring to the characteristics of the participants in the groups and experiences gained from the pilot study, it was found necessary to use relatively different approaches in the administration of the instrument to the participants.

Firstly, after explaining the objectives of the study, the constructed instrument (prepared in Amharic language) was distributed to 20 special class teachers and to 24 regular class teachers as scheduled for each school. For convenience, a page of written instruction was attached to all attitude scale questionnaires so that participants can easily understand how to make it. Two regular class teachers failed to give back the questionnaire on time and all the remaining questionnaires were collected within two days.

Regarding regular class students, a classroom was arranged as scheduled in each school and 46 students (24 in Menelik II and 22 in Adama No.2 School) completed the attitude scale questionnaire in the presence of the researcher. The researcher gave the necessary clarification whenever needed by the respondents. All the questionnaires were collected as soon as the session (which took almost an hour) was over.

As to the hearing-impaired students, owing to the possible problems that they may have in written communication and in reading skills, it was found preferable to complete the attitude scale through the help of sign language translators. The sign language translators, using a total communication method, explained the idea in each item to the hearing impaired students in an understandable manner, and then the attitude scale was marked
by the translators themselves on the basis of the given responses by the respondents.

The researcher closely attended the whole process. The expressed ideas through total communication in addressing the meaning of items to the hearing impaired students were also checked. Since total communication involves oral expression, it was possible to attend the translation process.

After collecting all the completed attitude scale questionnaire, 12 volunteer students (3 males and 3 females hearing-impaired and form regular class 4 males and 2 females students) were selected on voluntary basis to conduct two focus group discussions and it was managed accordingly in Menelik-II Primary School. Before conducting the discussion, the following points were explained:

- about the purpose of the study,
- the study confidentiality, and about
- The voluntary nature of their participation during the focus group discussion.

Almost one hour and a half were used for each session to discuss on issues pertaining to the idea of integration. The discussion held with hearing students was audio-taped and the discussion conducted with hearing impaired students was video recorded for latter use in writing the paper. At the end, two key informant teachers from each school were interviewed to obtain general information about the overall situation of the school environment.
All the collected data were organized and interpreted by using different statistical methods (such as mean, percentage, regression analysis, t-test) to examine the attitude of the participants towards integration and also to see the relationship of some demographic variables with attitudes.

### 3.5 Plan of Data Analysis

To examine the attitudes of the respondents towards the integration of hearing impaired students into regular classes and to see the relationship of some demographic variables with attitudes, some statistical methods were employed. Descriptive data analysis (by using frequency distribution, mean score, percentage, and standard deviation) has been used to describe the data on the basis of the reaction of the respondents to attitude scale items.

Multiple regression analysis was used to see the relation of the demographic variables to the variation of teachers' and students, attitudes towards the integration of hearing impaired students. This was made separately for teachers of special classes and regular class teachers and for hearing impaired students and regular class students.

Though four groups are included in the study, they are not taken from the same pool. Teachers and students can greatly vary in their educational level, life experience, occupation, age and the like. Hence, the researcher is interested to see whether there are differences between groups that are assumed to have relatively closer background/characteristics with the exception of some differences they have (such as
Therefore, t-test was used to see whether there are mean differences or not between hearing-impaired students versus regular class students and special class teachers versus regular class teachers in their attitudes towards integration. Mean differences between the prelingual and postlingual hearing impaired students and between males and females in each group were also checked by a t-test.

Before conducting t-tests to look at mean differences between hearing-impaired students versus regular class students, special class teachers versus regular class teachers and between the prelingual and postlingual students, Levene's test for the equality of group variances were observed. The test results have indicated the presence of variance homogeneity between the groups to be compared. The statistical software that was used in the study was SPSS computer program.

Results obtained from the two focus group discussions were used to confirm the quantitative results. Moreover, the information given by the key informants has also been used to confirm the perception of students about the overall situations in the school.
Chapter Four

4. Results

As elsewhere mentioned in this paper, an attempt has been made to examine the attitudes of students and teachers by administering 20 items of a three-point attitude scale to a total of 119 (m=56, f=63) participants. That is, 39 hearing-impaired students, 40 regular class students, 20 special class teachers and 20 regular class teachers.

Two focus group discussions were also conducted in Menelik - II Primary School for confirmation purpose. General information was also secured by interviewing key informant teachers from each school.

Therefore, on the basis of the given responses by the participants, the main findings of the study are presented in the following manner.

4.1 Background Profile of the Participants

The age of grades 5 and 6 hearing impaired students ranges from 11 to 27 years, with a mean of 15.9 years. The mean age of grade 6 hearing-impaired students (17.3 years) was higher than the mean age of grade 5 hearing-impaired students (14.5 years) (refer to appen. C).
The age of grades 5 and 6 regular class students ranges from 10 to 15 years with a mean of 12.4 years. The mean age for grade 6 regular class students (13.1 years) was relatively higher than grade 5 regular class students (11.8 years) (refer to appen. C).

In general, the age of 82.5% of grades 5 and 6 regular class students was below 14 years whereas the age of 71.8% of grades 5 and 6 hearing impaired students was 15 years and above.

The age of special class teachers ranges from 26 to 51 years (m=36.1 years) and that of the regular class teachers ranges from 28 to 52 years (m=43 years). The age of the majority of special class teachers (75%) was found to be less than 42 years; whereas the majority of regular class teachers (85%) age was 42 years and above. From this, it can be deduced that many of the regular class teachers appear to be older than special class teachers (refer to appen. D).

In terms of qualification status, out of 20 teachers, 17 (85%) special class teachers have a qualification level of 12+1 and below. Similarly, 12 (60%) regular class teachers were with a qualification level of 12+1 and below. Hence, more special class teachers appeared to be at a lower qualification level than teachers in regular classes (refer to appen. E).

Regarding total years of experience, for special class teachers it ranges from 4 years to 31 years (m=16.4), and that of regular class teachers ranges from 13 years to 32 years (m=23.6 years). As a whole, it appears that more regular class teachers have a relatively
higher year of experience than special class teachers (refer to appen. F).

4.2 Results of Attitudes towards Integration.

On the basis of the participants' reaction to each specific item in the attitude scale, percentages, means and standard deviations were computed in order to describe the position of the participants along the continuum in their attitude towards the integration of HI students into regular classes.

Consequently, the mean differences between groups (hearing-impaired versus hearing students, special class versus regular class teachers), were checked by a t-test. The relation of some demographic variables to change of attitude was also examined by employing multiple regression analysis.

4.2.1 Responses of the Participants of Attitude Scale Items

The respondents were asked to show their agreement on the idea of the integration of hearing impaired students into regular classes. The result indicated that 87.2 percent (m=1.23, SD=.62) of hearing impaired students, 70 percent (m=1.50, SD=.82) of the special class teachers and 90 percent of (m=1.20, SD=.61) regular class teachers did not support the integration of HI students into regular classes. On the other hand, 67.5 percent (m=2.37, SD=.92) of the regular class students have supported the integration of HI students into regular classes.

As to the perceived workload, 65 percent regular class teachers believed that there would
be more work to do by them if hearing-impaired students were integrated. Similarly, 59 percent of the hearing-impaired students reacted that regular class teachers would be overloaded if HI students were to be integrated.

Concerning the attitudes of hearing and non-hearing students towards each other, the result indicated that only 56.4 percent (m=1.87, SD=1) of hearing-impaired students were not willing to play with hearing students in their spare time. From the regular class students 77.5 percent (m=2.62, SD=.74) were willing to play with hearing-impaired students in their spare time.

Another reaction was the perceived effect of integration on academic achievement of hearing-impaired students. From the result, 92.3 percent (m=1.12, SD=.46) of the hearing impaired students, 50 percent (m=1.65, SD=.74) of special class teachers and 75 percent (m=1.30, SD=.57) of regular class teachers did not believe in the idea that integration will improve the academic achievement of hearing impaired students. On the other hand, 35 percent special class teachers and 67.5 percent of regular class students were uncertain whether integration helps to improve the academic achievement of HI students or not.

From the given responses 61.5 percent (m=1.51, SD=.72) of hearing-impaired students indicated that regular class teachers would be unwilling to accept them in their classrooms. Similarly, 90 percent (m=1.2, SD=.61) of the regular class teachers reacted that they are not willing to accept hearing-impaired students into their classrooms. Here,
as seen from the reaction of regular class teachers, the prediction of HI students about the perceived attitude of regular class teachers towards the integration of HI students appears to hold true in the existing situation. On this same issue, 75 percent of special class and 75 percent of regular class students are uncertain about the attitude of regular class teachers in accepting HI students.

Concerning the attitude of regular class students in accepting HI students, 65 percent (m=2.50, SD=.75) of regular students claimed that they are willing to accept if hearing impaired students were placed in their classrooms. On the contrary, 76.9 percent (m=1.33, SD=.66) of HI students expressed their fear that regular students would not accept them positively. On this point, 50 percent of special class and 60 percent of regular class teachers expressed uncertainty.

Regarding the reaction of the respondents about the academic competence of HI students in the integrated classroom set up, 94.9 percent (m=1.10, SD=.44) of hearing impaired students, 90 percent (m=1.10, SD=.30) of special class teachers and 85 percent (m=1.2j SD=.52) Regular class teachers affirmed that HI students cannot attend their education as equally as regular students. As to regular class students, 52.5 percent of them expressed uncertainty about the academic competence of hearing impaired students.

Concerning the regular class teachers' professional competence to teach in classes where HI students are integrated, 74.4 percent (m=1.33, SD=.85) of the HI students, 80 percent (m=1.30, SD=.65) of special class teachers and 45% of regular class students claimed
that regular class teachers will face difficulty in teaching if hearing impaired students were integrated in to regular classes. On this same issue, 65 percent (m=1.55, SD=. 82) of the regular class teachers reacted that they feel inadequate in their teaching professional skill if HI students were to be integrated into regular classes.

As to the social benefit of integration, the obtained result indicated that 71.8 percent (m=2.51, SD=. 82) of HI students, 52.5 percent (m=2.42, SD=. 67) of hearing students, 95 percent (m=2.95, SD=. 22) of special class teachers and 85 percent (m=2.80, SD=. 52) of regular class teachers were in favor of the opinion that the opening of special classes (physical integration) within the regular school set up would enable the HI students to have closer social contact with hearing students.

On the contrary, 74.4 percent (m=1.48, SD=. 85) of HI students, 60 percent of (m=1.75, SD=. 96) special class teachers and 85 percent (m=1.30, SD=. 73) of regular class teachers reacted that hearing-impaired students should attend their education in a separate special school. This indicates that valuing the social benefits of integration alone may not necessarily lead individuals to develop positive attitude towards integration for its academic benefit.

As to the nature of classroom discipline, owing to the integration of hearing impaired students, 50 percent of regular class teachers and 45% of special class teachers and 38.5% of hearing impaired students believed that integrating hearing-impaired students with hearing students will disrupt classroom discipline.
In the proceeding paragraphs, the general profile of the group on the basis of the computed mean scores, statistical results related to mean differences and the relation of some demographic variables to change of attitude are presented.

4.2.2 Comparison' of Groups ' Attitude towards Integration on the Basis of Mean Scores.

**Table -I Groups ' Mean' Values on attitudes towards Integration**

<table>
<thead>
<tr>
<th>No</th>
<th>Groups/Respondents</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hearing-Impaired students</td>
<td>39</td>
<td>1.7000</td>
<td>.3114</td>
</tr>
<tr>
<td>2</td>
<td>Regular class students</td>
<td>40</td>
<td>2.2013</td>
<td>.3022</td>
</tr>
<tr>
<td>3</td>
<td>Special class teachers</td>
<td>20</td>
<td>1.9850</td>
<td>.3297</td>
</tr>
<tr>
<td>4</td>
<td>Regular class teachers</td>
<td>20</td>
<td>1.7850</td>
<td>.3154</td>
</tr>
</tbody>
</table>

As it ca" be seen Rom table 1, the mean scores of hearing - impaired students (1.70), special class teachers (1.98) and that of regular class teachers (1.78) were below the neutral/average value (2).

This indicates that the three groups, as a whole appeared to have a negative attitude towards the integration of hearing-impaired students with little variation among themselves.

On the other hand, the mean score of regular class students- (2.20) generally indicated that regular class students appeared to have a somewhat positive attitude towards the integration of hearing-impaired students.
Table -2 Groups’ Mean values and Standard Deviation Distribution by Sex

<table>
<thead>
<tr>
<th>No</th>
<th>Groups/Respondents</th>
<th>Sex</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hearing Impaired students</td>
<td>M</td>
<td>16</td>
<td>1.7938</td>
<td>.3530</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>23</td>
<td>1.6348</td>
<td>.2677</td>
</tr>
<tr>
<td>2</td>
<td>Regular Class students</td>
<td>M</td>
<td>18</td>
<td>2.2944</td>
<td>.2514</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>22</td>
<td>2.1250</td>
<td>.3239</td>
</tr>
<tr>
<td>3</td>
<td>Special class teachers</td>
<td>M</td>
<td>12</td>
<td>1.9792</td>
<td>.3709</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>8</td>
<td>1.9938</td>
<td>.2809</td>
</tr>
<tr>
<td>4</td>
<td>Regular class teachers</td>
<td>M</td>
<td>10</td>
<td>1.7150</td>
<td>.1492</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>10</td>
<td>1.8550</td>
<td>.4202</td>
</tr>
</tbody>
</table>

As shown in table 2, all male and female participants in the three groups have mean scores below average (2). From the result, it generally appeared that both males and females in the three groups have negative attitude towards the integration of HI students.

Regular class students (both males and females) appeared to have a somewhat positive attitude towards the integration of HI students into regular classes.

4.2.3. Groups’ Mean Differences on Integration

The mean differences between groups to be compared were checked by a t-test and the following results were obtained.

Table -3 t-test Results for Mean Differences between groups in their Attitudes towards the Integration of HI Students.

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Mean diff</th>
<th>df</th>
<th>T values</th>
<th>Sig.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prelingual Vs Postlingual</td>
<td>21</td>
<td>1.6857</td>
<td>.2496</td>
<td>-0.031</td>
<td>37</td>
<td>.306</td>
<td>.762</td>
<td>Ns</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>1.7167</td>
<td>.3781</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hearing imp. Vs Regular class sts.</td>
<td>39</td>
<td>1.7000</td>
<td>.314</td>
<td>-.5013</td>
<td>77</td>
<td>7.260</td>
<td>.000</td>
<td>S</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>2.2012</td>
<td>.3022</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special class</td>
<td>20</td>
<td>1.9850</td>
<td>.3297</td>
<td>.2000</td>
<td>38</td>
<td>1.96</td>
<td>.057</td>
<td>ns</td>
</tr>
</tbody>
</table>
As indicated in table 3, there appeared no statistically significant mean difference between prelingual and postlingual hearing-impaired students $t(37) = .306, p > 0.05$ in their attitude toward integration.

However, the mean difference between the HI and hearing students is statistically significant $t(77)= -7.260, p < 0.001$.

There also appeared no statistically significant mean difference between special class and regular class teachers in their attitude towards the integration of HI students into regular classes $t(38)=1.96, p > 0.05$.

4.2.4. The Relation of Some Demographic Variables to Attitudes towards the Integration of HI Students (Multiple Regression Analysis).

Multiple regression analysis was employed to determine the prediction of groups' characteristics on integration. This is illustrated as follows in table 4.

<table>
<thead>
<tr>
<th>Variables</th>
<th>B Coeff.</th>
<th>Std.E.</th>
<th>t-values</th>
<th>sig.</th>
<th>R</th>
<th>$R^2$</th>
<th>Adj.R</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.797</td>
<td>.531</td>
<td>3.091</td>
<td>.004</td>
<td>.320</td>
<td>.103</td>
<td>.026</td>
</tr>
<tr>
<td>Age</td>
<td>-0.023</td>
<td>.019</td>
<td>-1.217</td>
<td>.232</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As seen from table 4, the regression coefficients (Bs) are not statistically significant to attitude towards the integration of hearing impaired students.

To see the significance of the overall contribution of the predictor variables (age, sex, grade level) to the hearing-impaired students' attitude towards integration, it was checked by an F-test.

The result indicated that the overall contribution of the predictor variables (10.3%) was not statistically significant to attitude towards integration, $F(.05,3,35) = 2.87$. The computed F value was 1.32.

Table -5 The Relation of Predictor Variables to Attitudes of Regular Class Students towards the Integration of HI Students into Regular Classes

<table>
<thead>
<tr>
<th>Variables</th>
<th>B Coef</th>
<th>Std.E.</th>
<th>t-values</th>
<th>Sig.</th>
<th>$R$</th>
<th>$R^2$</th>
<th>Adj. $R$</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>3.846</td>
<td>.523</td>
<td>7.349</td>
<td>.000</td>
<td>.521</td>
<td>.272</td>
<td>.211</td>
</tr>
<tr>
<td>Age</td>
<td>-0.0851</td>
<td>.043</td>
<td>-1.978</td>
<td>.056</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>-.167</td>
<td>.086</td>
<td>-1.954</td>
<td>.059</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade Level</td>
<td>-0.0913</td>
<td>.103</td>
<td>-.380</td>
<td>.380</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As shown in table 5, the regression Coefficients (Bs) are not statistically significant to attitude towards integration.

To check the significance of the overall contribution of the predictor variables (age, sex, and grade level) to attitude towards integration, an F-test was employed.
The obtained result indicated that overall contribution of independent variable (27.2%) was statistically significant to attitude towards the integration of HI students into regular classes, F(.05,3,36) = 2.86. The computed F value was 4.48.

Table 6 The Relation' of Predictor Variables to Attitudes of Special Class Teachers towards The Integration of HI Students into Regular Classes

<table>
<thead>
<tr>
<th>Variable</th>
<th>B Coeff.</th>
<th>Std. E.</th>
<th>t-values</th>
<th>Sig.</th>
<th>R</th>
<th>R'</th>
<th>Adj. R</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.719</td>
<td>1.239</td>
<td>1.387</td>
<td>.186</td>
<td>.394</td>
<td>.155</td>
<td>-.070</td>
</tr>
<tr>
<td>Age</td>
<td>0.05443</td>
<td>.038</td>
<td>1.415</td>
<td>1.177</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>0.07836</td>
<td>.162</td>
<td>.485</td>
<td>.635</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qualification Level</td>
<td>-0.0618</td>
<td>.072</td>
<td>-.860</td>
<td>.403</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Work Exp.</td>
<td>-0.0512</td>
<td>.041</td>
<td>-1.252</td>
<td>.230</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a=0.05

As indicated in table 6, the regression coefficients (Bs) are not statistically significant to attitude towards integration.

The significance of the overall contribution of the independent variables was checked by an F-test. The obtained result indicated that the overall contribution of the independent variables (15.5%) was not statistically significant to attitude towards the integration of HI students, F(.05,4,15) = 3.06. The computed F value was 0.688.

Table 7 The Relation of Predictor Variables to Attitudes of Regular Class Teachers towards the integration' of HI Students

<table>
<thead>
<tr>
<th>Variable</th>
<th>B Coeff.</th>
<th>Std. E.</th>
<th>t-values</th>
<th>Sig.</th>
<th>R</th>
<th>R'</th>
<th>Adj. R</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>3.546</td>
<td>1.196</td>
<td>2.964</td>
<td>.10</td>
<td>.436</td>
<td>190</td>
<td>-.026</td>
</tr>
<tr>
<td>Age</td>
<td>-0.00135</td>
<td>.032</td>
<td>-.042</td>
<td>.967</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>0.06599</td>
<td>.159</td>
<td>.414</td>
<td>.685</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qualification</td>
<td>-.117</td>
<td>.094</td>
<td>-1.239</td>
<td>.234</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exp Total Work.</td>
<td>0.0007766</td>
<td>.034</td>
<td>.023</td>
<td>.982</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a=0.05
As it can be observed from table 7, the regression coefficients (Bs) are not statistically significant to attitude towards integration.

The significance of the overall contribution of the independent variables was checked by an F-test. The F-test result indicated that the overall contribution of the independent variables (19%) to attitude towards the integration of HI students was not statistically significant, $F(0.05,4,15) = 3.06$. The computed $F$ value was 0.879.

Next, the perceived factors that predisposed the participants to favor or disfavor integration would be summarized in the following sub-heading.

4.2.5. Some Perceived Factors that Contributed to Favor or Disfavor the Integration of HI Students.

Responses given by the participants to the open-ended items have generally reflected some problems that may hinder the integration of hearing-impaired students into regular classes. Some benefits that integration may contribute to hearing-impaired students were also indicated by the respondents.

The main factors that were most frequently mentioned by hearing-impaired students for disfavoring integration were: the inability of regular class teachers to use sign language, communication problem with hearing students (due to language problem), fear to cope with hearing students in academic matters, mistreatment and teasing on the part of hearing students and the perceived negative attitude of regular class teachers in accepting
hearing impaired students in their classrooms.

From the part of regular class students who disfavored integration, communication problem is perceived as a major obstacle for the integration of HI students into regular classes.

The main factors more frequently rated by the special and regular class teachers for disfavoring the integration of HI students were: absence of sign language as a means of instruction in regular classes, communication barrier between the hearing and non hearing students and failure to cope up with academic challenges. The expected wastage of time in an effort to assist HI students and the existing classroom size of students were also mentioned as main problems. Regular class teachers have additionally indicated that integrating HI students would bring more work to do to regular class teachers.

As seen from the given responses, the indicated benefits that integration could contribute to the hearing-impaired students appeared to be more of social benefits rather than the academic benefits. The four hearing-impaired students who favored integration, for instance, stated that they support integration not because it is academically beneficial to them, but to play with their hearing peers.

Regular class students who supported the integration of HI students believed that integration would enable hearing-impaired students to develop better relationship with hearing students, avoid feeling of loneliness, gain assistance from hearing students in
academic activities, improve their language through interaction with hearing students, develop self-confidence and to improve their academic performance.

The benefits of integration indicated by the special and regular class teachers were also more of social benefits. Teachers believed that integration would enable HI students to create friendship with hearing students, develop positive self-concept about themselves, learn social life, gain assistance from hearing students whenever required, improve their language, and to reduce social stigmas that others may have towards the hearing-impaired students.

Generally, factors that are directly or indirectly related to communication problem seem to be major obstacles to the integration of HI students into regular classes. As seen from the given responses, the social benefits of integration were more emphasized than the educational benefits in favoring the integration of HI students into regular classes.

**4.2.6. Analysis of the Focus Group Discussion healed with Hearing and Non hearing students**

As it was already introduced in other part of this paper, two focus group discussions (with grades 5 and 6 hearing and non-hearing students were conducted for confirmation purpose.

Hearing-impaired students who participated in the focus group discussion were 3 males and 3 females. Their age ranges from 14 years to 18 years. Regular class students who
took part in the focus group discussion were 4 males and 2 females. Their age ranges from 11 to 14 years. All participants were voluntary to take part in the discussion.

Issues presented in the discussion for both focus groups were related to the expressed attitudes or feelings about the integration of hearing impaired students stated in the attitude scale. Only the highlights of the focus group discussions are briefly summarized in the following paragraphs.

In the first group, the moderator (the researcher) presented issues for discussion to the hearing-impaired students by using a sign language translator. As expected, the participants generated more ideas.

All HI participants, with emotionally loaded feeling, explained that the integration of hearing-impaired students into regular classes would be impossible due to the existing communication barrier between the hearing-impaired students and regular class teachers (including students). Additionally, mistreatment and provocation of regular class students against the HI students and lack of willingness (as perceived by HI students) on the part of regular class teachers to accept hearing-impaired students in their classrooms were also mentioned as main obstacles towards the integration of HI students.

Moreover, hearing-impaired students expressed their fear that they would be in problem and even lag behind academically if they were integrated in to regular classes. All Hearn impaired students preferred to remain as they are in the special class in order to maintain
their identity and for their academic benefit.

Some hearing-impaired students said, "We want to be like Alpha students". Alpha is a special school for hearing-impaired students run under the Ministry of Education. This implies that some hearing-impaired students may be interested to join special school rather than being in the special class. This opinion (favoring the special school) was also favored by 74.4 percent of the hearing impaired students in a response given to the attitude scale item.

From the held discussion, hearing impaired students generally appeared to have a negative attitude towards the regular class students. Hearing impaired students complained that regular class students were underestimating and teasing them about their hearing impairment. As a result, the hearing-impaired students have developed a common saying, which reads: "Those who hear are not good for us".

The hearing-impaired students explained that there was no joint activity planned by the school to enhance social interaction with hearing students. They further confirmed that no orientation program has been arranged by the school to create awareness and better relationship between the hearing and non-hearing students. They (the HI students) finally informed that vocational education should be provided to hearing impaired students rather than pure academic subjects.

The second focus group discussion was carried out with regular class students. As seen
from the response given to item 1 in the attitude scale, 67.5 percent of regular class students were in support of the integration of HI students into regular classes. But participants in the focus group discussion (5 out of 6 students) did not support the immediate integration of HI students into regular classes.

The regular class students suggested that, though they favor the integration of HI students in principle, regular class teachers should be trained in sign language before the integration of hearing-impaired students into regular classes. The participants were hesitant to explain about the perceived attitudes of special class and regular class teachers. Regular class students also have expressed their feeling that they welcome the placement of HI students into regular classes if hearing impaired students are willing to join them positively.

The regular class students did not deny that they have contradictions with hearing impaired students. They generally perceived the hearing-impaired students as an object of fear. Regular class students complained that HI students usually attack the hearing student(s) in group mainly by misinterpreting the actions or sayings of the hearing students.

One regular class student expressed his feeling about HI students by saying the following: "Whenever I see the hearing-impaired student, I feel as if I am chased by the biting dog". The hearing impaired students are perceived as aggressive, hostile and merciless by the regular class students. They (regular students) too confirmed that no
planned activity was undertaken by the school to create better relationship between the hearing and non-hearing students.

As a whole, the results obtained from the two focus group discussions largely appeared to confirm the responses given to the attitude scale items.

4.2.7. General Information from Key Informants

The four key informant teachers disclosed that no programs have been planned by the school to facilitate interaction between the hearing and non-hearing students. They further confirmed that no effort has also been made to create awareness among the school community about the nature of hearing impairment and the hearing impaired children.

The Key informants reported that there were conditions where the hearing impaired and regular class students come into conflict due to communication problem. The Key informants from Menelik -II Elementary School informed that various types of equipment that were practically in use some years back (to give vocational training for HI students) are now kept idle due to lack of trained man power.
Chapter Five

5. DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1. Discussion

The purpose of this study was to examine the attitudes of hearing-impaired students, regular class students, special class and regular class teachers towards the integration of hearing impaired students into regular classes.

Some demographic variables contributing to attitude towards integration were also considered. Furthermore, the study has also aimed at identifying the perceived factors that may predispose the participants to favor or disfavor the integration of hearing-impaired students into regular classes.

The result generally indicated that hearing impaired students (m=1.70), special class teachers (m=1.98), and the regular class teachers (m=1.78) appeared to have negative attitude towards the integration of hearing-impaired students.

As a whole, hearing-impaired students appeared to show a relatively strong negative attitude towards integration being followed by regular class teachers. On the other hand, regular students appeared to have a somewhat positive attitude (m=2.20) towards the integration of hearing-impaired students (refer to table 1). Comparison of respondents' mean values by sex revealed that both males and females in each group (when compared
in their own group) appeared to have a relatively closer mean scores (refer to table 2. The female hearing impaired students were found with the least mean score (m=1.63) as compared to male regular class students (m=2.20). This implies that female hearing impaired students seemed to have strong negative attitude towards integration; while male regular class students appeared to have a relatively positive attitude towards the integration of hearing impaired students into regular classes.

The result obtained from the focus group discussion has also confirmed that hearing impaired students have a strong negative attitude towards integration. In case of regular class students, though they generally appeared to have a relatively positive attitude towards integration in their response to the attitude scale items, 5 (83.3%) participants (out of G students) in the focus group discussion did not support the integration of hearing impaired students. They said that the existing barriers should be reduced first.

Previous studies on attitudes of students and teachers did not provide consistent picture. The result in this study, particularly with reference to the attitudes of hearing-impaired students, special class teachers and regular class teachers, agrees with studies undertaken by Stainback and Stainback (1990) Padeliadu and Lampropoulou (1997), Hayes and Gunn (1988), Thomas (1985).

The major perceived factors rated more often by the hearing-impaired students to disfavor integration were: communication problem with regular teachers and students, fear of coping up with hearing students in academic activities, mistreatment/teasing by
the regular class students and the perceived negative attitude of regular class teachers in accepting the hearing impaired students.

The reasons rated more-often by the special class teachers to disfavor integration were mainly related to the absence of sign language in regular classes, communication problem between the hearing and non hearing students (including teachers), problem in coping up with academic challenges, possible time-wastage in an effort to assist HI students and to the existing classroom size of students.

Regular class teachers were having the same view with special class teachers to disfavor the integration of HI students. Reasons mentioned by the hearing impaired students to disfavor integration were more emphasized by them during the focus group discussion.

As to the attitude of special class students towards integration, Stainback & Stainback (1990, pp. 20-21), indicated that students in a special class are unsure and hesitant about integration mainstreaming considering it "as a place where they may feel unwelcome and uncomfortable". Zigler and Stevenson (1987, p.522) on their part reported that integrated children "feel just as stigmatized by the normal peers as do handicapped children who are educated in self contained classes".

As noted by some writers, hearing impaired students, in some instances tend to come into conflict with their hearing peers due to their own misconception about the situation. Hegarty and Pocklington (1988, p.412), for instance, reported that "the hearing-impaired
think that they are being ridiculed when they are not”. Additionally, it has been observed that a group of hearing-impaired students in one school "were far too quick to misinterpret other students' actions and retaliate negatively (Ibid, p.434).

Hence, the complaints forwarded by the regular class students during the focus group discussion related to this same issue (misinterpretation of actions) need to be taken into account while assessing possible causes that keep apart the hearing and non hearing students.

As seen, especially from the focus group discussion held with HI students, other than communication problem, mistreatment and teasing directed towards the hearing impaired students and the perceived negative attitude of regular class teachers seem to serve as a condition to develop negative attitudes towards integration.

Therefore, without avoiding the social bias attached to the hearing impaired students and reduce the existing communication barriers, it would be very difficult to think of the integration of hearing-impaired students into regular classrooms. Therefore, winning the positive attitude of hearing-impaired students by reducing the existing major problems is highly pertinent to promote their successful integration.

Many educators noted that integration will be more effective and enables handicapped children (including the hearing-impaired) develop a positive feeling about their personal values if their hearing peers in the school accepted them (Tibebu, 1995, p. 50). Hallahan
and Kauffman (1991, p.277), on their part informed that 'social environment can largely
determine the child's inclination towards making healthy social interaction.

The other worrying condition that may hinder the integration of HI students, as seen from
the result, is the existence of negative attitudes of regular class and special class teachers
towards integration.

Padeliadu and Lampropoulou (1997, p.174) noted that teachers' attitudes have been
considered as one of the major factors guaranteeing the success of integration of students
with special needs.

Similarly, Millward and Dyson (1995, p.59), informed that mainstreaming children with
special needs in the regular education set up "depends crucially on the attitudes and the
actions of the regular class teacher and the school team" as a whole. Padeliadu and
Lampropoulou (1997, p.180) furthermore stressed that less positive attitude towards
integration on the part of special class teachers is to be perceived as losing the integral
supporters in the promotion of the integration of special needs children.

Despite all the facts that confirm the positive role of teachers in the process of
integration, some previous studies indicated that teachers appeared to have negative
413-414), on his comprehensive literature review of teachers' attitude towards
handicapped students pointed out that "teachers typically are uncomfortable with
handicapped students and have negative attitudes about their placement in regular classes”. Similarly, the survey conducted by Padeliadu and Lampropoulou (1997, p.180) indicated that special education teachers were having less positive regard towards integration than regular class teachers.

As it is further indicated by Padeliadu & Lampropoulou (1997, p.180), "Special education teachers may consider integration as a threat to their professional status or their special assets related to their appointments in special schools and classes." Moreover, it was noted that negative attitudes of special class teachers towards integration "may be the result of apprehension /unhappy feeling concerning their new roles in case of the implementation of integration" (Ibid). This might hold true in part as to the case of special class teachers in this study. However, it is also possible to assume that special class teachers can perceive integration negatively not because of threat to their status but due to the academic concern that they may have in preferring what appears educationally beneficial to the hearing-impaired students.

As seen from the given responses, 92.3 percent of the hearing-impaired students claimed that integration will not improve the academic achievement of hearing-impaired students. This issue was also raised in the focus group discussion and HI students believed that they will be at disadvantage academically if they were to be integrated.

Concerning the effect of integration on HI students' academic achievement, Scruggs & Mastropieri (199G, p.66), reported that 70.3 percent of teachers agreed that the placement
of handicapped students in regular classrooms would hurt the educational progress of handicapped children.

Hence, as far as students and teachers are not able to perceive the academic benefits of integration to HI students, it would be less likely to win their support to promote the integration of hearing-impaired students.

The other point to be treated (item 5) was related to the attitudes of regular class teachers towards accepting the hearing impaired students. The observed resistance of regular class teachers to such a maximum negative extent and the negative perception of HI students about regular class teachers' willingness in accepting them seem to be an alarming condition to be noted in taking appropriate measures to facilitate integration.

Lack of effort on the part of schools in arranging conditions for sharing experiences has been confirmed by the key informants and also by the hearing and non-hearing participants during the focus group discussion. In fact, as it was reported in other studies little concern is given "to intervene in a formal way to promote interaction between pupils with special needs and their peers" (Hegarty and Pocklington, 1988, p.419).

The obtained result indicated that 53.8 percent of hearing-impaired students were not willing to use hearing aids because they did not want to be identified by others. During the focus group discussion, one female HI student strongly opposed the idea of using a hearing aid not to be identified by others. The remaining five HI students expressed their
feeling that they are willing to use hearing aids only when they are in classes and keep them in their packet when they are in the outdoor. The hostile nature of the school environment (as perceived by the HI students) and possibly the images they have (the HI students) about their personal values can have an impact on their attitude towards using the hearing aids.

On this same issue, the survey made by Hegarty and Pocklington (1988, p. 445) has indicated that the hearing-impaired students had difficulty in "being singled out through wearing hearing aids" and even through their occasional use of sign language.

As to the effect of integration in reducing the social biases attached to hearing-impaired students, 46.2% of HI students did not believe that integration would reduce negative stereotypes towards the hearing-impaired. Similarly, 50 percent of special class teachers and 50 percent of regular class teachers reacted that integration will not reduce the negative social biases.

The position taken by the regular class teachers on the effect of integration to reduce social biases appeared to differ from what Scruggs & Mastropieri (1996, p.66) have reported. In their study, 63.7 percent of regular class teachers had believed that the integration model would reduce the negative social stigma attached to disabilities.

Hence, for integration to be possible, teachers and students should perceive that integration could serve to reduce social biases for it provides the opportunity to have
more understanding among each other. The interesting thing was that 65 percent of regular class students were in support of the idea that integration would reduce the social biases about hearing-impaired students.

As to the social benefits of integration, 71.8 percent of hearing-impaired students, 52.5 percent of regular class students, 95 percent of special class teachers and 85 percent of regular class teachers affirmed that the opening of special classes would enable the hearing impaired students to have closer social contact with hearing students. This positive response appears to be a healthy sign as a condition to maintain special education units/classes as an option to promote closer social and physical proximity between the hearing-impaired and regular class students.

However, the position taken by the participants in favor of the social benefits of special classes appears to be paradoxical when responses given to item 16 are closely examined. According to the given responses to item 16, 74.4 percent of hearing-impaired students, 60 percent of special class teachers and 85 percent of regular class teachers believed that hearing-impaired students should attend their education in the separate special school. The opinion forwarded by the hearing-impaired students during the focus group discussion was also in favor of special schools.

The possible assumption that could be made about the occurrence of such inconsistent view is that the participants might have been more concerned with academic benefits than social benefits. As it can be recalled, the perceived reasons for favoring the integration of
hearing impaired students were more of social benefits than the academic ones.

Concerning the effect of integration on regular class students' academic progress (item 10), 41 percent of hearing impaired students and 40 percent of regular class teachers agreed that the integration of HI students would hinder regular students' academic progress. On the other hand, 50 percent of regular class students and 50 percent of special class teachers claimed that integrating HI students would not hinder regular students' academic progress.

In Scruggs and Mastropier: (1996, p.62) report, it was stated that students with disabilities and without disabilities could benefit from integration experiences.

In principle, attending in regular classes was perceived as an educational right only by 43.6 percent of HI students. In the focus group discussion, the hearing-impaired students expressed their opinion that they will not claim integration as their educational right unless others are willing to accept them positively. In fact, though integration is perceived negatively by HI students due to the perceived constraints, the participants who responded negatively should have positively valued attending education in regular classes as a right.

The majority of the participants (59-70%) in the three groups and all special class teachers did not consider hearing-impairment as a sign of low ability in general. Despite the communication problem that the HI students have, perceiving hearing-impaired
students as full functioning individual may have its own positive contribution in promoting the integration of HI students into regular classes.

More hearing-impaired students (76.9%) perceived that regular students are unwilling to accept them in their classrooms. Conversely, 65 percent of regular class students showed their willingness to accept HI students. As it can be seen from the result, hearing impaired students seem to misperceive the attitude of regular class students in accepting HI students. Such misconception may prevent hearing-impaired students from making harmonious social relationship with hearing students.

Regarding the professional competence in teaching the integrated HI students, 65 percent of regular class teachers responded that they feel inadequate in their professional skill to teach the integrated students. Similarly, 74.4 percent of hearing-impaired students and 80 percent of special class teachers believed that regular class teachers would face difficulty in teaching if HI students were integrated in regular classrooms.

Probably, communication problem might have been taken by the participants as possible reason in judging the teaching competence of regular class teachers in the integrated classrooms.

Hegarty and Pocklington (1988, p.460), on this same issue reported that teachers appeared to consider themselves as ill-equipped to teach students with special needs or lack time to teach them in a large class. As a matter of fact, as noted by educators,
teachers competence in teaching students is a function of "general teaching skills, perceptions of the pupils and attitudes toward them, ... the teaching context and the type of support available (Ibid, p. 148).

Concerning the academic competence of HI students in the integrated classroom set up, 94.9 percent of hearing-impaired students, 90 percent of special class teachers and 85 percent of regular class teachers reacted that hearing-impaired students cannot attend their education as equally as regular class students can.

As seen in the focus group discussion, hearing impaired students appeared to lack confidence in facing academic challenges due to communication problem. While treating this same issue, Hegarty and Pocklington (1988, p.424) warned that though hearing impaired students lack confidence, "the lack of confidence must be seen in the context of the communication difficulty".

Concerning the perceived effect of integration on classroom discipline, 50 percent of regular class teachers, 45 percent of special class teachers and 38.5 percent of hearing-impaired students responded that the placement of HI students into regular classes will disrupt classroom discipline

This issue has been also raised during the focus group discussion held with the hearing and hearing-impaired students. Regular students expressed their feeling that hearing-impaired students may be impulsive due to lack of understanding with hearing students.
On the other hand, HI students believed that using a sign language in regular classes as a means of instruction could distract the attention of regular class students not to concentrate on the subject matter. They further stressed that such condition (distraction of attention) may lead regular class students develop feeling of resentment against HI students.

Previous studies on this same issue indicated that the majority of regular education teachers prefer not to teach students with disabilities (including the hearing-impaired) partly by associating them with trouble (Pastor and Jimenez (1994), cited in Padeliadu & Lampropolou, 1997, p. 174).

Similarly, in Scruggs and Mastropieri (1996, p.68) survey 30.3 percent regular teachers responded that students with disabilities (including HI students) could be harmful to the classroom. On the contrary, in the survey conducted by Hegarty & Pocklington (1988,p.376), it was reported that HI students remained silent "when they had not understood something or had run up against some difficulty".

However, it appears reasonable to assume that the way hearing-impaired students behave in a class could largely be governed by the prevailing conditions within the classroom.

As to the participants' perception concerning the extent of support and follow up to be offered for hearing-impaired students, 84.6 percent of HI students, 72.5 percent of regular class students, 100 percent of special class and regular class teachers believed that
hearing impaired students will always need an intensified support and follow up from teachers.

The position taken on this specific item possibly indicates the "high concern" that the participants have about the assistance to be given for HI students, and maybe the low perception of the participants towards the HI students as self efficient individuals in facing life challenges. In previous studies it was argued that "too high a level of supervision and staff support was detrimental and prevented pupils from growing in independence" (Hegarty and Pocklington, 1988, p.428). It was noted that "insisting an independent action from pupils led pupils to believe in themselves and so become more independent" (Ibid. P.429).

In general, it is believed that "The opportunity to act independently, to run risks and make mistakes, to explore the world about them and their own capacities... is an essential part of growing up" for all children and for those who have special needs (Ibid).

In fact, many educators have common understanding that maintaining the atmosphere of autonomy/feeling of independence requires "appropriate attitudes on the part of all concerned, both pupils and staff"(Ibid, p.431).

Regarding the competence to teach in regular classrooms, 75 percent of special class teachers reacted that they feel competent to teach in regular classes. The positive self perception of special class teachers (75%) as effective to teach in regular classrooms can
be taken as an asset to promote integration.

Regarding statistical treatments, the mean difference between the prelingual and postlingually hearing-impaired students was checked by a t-test (at $a = 0.05$ level) and it was not statistically significant $t (37) = -0.306$, $p > 0.05$, (refer to table 3).

The post-lingual hearing-impaired students did not appear favoring integration at a required level—though it was normally expected. Of course, from 18 postlingually hearing impaired students 13 of them (as reported by them) did not hear speech at all. Hence, due to communication problem, they can possibly disfavor integration (refer to Appen. K).

The mean difference between the hearing-impaired and regular class students in their attitude towards integration was found statistically significant $t (72) = -7.26$, $p < 0.001$, (refer to table 3).

As it was reported earlier, the age of 82.5 percent of the regular class students was below 14 years, whereas 71.9 percent of HI students were 15 years and above. Hence, age of the students may be taken as one of the possible factors to develop positive or negative attitude towards integration—thereby contributing to the mean difference between the two groups.

Hegarty and Pocklington (1988, p.414) indicated that "younger children seemed less sensitive to differences, and possibly did not notice handicapping conditions as much as older pupils".
Concerning the mean difference between special and regular class teachers, the t-test result indicated that the mean difference was not statistically significant $t(38)=1.96$, $p>.05$. Since both groups had nearly closer position on items in the attitude scale, this may be taken as one of the possible reasons not to obtain a statistically significant mean difference between special and regular class teachers (refer to table 3).

The mean difference between males and females in each group was also checked by a t-test and the difference was not statistically significant (refer to appendix L).

Padeliadu and Lampropoulou (1997, p.181), regarding gender, reported that, there was no difference between male and female teachers (both in special and regular class teachers) in their attitude towards school integration.

To see the relation of some demographic variables (age, sex, grade level) to the attitude of hearing-impaired students towards integration, multiple regression analysis was employed. The result indicated that the relation of the independent variables to attitude towards integration was not statistically significant (at $a=0.05$ level). Probably, their negative perception of the existing school environment and the perceived communication problem might have significantly contributed to develop negative attitude towards integration than the indicated variables. The relation of grade level to attitude towards integration in both groups appeared to be the least; possibly, due to less disparity between the two grades levels.
The significance of the overall contribution of the independent variables to attitude towards integration in HI students was checked by an F-test (at a=0.05 level). The result indicated that the overall contribution of the independent variables (10.3%) to attitude towards integration was not statistically significant (refer to table 4).

Similarly, the relation of independent variables (age, sex, grade level) to attitude of regular class students towards integration was not statistically significant at a = 0.05 level (refer to table 5). Though it was not statistically significant, age and sex appeared to have better relationship with attitude towards integration than grade level (in case of regular students).

However, the F-test result indicated that the overall contribution of the independent variables (27.2%) to attitude towards integration (in regular class students) was statistically significant at a = 0.05 level. Hence, though the relation of each variable (when seen separately) to attitude towards integration was not statistically significant, their combined effect indicated that the predictor variables had some how relevant contribution to develop positive attitude towards integration.

Concerning special class teachers, the relation of independent variables (age, sex, qualification level and work experience) to attitude towards integration was not statistically significant at a = 0.05 level (refer to table 6). Additionally, the significance of the overall contribution of the independent variables (15.5%) to attitude towards
integration was not statistically significant (at $a = 0.05$ level).

Larrivee & Cook (1979, P.316) informed that some studies conducted on "teacher-related variables such as sex, age, level of education and years of experience..." showed little conclusive results. As it is further indicated, teacher attitudes appeared to vary "as a function of stereotypic perceptions of specific labels". Hence, the perception of the special class teachers about the existing school situation might have significant contribution to their attitude towards integration, at least in part. As to regular class teachers, the relation of the indicated independent variables to their attitude was not statistically significant at $a = 0.05$ level (refer to table 7). The F-test result also indicated that the percentage variance of the dependent variable (attitude,' explained by the independent variables (19%) was not statistically significant. Here also, the perception of regular class teachers about the situation (as related to the integration of HI students) and of their own teaching competence might have contributed to their negative attitude towards integration.

Regarding the contribution of age and total year of experience to attitude towards integration, Padeliadu and Lampropoulou (1997, pp. 180-181) noted that as teachers get older and gain more experience in teaching, they "become more intolerant towards disabled students". However, the result of this study did not confirm this fact for age and total year of experience of teachers appeared to have no statistically significant relation to attitude towards integration.
5.2. CONCLUSION

To realize successful integration of the hearing-impaired students into regular classes, the attitude of hearing-impaired (HI) students, regular class students, special class and regular class teachers should be the major concern of educators.

Though there seems to be a general truth that integration is favored for its social and academic benefits particularly for children with special needs, the obtained result in this study did not confirm this truth in large part.

As it was seen from the result, though regular class students appeared to have a somewhat positive attitude towards integration, the majority of hearing impaired students, special class teachers and regular class teachers did not support the integration of hearing-impaired students into regular classes. The mean scores of HI students (1.70), regular class teachers (1.78), and that of special class teachers (1.98) were below the average value (2); indicating their negative attitude towards the integration of HI students.

The given responses to some attitude scale items and information obtained from the focus group discussion and from key informants confirmed that there was no smooth social relationship between the hearing impaired and regular class students.

The major perceived factors for disfavoring the integration of HI students were mainly related to communication problem, perception of the participants about situations in the school and to feeling of incompetence in facing challenges that may be encountered in
the integration process.

The t-test result for groups' mean differences confirmed that there was a statistically significant mean difference between the hearing-impaired and regular class students; possibly owing to reasonable differences they showed in their reaction on the attitude scale items. The mean difference between special class and regular class teachers, prelingual and postlingually hearing-impaired students and between male and female participants in each group was not statistically significant.

As seen from the result, the demographic variables considered in this study did not show a statistically significant relation to the attitude of the participants in favor of integration when the four groups were treated independently.

However, the overall contribution (27.2%) of the independent variables (age, sex and grade level) to attitude of the participants towards integration was statistically significant in case of regular class students.

While the relationship of the independent variables can be viewed as interactive, the degree to which each variable has contributed to attitude towards integration did not appear clearly. Therefore, further research is required to identify the relative contribution of each variable to the development of positive attitude towards the integration of HI students into regular classes.
Nevertheless, since there was a statistically significant overall contribution of some independent variables, the relation of demographic variables to attitude towards integration is not totally to be ignored.

In conclusion, the overall picture of the results in this study (with the exception of regular class students having less positive attitude towards integration) indicated that the majority of hearing-impaired students, regular class and special class teachers have negative attitude towards the integration of hearing-impaired students into regular classes. Hence, there appears to be no conducive situation to promote the integration of hearing-impaired students into regular classrooms particularly in schools that were included in the study.

Thus, the situation in return suggests that much effort have to be paid to avoid the existing communication barriers between the hearing-impaired and the hearing school community and also to bring positive change of attitude among students and teachers in favor of the integration of hearing-impaired students.

5.3. RECOMMENDATION

The way teachers and students perceive the implementation of integration program and the prevailing conditions within the school set up may hinder or enhance its promotion.

Therefore effective measures need to be taken to tackle the prevailing problems that work against the integration of HI students. Depending upon the scope of the problem and areas of emphasis for taking actions, measures to be taken can be carried out at several
5.3.1 Measures to be taken by the Government

- Though policies and legislation are issued, there appears to be lack of clarity and specification. Therefore, there must be clearly stated guidelines to provide special education to children with different types of disabilities. Legislation, educational policies, teachers’ training programs also need to be progressively updated to realize integration as an educational modality.

- The government should play a part in creating public awareness about the nature of hearing-impairment and of the hearing-impaired children through its accessible organizational networks. This would help to develop positive attitude in society towards the hearing-impaired children.

- Study has indicated that early intervention for hearing-impaired children can facilitate their successful integration with their hearing peers (Moores, 1996). According to the 1995 UNESCO’s report, “there is little or no preschool provision for children with special educational needs” in Ethiopia (p.105). Hence, the government should encourage the preschool provision of special education for hearing-impaired children at a sufficient level. This may serve as a foundation to successful integration.

- To reduce communication problem between teachers and HI students and enhance the integration process, sign language skill training should be given for teachers
through pre-and in-service training programs. Additionally, HI students need to be assisted technologically. Hence, instruments, such as hearing aids, should be accessible for hearing-impaired students.

- To promote successful integration, reasonable number of students should be enrolled in a classroom. To ensure fair class enrollment, an effort should be made towards this end by constructing additional classrooms/schools.

Guidance and counseling service appears to play an important role in creating favorable school climate if professionally/ educationally meaningful services were to be given to the school community. Hence, though priority is given to senior high schools, guidance and counseling service should be extended to schools where special units are available.

5.3.2. At School Level

Hearing-impaired children, as part of the school community, should enjoy a rewarding social and academic life with their hearing peers. Therefore, it is highly pertinent to remove the existing barriers between the hearing-impaired and the hearing school community. To do so, the preconceived beliefs that lead individuals develop negative attitude towards each other need to be changed. To achieve this end, at least in part, the following measures can be taken at the school level.

- The school should create awareness among the school community about the nature of hearing-impairment and of the hearing-impaired children. This
would help regular class teachers and students to perceive HI students as persons with a potentiality to grow up.

- Joint activities should be wisely structured (by the school) to facilitate social interaction between the hearing-impaired and regular class students. Closer social and physical proximity between students may bring positive attitude towards each other.

- The school should appreciate diversity and respond to varying needs of students to reach to their full potential. The school should reassure that there is respect to individual differences and mutual understanding between and among teachers and students.

- Continuous assessment of hearing-impaired students’ attitude towards integration should be made to identify interested individuals to join regular classes. Giving opportunity to interested HI students to join regular classes may initiate others to favor integration.

- There should be collaboration between special and regular class teachers for sharing experiences and arrange ongoing supports to the hearing-impaired and regular class students.

- All equipment (especially in Menelik-II School) available in the resource rooms should be in use to help HI students to acquire certain skills that would be helpful in their future life.
- Hearing-impaired students must be informed about their own personal values and potentiality to make them develop a positive self-image in their interaction with the hearing school community.

- To reduce communication problem, sign language training should be given to teachers and students by those teachers who are already trained in sign language.

- Hearing-impaired students appear to be isolated not only in schools but also in their hearing family. Therefore, the school need to work closely with parents to discuss the types of support that should be given to hearing-impaired students to facilitate communication both at home and school level.

5.3.3. Teachers

Teachers should be oriented about the nature of hearing impairment and the Potentiality to be cultivated in HI students so that they can have better understanding to promote integration.

They should appreciate individual differences and be prepared/willing to meet academic and social challenges resulting from diverse individual needs by acquiring knowledge about the nature of individual differences.

Special and regular class teachers should work hand-in-hand to achieve successful integration through sharing experiences.

- Teachers should guide learning experiences as opportunities to develop respect, trust and sense of responsibility among students.
In conclusion, "The development of positive attitudes and the recognition of the strength and value of each individual can only occur when students have the opportunity to grow up together with the expectation and modeling of acceptance and support for each member of the school community" (Stainback and Stainback, 1990 p. 1 19.)
REFERENCE


(1995). Review of the present Situation in special Needs Education UNESCO.


Description of Special and Regular Class Students by School type and Sex-in figure.

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Appen. A

Description of Special and Regular Class Students by school type and Sex-in figure

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<td>3</td>
<td>10</td>
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<tr>
<td>Adama No 2 School</td>
<td>12</td>
<td>8</td>
<td>20</td>
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</tbody>
</table>

125
**Appen. C**

Age distribution of HI students by sex and Grade level

Age distribution of regular Class students by sex and Grade level

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Grade</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>F</td>
<td>M</td>
<td>F</td>
<td>M</td>
<td>F</td>
<td>M</td>
</tr>
<tr>
<td>Regular class Students</td>
<td></td>
<td>5</td>
<td>1</td>
<td>-</td>
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</table>

**Appen.D**

Age distribution of Special and regular Class teachers by sex-in figures

<table>
<thead>
<tr>
<th>Respondents</th>
<th>26-33 yrs</th>
<th>34-41 yrs</th>
<th>42-49 yrs</th>
<th>50 and above</th>
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<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>T</td>
<td>M</td>
</tr>
<tr>
<td>Special class Teachers</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Regular class Teachers</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
| Total       | 4         | 5         | 9         | 8           | 6         | 14         | 14          | 6  | 7 | 1
### Description of Special Class and Regular Class Teachers by Qualification Level

<table>
<thead>
<tr>
<th>Respondents</th>
<th>10+2</th>
<th>12+TTI</th>
<th>12+1</th>
<th>12+2</th>
<th>12+3</th>
<th>12+4</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td>F</td>
<td>M</td>
<td>F</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td>Special class</td>
<td>-</td>
<td>2</td>
<td>7</td>
<td>4</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular class</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>7</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>2</td>
<td>9</td>
<td>11</td>
<td>7</td>
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</table>

127
### Description of Teachers by sex and total year of Experience in figure

<table>
<thead>
<tr>
<th>Respondents</th>
<th>4-13 Years</th>
<th>14-23 Years</th>
<th>24-33 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>T</td>
</tr>
<tr>
<td>Special class Teachers</td>
<td>4</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Regular class Teachers</td>
<td>-</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>6</td>
<td>10</td>
</tr>
</tbody>
</table>

### Description of Special Class Teachers by sex and year of Experience in special unit in figure

<table>
<thead>
<tr>
<th>Respondents</th>
<th>2-7 Years</th>
<th>8-13 Years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>T</td>
</tr>
<tr>
<td>Special class Teachers</td>
<td>8</td>
<td>7</td>
<td>15</td>
</tr>
</tbody>
</table>
Responses of hearing impaired students to attitude scale items (I-01)

<table>
<thead>
<tr>
<th>No</th>
<th>Items/attitude statements</th>
<th>Agree</th>
<th>Uncertain</th>
<th>disagree</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I support the integration of hearing impaired students in to regular classes</td>
<td>10.3</td>
<td>2.6</td>
<td>87.2</td>
<td>1.73</td>
<td>.62</td>
</tr>
<tr>
<td>2</td>
<td>If HI students are integrated in to regular classes, regular classes teachers would be at disadvantage for they would do additional work</td>
<td>59.0</td>
<td>35.9</td>
<td>5.1</td>
<td>1.46</td>
<td>.60</td>
</tr>
<tr>
<td>3</td>
<td>I like to play with hearing students in my spare time</td>
<td>43.6</td>
<td>-</td>
<td>56.4</td>
<td>1.87</td>
<td>1.00</td>
</tr>
<tr>
<td>4</td>
<td>If HI students are integrated in to regular classes, they would get better results in their academic results</td>
<td>5.1</td>
<td>2.6</td>
<td>92.3</td>
<td>1.12</td>
<td>.46</td>
</tr>
<tr>
<td>5</td>
<td>If I am placed in regular classes, regular classes teachers will accept me happily</td>
<td>12.8</td>
<td>25.6</td>
<td>61.5</td>
<td>1.51</td>
<td>.72</td>
</tr>
<tr>
<td>6</td>
<td>I don’t wont to use hearing aid because others will easily identify me</td>
<td>53.8</td>
<td>2.6</td>
<td>43.6</td>
<td>1.89</td>
<td>.99</td>
</tr>
<tr>
<td>7</td>
<td>If I learn with hearing students, I expect that bad words being said about me would decrease.</td>
<td>15.4</td>
<td>38.5</td>
<td>46.2</td>
<td>1.69</td>
<td>.73</td>
</tr>
<tr>
<td>8</td>
<td>Special Class teachers do not support the integration of HI students in to regular classes</td>
<td>28.2</td>
<td>46.2</td>
<td>25.6</td>
<td>1.97</td>
<td>.74</td>
</tr>
<tr>
<td>9</td>
<td>The opening of Special class with in the regular school set up will enable the HI students to have closer social contact with hearing students</td>
<td>71.8</td>
<td>7.7</td>
<td>20.5</td>
<td>2.51</td>
<td>.82</td>
</tr>
<tr>
<td>10</td>
<td>If we learn together in the same class, regular class students will disadvantage educationally</td>
<td>41.0</td>
<td>23.1</td>
<td>35.9</td>
<td>1.94</td>
<td>.88</td>
</tr>
<tr>
<td>11</td>
<td>Attending in regular classes should be the educational rights of HI students</td>
<td>43.6</td>
<td>12.8</td>
<td>43.6</td>
<td>2.00</td>
<td>.94</td>
</tr>
<tr>
<td>12</td>
<td>Hearing impairment is a sign of low ability in general</td>
<td>33.3</td>
<td>7.7</td>
<td>59.0</td>
<td>2.25</td>
<td>.93</td>
</tr>
<tr>
<td>13</td>
<td>I believe that regular students will accept me happily if I am placed in regular classes</td>
<td>5</td>
<td>12.8</td>
<td>76.9</td>
<td>1.33</td>
<td>.66</td>
</tr>
<tr>
<td>14</td>
<td>If HI students are integrated, regular class teachers will have difficulty in teaching students</td>
<td>74.4</td>
<td>17.9</td>
<td>7.7</td>
<td>1.33</td>
<td>.62</td>
</tr>
<tr>
<td>15</td>
<td>I want to be a friend with a hearing student</td>
<td>41.0</td>
<td>-</td>
<td>59.0</td>
<td>1.8</td>
<td>.99</td>
</tr>
<tr>
<td>16</td>
<td>I support if HI students attend their education in a separate special school</td>
<td>74.4</td>
<td>2.6</td>
<td>13.1</td>
<td>1.48</td>
<td>.85</td>
</tr>
<tr>
<td>17</td>
<td>I can equally attend my education if I am integrated with regular students</td>
<td>5.1</td>
<td>-</td>
<td>94.9</td>
<td>1.10</td>
<td>.44</td>
</tr>
<tr>
<td>18</td>
<td>Integrating HI students with Hearing students will disrupt class room discipline</td>
<td>38.5</td>
<td>41.0</td>
<td>20.5</td>
<td>1.82</td>
<td>.75</td>
</tr>
<tr>
<td>19</td>
<td>I believe that HI students should always deserve an intensified support and follow up from teachers</td>
<td>84.6</td>
<td>-</td>
<td>15.4</td>
<td>1.30</td>
<td>.73</td>
</tr>
<tr>
<td>20</td>
<td>If HI students are integrated, then special class teachers would be in problem to teach in regular classes effectively</td>
<td>23.1</td>
<td>23.1</td>
<td>53.8</td>
<td>2.30</td>
<td>.83</td>
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</tbody>
</table>

HI-Hearing-impaired
Responses of regular class’s students to attitude scale items (I-02)

<table>
<thead>
<tr>
<th>No</th>
<th>Items /attitude statements</th>
<th>Agree</th>
<th>Uncertain</th>
<th>disagree</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I support the integration of hearing impaired students in to regular classes</td>
<td>67.5</td>
<td>2.5</td>
<td>30</td>
<td>2.37</td>
<td>.92</td>
</tr>
<tr>
<td>2</td>
<td>If HI students are integrated in to regular classes , regular classes teachers would be at disadvantage for they would do additional work</td>
<td>30</td>
<td>37.5</td>
<td>32.5</td>
<td>2.02</td>
<td>.08</td>
</tr>
<tr>
<td>3</td>
<td>I like to play with hearing students in my spare time</td>
<td>77.5</td>
<td>7.5</td>
<td>15</td>
<td>2.62</td>
<td>.74</td>
</tr>
<tr>
<td>4</td>
<td>If HI students are integrated in to regular classes , they would get better results in their academic results</td>
<td>27.5</td>
<td>67.5</td>
<td>5.0</td>
<td>2.22</td>
<td>.53</td>
</tr>
<tr>
<td>5</td>
<td>If I am placed in regular classes , regular classes teachers will accept them positively</td>
<td>10</td>
<td>75</td>
<td>15</td>
<td>1.95</td>
<td>.50</td>
</tr>
<tr>
<td>6</td>
<td>Since using hearing aid makes students easily identified, it is preferable not to use it.</td>
<td>30</td>
<td>15</td>
<td>55</td>
<td>2.25</td>
<td>.89</td>
</tr>
<tr>
<td>7</td>
<td>I believe that negative social stigmas about HI students will case HI students attend class with regular students.</td>
<td>65</td>
<td>25</td>
<td>10</td>
<td>2.55</td>
<td>.67</td>
</tr>
<tr>
<td>8</td>
<td>Special Class teachers do not support the integration of HI students in to regular classes</td>
<td>17.5</td>
<td>75</td>
<td>7.6</td>
<td>1.90</td>
<td>.49</td>
</tr>
<tr>
<td>9</td>
<td>The opening of Special class with in the regular school set up will enable the HI students to have closer social contact with hearing students</td>
<td>52.5</td>
<td>37.5</td>
<td>10</td>
<td>2.42</td>
<td>.67</td>
</tr>
<tr>
<td>10</td>
<td>Integrating HI students in to regular class will hinder regular students education</td>
<td>20</td>
<td>30</td>
<td>50</td>
<td>2.30</td>
<td>.79</td>
</tr>
<tr>
<td>11</td>
<td>Attending in regular classes should be the educational rights of HI students</td>
<td>62.5</td>
<td>22.5</td>
<td>15</td>
<td>2.47</td>
<td>.75</td>
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<tr>
<td>12</td>
<td>Hearing impairment is a sign of low ability in general</td>
<td>15</td>
<td>25</td>
<td>60</td>
<td>2.45</td>
<td>.74</td>
</tr>
<tr>
<td>13</td>
<td>If HI students are assigned in my class ,I will accept them positively</td>
<td>65</td>
<td>20</td>
<td>15</td>
<td>2.50</td>
<td>.75</td>
</tr>
<tr>
<td>14</td>
<td>If HI students are integrated ,regular class teachers will have difficulty in teaching students</td>
<td>45</td>
<td>55</td>
<td>-</td>
<td>1.55</td>
<td>.50</td>
</tr>
<tr>
<td>15</td>
<td>I wont to have a friendship with a hearing impaired student</td>
<td>77.5</td>
<td>10</td>
<td>12.5</td>
<td>2.65</td>
<td>.70</td>
</tr>
<tr>
<td>16</td>
<td>I support if HI students attend their education in a separate special school</td>
<td>15</td>
<td>17.5</td>
<td>67.5</td>
<td>2.52</td>
<td>.75</td>
</tr>
<tr>
<td>17</td>
<td>I can equally attend my education if I am integrated with regular students</td>
<td>22.5</td>
<td>52.5</td>
<td>25</td>
<td>1.97</td>
<td>.69</td>
</tr>
<tr>
<td>18</td>
<td>Integrating HI students with Hearing students will disrupt class room discipline</td>
<td>25</td>
<td>42.5</td>
<td>32.5</td>
<td>2.07</td>
<td>.76</td>
</tr>
<tr>
<td>19</td>
<td>I believe that HI students should always deserve an intensified support and follow up from teachers</td>
<td>72.5</td>
<td>25</td>
<td>2.5</td>
<td>1.3</td>
<td>.51</td>
</tr>
<tr>
<td>20</td>
<td>If HI students are integrated ,then special class teachers would be in problem to teach in regular classes effectively</td>
<td>225</td>
<td>60</td>
<td>15</td>
<td>1.90</td>
<td>.63</td>
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</tbody>
</table>

HI-Hearing-impaired
### Responses of regular class’s students to attitude scale items (I-03)

<table>
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<tr>
<th>No</th>
<th>Items /attitude statements</th>
<th>Agree</th>
<th>Uncertain</th>
<th>disagree</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I support the integration of hearing impaired students in to regular classes</td>
<td>20</td>
<td>10</td>
<td>70</td>
<td>1.50</td>
<td>.82</td>
</tr>
<tr>
<td>2</td>
<td>The integration of HI students in to regular classes will increase work load on regular teachers</td>
<td>45</td>
<td>20</td>
<td>35</td>
<td>1.90</td>
<td>.91</td>
</tr>
<tr>
<td>3</td>
<td>Hearing impaired students are willing to play with hearing students in their spare time</td>
<td>80</td>
<td>5</td>
<td>15</td>
<td>2.62</td>
<td>.74</td>
</tr>
<tr>
<td>4</td>
<td>If HI students are integrated they would show improvement in their academic performance</td>
<td>15</td>
<td>35</td>
<td>50</td>
<td>1.65</td>
<td>.74</td>
</tr>
<tr>
<td>5</td>
<td>If I am placed in regular classes, regular classes teachers willing to accept them.</td>
<td>-</td>
<td>75</td>
<td>25</td>
<td>1.75</td>
<td>.44</td>
</tr>
<tr>
<td>6</td>
<td>Since using hearing aid makes students easily identified, it is preferable not to use it.</td>
<td>-</td>
<td>-</td>
<td>100</td>
<td>3.0</td>
<td>.00</td>
</tr>
<tr>
<td>7</td>
<td>Teaching the hearing and non-hearing students in the same class will help to avoid negative social stigma about HI students</td>
<td>35</td>
<td>15</td>
<td>50</td>
<td>1.85</td>
<td>.93</td>
</tr>
<tr>
<td>8</td>
<td>Special Class teachers do not support the integration of HI students in to regular classes</td>
<td>60</td>
<td>30</td>
<td>10</td>
<td>1.50</td>
<td>.68</td>
</tr>
<tr>
<td>9</td>
<td>The opening of Special class with in the regular school set up will enable the HI students to have closer social contact with hearing students</td>
<td>95</td>
<td>5</td>
<td>-</td>
<td>2.95</td>
<td>.22</td>
</tr>
<tr>
<td>10</td>
<td>Integrating HI students in to regular class will hinder regular students education</td>
<td>20</td>
<td>30</td>
<td>50</td>
<td>2.30</td>
<td>.80</td>
</tr>
<tr>
<td>11</td>
<td>Attending in regular classes should be the educational rights of HI students</td>
<td>65</td>
<td>15</td>
<td>20</td>
<td>2.45</td>
<td>.82</td>
</tr>
<tr>
<td>12</td>
<td>Hearing impairment is a sign of low ability in general</td>
<td>-</td>
<td>-</td>
<td>100</td>
<td>3.0</td>
<td>.00</td>
</tr>
<tr>
<td>13</td>
<td>I believe that regular students will positively accept HI students if they are placed in regular classes</td>
<td>30</td>
<td>50</td>
<td>20</td>
<td>2.10</td>
<td>.71</td>
</tr>
<tr>
<td>14</td>
<td>regular class teachers professional skill is limited to teach hearing impaired students</td>
<td>80</td>
<td>10</td>
<td>10</td>
<td>1.30</td>
<td>.65</td>
</tr>
<tr>
<td>15</td>
<td>HI have no negative impact on the selection of a friend</td>
<td>25</td>
<td>5</td>
<td>70</td>
<td>1.55</td>
<td>.88</td>
</tr>
<tr>
<td>16</td>
<td>I support if HI students attend their education in a separate special school</td>
<td>60</td>
<td>5</td>
<td>35</td>
<td>1.75</td>
<td>.96</td>
</tr>
<tr>
<td>17</td>
<td>If hearing impaired students are placed in regular classes, they can equally attend their education</td>
<td>-</td>
<td>10</td>
<td>90</td>
<td>1.10</td>
<td>.30</td>
</tr>
<tr>
<td>18</td>
<td>Integrating HI students with Hearing students will disrupt class room discipline</td>
<td>45</td>
<td>25</td>
<td>30</td>
<td>1.85</td>
<td>.87</td>
</tr>
<tr>
<td>19</td>
<td>I believe that HI students should always deserve an intensified support and follow up from teachers</td>
<td>100</td>
<td>-</td>
<td>-</td>
<td>1.00</td>
<td>.00</td>
</tr>
<tr>
<td>20</td>
<td>If HI students are integrated, then special class teachers would be in problem to teach in regular classes effectively</td>
<td>20</td>
<td>5</td>
<td>75</td>
<td>2.55</td>
<td>.82</td>
</tr>
</tbody>
</table>

HI-Hearing-impaired
Responses of regular class’s students to attitude scale items (I-04)

<table>
<thead>
<tr>
<th>No.</th>
<th>Items /attitude statements</th>
<th>Agree</th>
<th>Uncertain</th>
<th>disagree</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I support the integration of hearing impaired students in to regular classes</td>
<td>10</td>
<td>-</td>
<td>90</td>
<td>1.20</td>
<td>.61</td>
</tr>
<tr>
<td>2</td>
<td>The integration of HI students in to regular classes will increase work load on regular teachers</td>
<td>65</td>
<td>25</td>
<td>10</td>
<td>1.45</td>
<td>.68</td>
</tr>
<tr>
<td>3</td>
<td>Hearing impaired students are willing to play with hearing students in their spare time</td>
<td>55</td>
<td>35</td>
<td>10</td>
<td>2.45</td>
<td>.68</td>
</tr>
<tr>
<td>4</td>
<td>If HI students are integrated they would show improvement in their academic performance</td>
<td>5</td>
<td>20</td>
<td>75</td>
<td>1.30</td>
<td>.57</td>
</tr>
<tr>
<td>5</td>
<td>If I am placed in regular classes, regular classes teachers willing to accept them.</td>
<td>-</td>
<td>75</td>
<td>25</td>
<td>1.75</td>
<td>.61</td>
</tr>
<tr>
<td>6</td>
<td>Since using hearing aid makes students easily identified, it is preferable not to use it.</td>
<td>-</td>
<td>-</td>
<td>100</td>
<td>3.0</td>
<td>.87</td>
</tr>
<tr>
<td>7</td>
<td>Teaching the hearing and non-hearing students in the same class will help to avoid negative social stigma about HI students</td>
<td>35</td>
<td>15</td>
<td>50</td>
<td>1.85</td>
<td>.85</td>
</tr>
<tr>
<td>8</td>
<td>Special Class teachers do not support the integration of HI students in to regular classes</td>
<td>60</td>
<td>30</td>
<td>10</td>
<td>1.50</td>
<td>.55</td>
</tr>
<tr>
<td>9</td>
<td>The opening of Special class with in the regular school set up will enable the HI students to have closer social contact with hearing students</td>
<td>95</td>
<td>5</td>
<td>-</td>
<td>2.95</td>
<td>.52</td>
</tr>
<tr>
<td>10</td>
<td>Integrating HI students in to regular class will hinder regular students’ education</td>
<td>20</td>
<td>30</td>
<td>50</td>
<td>2.30</td>
<td>.81</td>
</tr>
<tr>
<td>11</td>
<td>Attending in regular classes should be the educational rights of HI students</td>
<td>65</td>
<td>15</td>
<td>20</td>
<td>2.45</td>
<td>.87</td>
</tr>
<tr>
<td>12</td>
<td>Hearing impairment is a sign of low ability in general</td>
<td>-</td>
<td>-</td>
<td>100</td>
<td>3.0</td>
<td>.68</td>
</tr>
<tr>
<td>13</td>
<td>I believe that regular students will positively accept HI students if they are placed in regular classes</td>
<td>30</td>
<td>50</td>
<td>20</td>
<td>2.10</td>
<td>.64</td>
</tr>
<tr>
<td>14</td>
<td>regular class teachers professional skill is limited to teach hearing impaired students</td>
<td>80</td>
<td>10</td>
<td>10</td>
<td>1.30</td>
<td>.82</td>
</tr>
<tr>
<td>15</td>
<td>HI have no negative impact on the selection of a friend</td>
<td>25</td>
<td>5</td>
<td>70</td>
<td>1.55</td>
<td>.78</td>
</tr>
<tr>
<td>16</td>
<td>I support if HI students attend their education in a separate special school</td>
<td>60</td>
<td>5</td>
<td>35</td>
<td>1.75</td>
<td>.73</td>
</tr>
<tr>
<td>17</td>
<td>If hearing impaired students are placed in regular classes , they can equally attend their education</td>
<td>-</td>
<td>10</td>
<td>90</td>
<td>1.10</td>
<td>.52</td>
</tr>
<tr>
<td>18</td>
<td>Integrating HI students with Hearing students will disrupt class room discipline</td>
<td>45</td>
<td>25</td>
<td>30</td>
<td>1.85</td>
<td>.74</td>
</tr>
<tr>
<td>19</td>
<td>I believe that HI students should always deserve an intensified support and follow up from teachers</td>
<td>100</td>
<td>-</td>
<td>-</td>
<td>1.00</td>
<td>.00</td>
</tr>
<tr>
<td>20</td>
<td>If HI students are integrated ,then special class teachers would be in problem to teach in regular classes effectively</td>
<td>20</td>
<td>5</td>
<td>75</td>
<td>2.55</td>
<td>.85</td>
</tr>
</tbody>
</table>

HI-Hearing-impaired
<table>
<thead>
<tr>
<th>Type of HI * by age of on set</th>
<th>Hearing Speech (1) Very little</th>
<th>Hearing sound very little (2)</th>
<th>Unable t (1+2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>T</td>
</tr>
<tr>
<td>Prelingualy hearing impaired</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Postlingualy Hearing impaired</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>
### T-test Result for Mean Difference between Male and Female HI student in Attitude towards Integration.

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Mean diff.</th>
<th>df</th>
<th>t</th>
<th>sig.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>16</td>
<td>1.7937</td>
<td>.3530</td>
<td>.1590</td>
<td>37</td>
<td>1.600</td>
<td>.118</td>
<td>ns</td>
</tr>
<tr>
<td>Female</td>
<td>23</td>
<td>1.6348</td>
<td>.2677</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### T-test Result for Mean Difference between Male and Female Regular Class Student s in Attitude towards integration.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Mean diff.</th>
<th>df</th>
<th>t</th>
<th>sig.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>18</td>
<td>2.2944</td>
<td>.2514</td>
<td>.1694</td>
<td>38</td>
<td>1.815</td>
<td>.077</td>
<td>ns</td>
</tr>
<tr>
<td>Female</td>
<td>22</td>
<td>2.1250</td>
<td>.3239</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### T-test Result for Mean Difference between Male and Female Special Class Teachers in Attitude towards Integration.

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Mean diff</th>
<th>df</th>
<th>t</th>
<th>sig.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>12</td>
<td>1.9792</td>
<td>.3708</td>
<td>.0146</td>
<td>18</td>
<td>-.94</td>
<td>.926</td>
<td>ns</td>
</tr>
<tr>
<td>Female</td>
<td>8</td>
<td>1.9938</td>
<td>.2809</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### t-test Result for Mean Difference Between Male and Female Regular Class Teachers in Attitude towards Integration.

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Mean Diff</th>
<th>df</th>
<th>t</th>
<th>Sig.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>10</td>
<td>1.7150</td>
<td>.1492</td>
<td>-.1400</td>
<td>18</td>
<td>-.092</td>
<td>.334</td>
<td>ns</td>
</tr>
<tr>
<td>Female</td>
<td>10</td>
<td>1.8550</td>
<td>.4206</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Attitude scale for Measuring The Attitudes of hearing Impaired Students Regarding the Integration of Hearing Impaired Students into Regular Classes.

(To be completed by hearing impaired students (I - 01))

This scale is designed to examine the attitudes of 5 grade and 6 hearing impaired students regarding the integration of hearing impaired students into regular classes.

Statements presented in this scale, directly or indirectly express attitudes or feelings that persons may have concerning the integration of hearing impaired students into regular classes.

You are expected to show the extent of your own agreement or disagreement on each statement on the basis of the given options in a three-point scale. The Three options are: Agree (A), Uncertain (U), and Disagree (D). Put an "ix" mark on the given space that corresponds to the response which best indicates your position/feeling on each statement.

Giving clear and dependable feedback is highly important for the success of this study.

Thank you in advance for your co-operation.
Part - I (I-01) Hearing - Impaired Students.

Background Information

1. School Name_____________________________________

2. Age____________________ Sex ___________ Grade________________

3. Age of onset (of the hearing impairment)____________________

4. Current status of hearing capacity (Mark an “x” on the line).
   
   4.1 I hear speech very slightly
   4.2 I hear sound very slightly
   4.3 I don't hear at all

5. If there is a hearing- impaired family member, please specify (e.g. mother, father, etc.).
<table>
<thead>
<tr>
<th>No</th>
<th>Items /attitude statements</th>
<th>A</th>
<th>U</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I support the integration of hearing impaired students in to regular classes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>If HI students are integrated in to regular classes , regular classes teachers would be at disadvantage for they would do additional work</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I like to play with hearing students in my spare time</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>If HI students are integrated in to regular classes , they would get better results in their academic results</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>If I am placed in regular classes , regular classes teachers will accept me happily</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>I don’t wont to use hearing aid because others will easily identify me</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>If I learn with hearing students, I expect that bad words being said about me would decrease.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Special Class teachers do not support the integration of HI students in to regular classes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>The opening of Special class with in the regular school set up will enable the HI students to have closer social contact with hearing students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>If we learn together in the same class , regular class students will disadvantage educationally</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Attending in regular classes should be the educational rights of HI students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Hearing impairment is a sign of low ability in general</td>
<td></td>
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<td>13</td>
<td>I believe that regular students will accept me happily if I am placed in regular classes</td>
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<td>If HI students are integrated , regular class teachers will have difficulty in teaching students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>I wont to be a friend with a hearing student</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>I support if HI students attend their education in a separate special school</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>I can equally attend my education if I am integrated with regular students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Integrating HI students with Hearing students will disrupt class room discipline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>I believe that HI students should always deserve an intensified support and follow up from teachers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>If HI students are integrated , then special class teachers would be in problem to teach in regular classes effectively</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

HI = Hearing- impaired
Part III

Open ended Items

1. If you are in support of the integration of hearing impaired students into regular classes,

   1.1 What are the benefits of integration especially to the hearing impaired students. Please list out the important ones in short.

   1.2 What would you suggest to make integration more effective in the future?

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

2. If you don't support the integration of hearing-impaired students into regular classes,

   2.1 What are the main possible problems you expect that would hinder integration? Indicate in short.

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

2.2 If you think that there may be a possibility of integrating hearing impaired students into regular classes, what measures would you suggest to be taken in the future? Indicate in short.

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

3. Any other suggestion

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
Addis Ababa University 
School of Graduate Studies 
Department of Educational Psychology. 
(Special Education)

Attitude scale for measuring the 
Attitudes of Regular Class Students 
Regarding the Integration of Hearing. 
Impaired Students into Regular Classes.

(To be completed by Regular Class Students- (1-021)

This scale is designed to examine the attitudes of grade 5 and 6 regular class students regarding the integration of hearing-impaired students into regular classes.

Statements presented in this scale, directly or indirectly express attitudes or feelings that persons may have concerning the integration of hearing-impaired students into regular classes.

You are expected to show the extent of your own agreement and disagreement on each statement by marking one of the given options in a three point scale. The three options are: "Agree" (A), "Uncertain" (U), and "Disagree" (D). Put an "x" mark on the given space that corresponds to the response which best indicates your position / feeling on each statement.

Giving Clear and dependable feedback is highly important for the success of this study.

Thank you in advance for your co-operation
Part -I  
**Background Information (I-02) Regular class students.**  
1. Name of the school________________
2. Age __________Sex_________ Grade level______________

Part II  
Key: A= agree, U= Uncertain, D= disagree  
**Attitude scale**  

<table>
<thead>
<tr>
<th>No</th>
<th>Items /attitude statements</th>
<th>A</th>
<th>U</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I support the integration of hearing impaired students in to regular classes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>If HI students are integrated in to regular classes , regular classes teachers would be at disadvantage for they would do additional work</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I like to play with hearing students in my spare time</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>If HI students are integrated in to regular classes , they would get better results in their academic results</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>If I am placed in regular classes , regular classes teachers will accept them positively</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Since using hearing aid makes students easily identified, it is preferable not to use it.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I believe that negative social stigmas about HI students will case HI students attend class with regular students.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>9</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Part -III (I-02) Regular class students

Open-ended Items

I. If you are supporting of the Integration of hearing impaired students into regular classes,
1. 1 what are the benefits of integration especially to the hearing impaired Students? Please list out the important ones in short.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

1.2 What would you suggest to make integration more effective in the future?

2. If you don’t support the integration of hearing impaired students into regular classes,

2.1 What are the main possible problems you expect that would hinder integration? Indicate in short.

________________________________________________________________________
________________________________________________________________________

2.2 If you think that there may be a possibility of integrating hearing-impaired students into regular classes what would you suggest to be taken in the future? Indicate in short.

________________________________________________________________________
________________________________________________________________________

3. Any other suggestion

________________________________________________________________________
________________________________________________________________________
Addis Ababa University
School of Graduate Studies
Department of Educational Psychology.

(Special Education)

Attitudes of Special Class Teachers
Regarding the Integration of Hearing.
Impaired Students into regular Classes.

(To be completed by the special Class Teachers - I-03)

This scale is designed to examine the attitudes of special class teachers regarding the integration of hearing-impaired students into regular classes.

Statements presented in this scale, directly or indirectly express attitudes or feelings that persons may have concerning the integration of hearing-impaired students into regular classes.

You are expected to show the extent of your own agreement and disagreement on each statement by marking one of the given options in a three point scale. The three options are: "Agree" (A), "Uncertain" (U), and "Disagree" (D). Put an "x" mark on the given space that corresponds to the response which best indicates your position / feeling on each statement.

Giving Clear and dependable feedback is highly important for the success of this study.

Thank you in advance for your co-operation
Part -1  

Background Information (I 03)  
Special class teachers

1. Name of the School_____________________________________________________

2. Age______________ Sex_____________________ Qualification level__________

3. Total Service / Work Experience / in years  
   3.1 Experience in teaching HI. Student’s ________Year(s).  
   3.2 As a regular class teacher ________years.  
   3.3 Experience in teaching other disabled students’ _____________year(s).  
   3.4 In other work area_________________ year(S).

4. Have you taken training in special education?  
   a) Yes    b) No
Part II
Key:  A= agree  U= Uncertain  D= disagree

Attitude scale Special class teachers (1-03)

<table>
<thead>
<tr>
<th>No</th>
<th>Items /attitude statements</th>
<th>A</th>
<th>U</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
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HI= Hearing-impaired
Part-III (I-03) Special class teachers

Open-ended Items

1. If you are in support of the integration of hearing impaired students into regular classes,
   1.1 What are the benefits of integration especially to the hearing impaired Students? Please list out the important ones in short.
   
   __________________________
   __________________________
   __________________________

   1.2 What would you suggest to make integration more effective in the future?
   
   __________________________
   __________________________

2. If you don't support the integration of hearing impaired students into regular - classes,
   2.1 What are the main possible problems you expect that would hinder integration?- Indicate in shot.
   
   __________________________
   __________________________

   2.2 If you think that there may be a possibility of integrating hearing impaired students what would you suggest to be taken in the future?
   
   __________________________
   __________________________

3. Any other suggestion
   
   __________________________
   __________________________
   __________________________
   __________________________
Addis Ababa University
School of Graduate Studies
Department of Educational Psychology.
(Special Education)

Attitude scale for measuring the
Attitudes of Regular Class Students
Regarding the integration of Hearing
Impaired Students into Regular Classes.

(To be completed regular Class Students- (I-04)

This scale is designed to examine the attitudes of grade 5 and 6 regular class students regarding the integration of hearing-impaired students into regular classes.

Statements presented in this scale, directly or indirectly express attitudes or feelings that persons may have concerning the integration of hearing-impaired students into regular classes.

You are expected to show the extent of your own agreement and disagreement on each statement by marking one of the given options in a three point scale. The three options are: "Agree" (A), "Uncertain" (U), and "Disagree" (D). Put an "x" mark on the given space that corresponds to the response which best indicates your position / feeling on each statement.

Giving Clear and dependable feedback is highly important for the success of this study.

Thank you in advance for your co-operation
PART II
Attitude Scale Key:

A = Agree, U = Uncertain, D = Disagree

(I - 04) Regular class teachers

<table>
<thead>
<tr>
<th>No</th>
<th>Items / attitude statements</th>
<th>A</th>
<th>U</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I support the integration of hearing impaired students in to regular classes</td>
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<tr>
<td>2</td>
<td>The integration of HI students in to regular classes will increase work load on regular teachers</td>
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<tr>
<td>3</td>
<td>Hearing impaired students are willing to play with hearing students in their spare time</td>
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<td>4</td>
<td>If HI students are integrated they would show improvement in their academic performance</td>
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<td>5</td>
<td>If I am placed in regular classes, regular classes teachers willing to accept them.</td>
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<td>Since using hearing aid makes students easily identified, it is preferable not to use it.</td>
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<td>Teaching the hearing and non-hearing students in the same class will help to avoid negative social stigma about HI students</td>
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<td>8</td>
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HI = Hearing -impaired

PART III

Open-ended items

1. If you are in support of the integration of hearing impaired students into regular classes,

1.1 what are the benefits of integration especially to the hearing-impaired students? Please list-out the important ones in short.

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

1.2 What would you suggest to make integration more effective in the future?

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

2. If you don't support the integration of hearing impaired students into regular classes,

2.1 what are the main possible problems you expect that would hinder integration? Indicate in short.

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

2.2 If you think that there may be a possibility of integrating hearing impaired students into regular classes, what measures would you suggest to be taken in the future? Indicate in short.

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

3. Any other suggestion

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

148
Declaration

I, the undersigned, declare that the 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: Abebe Gebereselassie
Signature:
Place: AAU
Date: June /2000

Approved by:

____________________
Dr Teka Zewdie
Advisor