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SIGNED LANGUAGE PROFICIENCY AND WRITING SKILL OF DEAF CHILDREN IN SPECIAL AND INTEGRATED PRIMARY SCHOOLS IN ADDIS ABABA

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ABSTRACT

The purpose of this study was to investigate the signed language proficiency and writing skill of deaf children in special and integrated primary schools in Addis Ababa City Administration. This study used mixed research methods to collect diverse types of data. The study contained administering Signed Amharic and English proficiency task, writing task, questionnaire, classroom observation and interviews. For quantitative data collection (n = 76) deaf participants were involved. A total of 20 participants were involved in the qualitative part of the study. The participant included teachers of the deaf, deaf students and school principals. The finding revealed that in teaching and learning process, limitation of sign language is prevalent problem of signing and writing. This shows that the schools are not linguistically rich to facilitate sign language acquisition for deaf learners. Furthermore, the finding of the study revealed that the contribution of Signed English and Amharic in the development of natural sign language for deaf children were unsatisfactory. The results also indicated that special schools deaf learners performed better sign language proficiency and writing skill than those of the integrated schools. Besides, the findings revealed that the high signed proficiency group demonstrated higher writing skill than the low proficiency group. This shows that signed language proficiency is highly associated with writing skill. To empower deaf learners in sign language and literacy early sign language and literacy skills development is fundamental.

Keywords: signed language proficiency, signed Amharic, signed English, writing skill

INTRODUCTION

My eight years experience in teaching English language in the elementary school for the deaf has convinced me that the problem was from our teaching system of English and Amharic languages. And our education has been taken for granted with little attempt at critically looking in to the teaching system and consciously and cooperatively trying to change our ways of teaching the deaf students. It is no good blaming students with hearing impairment for poor performance of literacy, sign language limitation and academic achievement. Poor input- poor outcome is mentioned issue. If they fail to achieve and if we do not try to find out what it is that causes the failure and correct the situation, the blame would be upon the teachers and teachers training institutions.

It seemed to me that the key solution to many of deaf education problems is to criticizing ourselves and improving our ways of teaching, to freely discussing our approaches on a regular and special school basis with an aim to exchanging views and experiences by conducting research of the kind I have attempted. There is a need for better understanding of the problems of deaf students and making them competent students in reading and writing, in their native language (sign language), and helping them advance in their academic performances. Reading and writings in schools received less attention; however they are crucial for deaf learners. We would be forced, then, to know the level of our deaf students' performance in writing skill in relation to their native language proficiency. Moreover, as far as I know few local studies examined the writing skill with sign language proficiency in combination. It is my sincere hope that this research will make its own contribution in this regard.

In Ethiopia, a number of reform initiatives have been undertaken in general education to promote school improvement and student's achievement. The reforms have given priority to general education and have served the larger majority of pupils. Ethiopia's education system ignored reform in the deaf education.

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To this effect, the academic status of deaf learners has historically lagged behind that of their hearing peers (Allen, 1986). In other words, the field of deaf education has not given due attention to a similar reform to improve the education of its learners but for the hot discussion of inclusion or segregation. Due to lack of early appropriate sign language and literacy intervention and receipt of proper accommodation, deaf children have reached high school age without learning to read, write and understand subject matters they need to acquire (Tesfaye, 2004; Marshark & Spencer, 2003).

In a similar way, (Hailu, 2003) says that the quality and the scope of catering educational services for deaf children have gained a scant attention and remained a perennial problem for the last twenty five years in Ethiopia. He relates the underlying causes of improvised deaf education in Ethiopia to the lack of well-trained educators of the deaf, absence of adequate schools for the deaf and inaccurate prevalence information given about people with hearing impairment. Deaf children are at a distinct disadvantage, such as the children's capacity to learn is not exploited to their potential, teaching and learning takes place in a haphazard manner, teaching methods are traditional (chalk and talk), teachers are not equipped to match the learners with their needs, and learners suffer with problems in literacy skills as Hailu assumes. If deliveries of education are limited then deaf students could develop probably long term frustration and lack of confidence to meet later life challenges (Marshark & Spencer, 2003).

Hence, appropriate educational services can be detrimental to the academic and social outcomes of all deaf students. In this regard, Siegel (2008) states communication is at the heart of what human beings do; it defines and gives meaning to our emotions, beliefs, hopes, creativities, and life experiences. Without communication, a child is lost in the joys of human contact, the ability to connect thought and symbol into language, and the beauty of learning. The effective development, understanding, and expression of language are fundamental to any educational and social experience and are particularly crucial for deaf children (Girma, 2008).

Written Language Skill of Deaf Children

In this connection, communication, education and social growths depend on a language-rich environment, one with ongoing, direct, and age-appropriate language opportunities. According to Antia et al. (2005), we should give importance for the communication of the deaf children since an effective, communication-driven system will meet the needs of all deaf children. If the communication goes awry, it affects the intellectual growth, social interaction, language development, and emotional attitudes, all at once, simultaneously, and inseparably. The language problem is one of several problems. Therefore, efforts should be made to make school life enjoyable for the deaf learners.

Seemingly, sign languages have allowed deaf people to match the skills and abilities of hearing people in communication, cognition, and to empower deaf child in learning (Cummin, 2006). The sign language should be the first language of deaf children and be regarded as their primary language. It should be used to teach academic subjects such as science, humanities, social studies and mathematics. Sign Language can be used to teach English or other majority language as a second language. Usually sign language is used to teach reading and writing skills in English and other languages rather than oracy. In his other work, he tried to say "concepts and knowledge developed in the first language transfer easily to the second language; school performance and curriculum attainment are raised when the first language is celebrated rather than devalued" (Cummins, 1981, P.20).

In the same view, 'the best deaf readers writers appear to be those who receive early exposure to sign language and exposure to the language in which they will eventually learn to read and write' (Lukner &

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Muir, 2001). Supporting the ideas stated by the scholars above, Moats (2000) gives emphasis to literacy as the most important goal of school education. He further explains it as follows: The ability to read and write is an important component of one's potential academic and vocational success. Students, who experience difficulty in learning to read and write cannot fully participate in classroom learning, are at high risk for school failure, for lifelong problems with employment, and have diminished avenues for pleasure. For students who are deaf, the list of potential negative outcomes increases because of the essential role that literacy plays in interacting with deaf and hearing peers.

McAnnally, Rose, & Quingley (1994) explain writing as "… a way of expressing what one already knows". Writing is a critical skill, functioning as a method of clear communication and a path to achieving higher levels of prosperity. In one of the few examinations of deaf students on a standardized writing test, Musselman and Szanto (1998) administered the spontaneous writing subtest of 'The Test of Written Language–2 /TOWL–2/' to a sample of 69 adolescents between 14.5 and 19.5 years of age. The students enrolled in a variety of programs ranging from special schools in general-education classrooms Hammill & Larsen, 1988). Scores for the group to syntactic maturity (a measure of grammatical complexity and accuracy) fell more than 1 standard deviation below the mean for the test. Thus, the grammatical complexity of deaf students' writing increases over time. Antia et al. (2005) found out the deaf students, face difficulty in public school with grammatical constructions in their school life.

As Yoshinaga- Itano et al., (1996a, 1996b) analyzed the '… written essays for deaf children (in a variety of educational placements) and reported that they were able to communicate main ideas but did not elaborate or provide details in their writing'. In addition, Antia et al., (2005), further explains that students with severe and profound hearing losses, show lower performance when compared with their hearing peers.

Yoshinaga-Itano and Downey (1996) reported that the pattern of writing delay differed by degree of hearing loss. Students with mild and moderate degrees of hearing loss are likely to have better English literacy than deaf students because of increased access to oral language, they may not necessarily achieve at the same level as their hearing peers. Students with severe and profound hearing loss were reported to demonstrate less skill than mild and moderate. Furthermore, the lexical coding deficit hypothesis (e.g., Kelly & Barac-Cikoja, 2007) claims that because of a permanent lack of auditory stimulation, individuals with pre-lingual deafness do not develop sufficient phonemic awareness to sustain the rapid and accurate phonological decoding and subsequent identification of written words (e.g., Perfetti & Sandak, 2000). As a consequence, the integration of their meaning into broader ideas by means of their structural (syntactic) and semantic processing is at risk to fail. Authors like (Moores, 1996; Paul, 1998) have commented on the difficulty that deaf students have in writing in English. Because of the difficulty they face to access and learn English syntactical and morphological structures, either auditorily or visually, they make numerous errors at the sentence level.

Children who are deaf do not have the same access to the rules of spoken language as do children with normal hearing. Similarly, they are delayed in the development of a signed language (Marschark, Schick, & Spencer, 2006). Thus, the relationship between spoken or signed language and written language is limited in this population resulting in written language acquisition that is both delayed and incomplete (Everhart & Marschark, 1988). The difficulties that children with educationally significant hearing loss have in acquiring receptive and expressive language skills are well documented (Ewoldt, 1985; Marschark, Mouradian, & Halas, 1994; Moeller, Osberger et al., & Eccarius, 1986). The average child who is deaf graduates from high school functionally illiterate, reading and writing on a third- or fourth-grade level (Allen, 1986; Waters & Doehring, 1990).

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The Relation between Sign Language Proficiency and Written Language Skill

In connection to relation sign language and written language skill, one of the earliest and most impressive studies on the relation between linguistic proficiency in sign language and written language was conducted by Strong and Prinz (1997). Strong and Prinz assessed the proficiency in American Sign Language (ASL) and written English of a group of 160 deaf children between 8 and 15 years old. They reported a strong correlation between the composite scores of the linguistic comprehension and language tests in ASL and English after age and nonverbal intelligence was partialled out. Strong and Prinz concluded that "bilingual deaf children can benefit from having (even a moderate) fluency in ASL". Their study was really interesting one to establish a positive relationship between linguistic proficiency in sign language and written language. Most of the early studies were interpreted as evidence for linguistic interdependence between children's proficiency in sign language and in written language.

For deaf students in public schools, one would expect (as a group) that their writing achievement would be higher than students in special schools; however, it is important to know how they compare to norms for the general student population. Antia, et al, (2005) found that deaf students, "even those in public schools, may experience difficulty with grammatical constructions throughout their school years".

Since the very beginning of education of deaf people, a strong view has been held that '… reading and writing can substitute for the diminished capacity to hear and speak' (Power and Leigh, 2000). Earlier identification of hearing loss allows for earlier intervention and raises expectations that increasing numbers of deaf children will build up language and written abilities that are comparable to their hearing age peers. Early years of literacy learning has been shown to be critical to future success. Suggestions have been made that, "with respect to early literacy development, deaf children follow similar trajectories to those of their hearing counterparts. In a review of the literature", Williams (2004) argues that "deaf children's emergent reading reflected the developmental sequence of hearing children described in the research literature" (p. 356) and that "young deaf children's emergent writing development may be similar to that of hearing children" (p. 361).

To summarize, the written language of deaf students vary from their hearing peers on a number of scope. In relation to this, deaf learners need to become proficient and literate users of the language in order to succeed in school, participate in a democracy as knowledgeable citizens, find challenging and rewarding work, be grateful for and contribute to cultural activities, and follow their own ambition and interests as independent learners throughout their lives. Hence, written skill is crucially important.

From the points made above the researcher would appear to be in a tenable position to study that special and integrated schools are conspicuously requiring investigation that focuses on signed language proficiency and written skill of deaf children.

Statement of the Problem

In Ethiopia, schooling for students with hearing impairment is evolving at a fairly rapid rate due to educational and legal changes in the country. In most cases, these changes have contributed to a better understanding of the needs of deaf children and their access to greater educational opportunities. Currently, special schools and integration schools for deaf children are growing up quantitatively in the entire country. This nationwide movement toward opening integration classes in regular schools is part of the inclusive education movement and the result of the expansion of inclusive education program. These opportunities and challenges reveal a need to re-think about deaf education: writing skill as well as

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Ethiopian Sign Language (ETHSL) in current school practices. This requires an in-depth study in the area of deaf education examining their academic status in integrated and special elementary schools.

The other outcome measures are included in recognition of the impact of sign language proficiency on writing skill. In deaf education, these skills influence one another. They link each other. One encourages the other. Without a strong first language base, teaching and learning become complicated and the learning of a second language is much more difficult (Landsberg, 2005). This study assesses the capabilities of deaf children and the problems that they may encounter because deaf children may use more than one mode of communication (e.g., sign language skills and written language skills). Thus it is important to assess their skills in the learning process.

For the purpose of this study, Signed Amharic/English mode of communication was used to assess their proficiency. As all languages have their own grammatical peculiarities, so does the sign language since it has its own grammatical structure (Adoyo, 2002; Johnston and Schembri, 2007). Ethiopian Sign Language has its own grammatical structure, yet not studied (Paulos, 2012). Since Ethiopian Sign Language is not well studied, it is difficult to study its complete structure. Due to this, the researcher with the objective of helping to promote and strengthen the future education and sign language development, the findings of this research will be used to fill the gap invaluable information about the relation between deaf students' signed language proficiency and written skills.

Therefore, regarding the purpose of the study, the following basic research questions are posed.

1) Do deaf children in integrated schools differ from those in special schools in the writing skills?

2) Is there statistically significant difference between Sign Language proficiency and writing skills of deaf students?

METHODS

This study was conducted on the basis of the pragmatist philosophical lens which applied both quantitative and qualitative (mixed) approaches. This philosophical framework would propose the use of both methods carefully, to answer the research questions in the study. Since the purpose of this research was to investigate academic status of deaf children in integrated and special schools, to answer the questions posed and to meet the objectives of the study, the researcher used triangulation design, convergence model. The design allowed the researcher to collect diverse types of data which opened the door to a better understanding of the research problem.

The data collection procedures involved both numerical as well as textual information. In this regard, the intention here is to mark the final data represents both the quantitative and qualitative information (Lodico, Spaulding, & Voeglteh, 2006). In other words, the rationale for using mixed method design was to triangulate the findings from different data sources such as Signed Amharic and English proficiency test, writing tests, observation and face-to- face interview reports. Such a triangulation helped the researcher to use mixed methods and thereby enhanced the trustworthiness of the analysis by complementing and compensating the weaknesses of one method through the strength of the other. As the result of this, both the quantitative comparative research and qualitative study designs were equally weighed in this study. The researcher wanted to focus on two linguistic content areas such as sign language and writing skill. The reason for choosing those specific reading and writing skills were that they are important language learning areas that most deaf students experiences a tremendous difficulties.

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These were critical areas of the school curriculum, an important part of student's carrier and a social act as well as an integral part of everyday life.

Participants

The participants for the main study included deaf students, teachers of the deaf, and principals from the four schools. The participants were working at special schools for the deaf and integration schools in Addis Ababa city Administration. To maintain all affairs of confidentiality, the schools were assigned numbers: 1, 2, 3 and 4. All the entire population participated in the study: 19 deaf students (7 males and 12 females) from School - 2, 12 deaf students (10 males and 2 females) from School - 4, 25 deaf students (15 males and 10 females) from School- 1 and 20 deaf students (10 males and 10 females) from School - 3. The sum of 76 deaf students participated in the study. All of the deaf students had hearing losses ranging from severe to profound.
Formal semi-structured interviews were designed for three categories of participants. From each school 2 deaf students, 2 teachers and 1 school principal. Totally 20 participants were selected. To sum up 96 participants were taken as sampled for this study. Hence, the data for the study were generated from two nongovernmental and two government school participants. More specifically, deaf students from grade eight Amharic/English and sign language teachers were the participants of the study.

Participant Selection Procedure

The focus of this study was grade 8 deaf students and their teachers in primary government and non-government schools. The difficulty of getting information from every region, difficulty of comparing of varied curriculum, varied media of instruction and examination in each region to study every grade eight deaf students in entire country is very difficult. To study in one representative sample region of all deaf students is the optimal choice. The study limited to Addis Ababa City Administration. The result is directly generalizable to a target city administration school deaf population. Therefore, for quantitative data collection, the accessible population was taken as a sample for the study. For qualitative data collection purposeful sampling strategies were used. Deaf interview participants purposefully selected from grade eight who could provide appropriate information for the student and teacher participants who had long experiences and worked with deaf more than five years in teaching were selected to obtain adequate information about deaf students. To check, the reliability, validity and consistency of the research instruments, the sign language proficiency task, writing task, questionnaire and interviews were administered to a group of 24 deaf students to pilot the study in LeaMcD and Hosanna School for the Deaf.

Deaf students were eligible to participate since they met the following requirements at the time of enrollment in the study: (a) they had an identified bilateral hearing loss, (b) they did not have additional disabilities, (c) they attended either integration schools or special schools for two or more years, and (e) they were in grade 8 in 2010/2011 school year, (f) they were all deaf students enrolled in grade eight in four schools and (g) they had from severe to profound deafness (70 dB above hearing loss on the better ear). The researcher used non-random sampling technique. As a result of the availability of few 8th grade deaf children in selected sites, the researcher was forced to take the whole population as the sample of the study.

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Instruments and Procedures

Signed Amharic and English Tasks

The researcher gave a detailed description of deaf participants who are high proficient and low-proficient in sign language. The deaf participants were divided into proficient and low proficient groups were discussed as follows: To be able to divide the deaf participants into a group that is high proficient in Signed Amharic and English and a group that is low-proficient in signed Amharic and English (Berk, 1976) model was used to determine cut-off scores in two categories (low and high) to assess Sign language proficiency. The researcher with grade eight language teachers developed the reading passage to assess signed language proficiency. To check the content validity, the test was evaluated and commented by Alpha and Hosanna deaf school teachers whether the items prepared to 8th grade deaf students were appropriate to their cognitive and linguistic capability to sign. And then, the tests were given to a language testing expert of Addis Ababa University and PhD students of linguistics for appraisal. After a thorough looking through the commented test, the researcher gave the test for further appraisal to the English and Amharic teachers of eighth grade deaf students. The researcher seriously considered the comments which were given by individuals.

The researcher used a Signed Amharic/English proficiency task for all selected grade eight deaf students. The researcher asked the participants (via a written instruction, similar to the instruction for the written narratives) to sign a short narrative in front of a video camera. The instructions were given in ETHSL or Sign Supported Amharic during the assessment of sign language proficiency. To the end, participants were brought individually to the room to sign written text where a camera was used to capture the sign language sample. The camera focused on the participant so that the participant would be seen on the full screen while signing. In this way, coders could view participants signing.

For reliable and valid assessment of individual sign language proficiency, establishing clear specific checklist is critical. For this Brennan (1992) grouped signs into five parameters (hand shape, location, movement, orientation and non manual components). Similarly, Johnston and Schembri (2007) broken down sign into five formational parameters. In addition, Paulos (2012) states that all sign languages including Ethiopian sign language had five gestural features that are known as the *parameters* of sign production. To assess high and low sign language proficiency of deaf learners these five sign production parameters were used. To that end, the deaf students were assessed in the following five sign language linguistic parameters: hand shape, location, movement, orientation and non manual components. These are most relevant cheremes in sign productions (Emmorey & Corina, 1990). The two primary ways of guiding performance judgments are rating scales and checklists (Linn & Gronlund, 2001).

Two sign language experts native speakers of SL (who were deaf) and one of them was post-lingual assessed the deaf by rating narratives on the bases of hand configurations, location, movement, orientation, and non-manual components on a scale from 1 to 5 point. To control the order effects the 105 words of Amharic, 72 words of English were printed from the reading texts that were equally divided over the raters. The skills were facilitated by the design of the Signed English/Signed Amharic system. Scoring included right and wrong assessments points for each word. On the basis of frequency distribution of their test scores, children were classified as proficient or low-proficient in sign language. Cohen's Kappa's coefficient was 0.66 indicating substantial agreement between raters (Landis and Koch, 1977).

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Out of 105 words those students who scored right for signed Amharic and rated in frequency distribution from top groups 76 (61.1%) to 99 (100%) were selected as high proficiency groups and deaf students who scored below 55 (39.5%) were selected as low proficiency signed Amharic bottom groups. To avoid boarder line cases and possible confusion that may arise from the inclusion of these cases in the analysis, 15 (20 %) students were excluded. Similarly, out of 72 Signed English words, those students who answered 40 to 72 of the words correctly were categorized in the high proficiency group. Those students who answered 29 of the items or less were categorized in the low proficiency group. Furthermore, development of this instrument is planned including assessor training, gathering data, and verifying the cut-off scores for low and high proficiency categories. The goal of doing this was to yield as an efficient, reliable, and valid measure of signed languages proficiency among deaf learners of eighth grade.

Writing Task

In language, four types of tests are commonly used depending on the criteria of their classification. These include: proficiency tests, achievement tests, diagnostic tests and placement tests (Hughes, 1989). Proficiency tests are designed to measure the ability of students without giving any training. This means proficiency test is not based on the content or objective of language courses. Achievement tests are directly related to language courses, and are often prepared by classroom teachers. Diagnostic tests are intended to identify what further teaching learners need. It helps to find strengths and weaknesses. There are two types of testing writing: indirect and direct testing of writing. In indirect testing of writing, students, for example, are asked to edit a text containing a number of errors of grammar, spelling and punctuation, and to re-write the passage by making all the necessary corrections. The direct testing of writing includes essay tests, controlled writing, guided writing, free expository writing and summary. In this study, the researcher used the direct testing of free writing to measure their proficiency. Jonathan Swift model also asked students to write their own experience. Free writing techniques were used to encourage reticent and less confident writers. The focus is getting one's thought, feelings, memories, skills and down on paper without censoring or editing (Murray, 1976, cited in Marschark & Spencer, 2003).

In the direct testing, participants were asked to write a story about the school they have experienced by themselves related to something they have learned. They were asked to write in both Amharic and English languages. Writings skills should be expected within linguistic and cognitive capacities of grade eight deaf students. They were specifically, instructed to write a story about their school, what they had experienced and what the school was for them. The deaf participants received instructions in Total Communication and on paper. The instruction in sign language was given by a teacher of the school and the researcher. The researcher always verified whether the participants understood the instruction. Students were not given any assistance during writing. They were not limited in time when writing their texts. Because of the persistence writing errors of deaf learners, the researcher preferred to evaluate in five criterions such as content knowledge, organization of the ideas, effective use of vocabulary, language construction and mastery of mechanics. For this, Heaton's (1990) five dimension of essay writing assessment model of rating scale used for both Amharic and English writing skill. Five items were identified to be scored by use of ratings that varied from 1 to 4. These items and a brief explanation of the ratings are presented in appendix.

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The two PhD linguistics students were trained in the scoring procedures. Both researcher assistances independently scored the transcript of each written products using evaluation marking scale.

Questionnaire for Students

It was the entire population that was aimed at and hence no sampling was carried out in obtaining the questionnaire data. Questionnaire for students was one of the tools used for gathering data for the study. The researcher developed detailed questionnaire to deaf participants that included questions about personal profiles, sign language and writing skills. Information about the participant was looked up in the personal files available at the schools or was provided by their teachers. The written skill background questionnaire demonstrates that the deaf participants written skills and difficulties. The researcher distributed the questionnaire only for students who attended in the grade 8 level required for the study.

Interviews

The researcher designed a semi-structured interview. The purpose of this interview was to gather data on the teachers' and deaf students' perception about sign language and written skill to students with hearing impairments. The instrument was especially developed for deaf students, teachers and principals of the schools. The semi-structured interviews were written in Amharic language and given to linguists to review. All the corrections were incorporated.

Face-to-face interview was conducted in sign language for deaf students so that the deaf students could understand the interview questions clearly and give accurate responses. The interviews were administered individually and signing to the deaf students by a hearing interviewer. All the interview participants were purposefully selected from each school to give their views in the interview sessions held with the researcher.

The major objective was to investigate sign and writing skill of deaf students in four primary schools. Considering the measurement tools, the researcher developed in the following ways.

1) Signed language proficiency
2) Writing skills

Observation

In this research, observation was used as empirical method for data collection. As a method, it required the researcher to go in search of information in the learner natural settings. The natural settings included selected primary schools for the deaf. Observation data create opportunity for a researcher to gather live data from live situation (Cohen, Manion and Morrison, 2007). The researcher also designed a non-participatory observation guide based on Creswell (2007).

The observation pattern was visiting all the selected special and integrated primary schools and classrooms followed by a close observation according to the scheduled time of data collection. During this time, deaf education pattern (how SL and spoken languages are practiced) and literacy skills were observed in their natural placements. Close observation was carried out in order to compare special and integration primary schools of 8th grade deaf students in the sites. For all the observation, observation checklist was developed and used. Hence, classroom observation helped the researcher to find out how written skills and sign language and other academic tasks were being taught and students' experience of learning.

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Procedure

Before conducting of the classroom observation, I secured permission from the subject teachers. This was on the basis of their inherent willingness to take part. In prior discussion I assured the teachers that all information gathered would be strictly confidential. Thus my presence in the classroom could not have had much negative impact on deaf students. I sat at the back of a classroom. I took notes about what was going on in the classroom itself or completed the notes afterwards. The observation sessions were held on Monday to Friday for four weeks- one week for each school. Each class in the subject area was observed for one class period which had duration of 40 minutes. The sign language, English and Amharic classes were observed for two consecutive periods on different ways. I decided that the language classes had to receive two periods of observation because I felt that the language classes might use different methods of teaching for different topics.

Data Collection Procedure

Signed Amharic/English proficiency assessment task test and writing skill assessment task test scores were compiled and entered in to the statistical software program known as SPSS, version 15.00 to calculate the mean and standard deviation for each category. All the scores of students of all the sample schools were documented and analyzed using this software.

The sign language and the writing tasks were described in more detail and interrelating comparison was done. These helped the researcher to evaluate the writing skill and sign language impact in selected schools deaf students.

Pilot study: A pilot study involves a small scale testing of data collection methods and procedures that the researcher plans to use in the main study, and revising the methods and procedures before they are launched, or become operational based on what the testing reveals (Anderson, Clapham and Wall, 2001). Therefore, to achieve such a goal the researcher conducted the pilot test in two nongovernmental special primary schools. The schools were used as a proving ground for refining and answering the research questions. Therefore, as the way of devising the pilot study sign language proficiency test, writing test, questionnaire, interview and observation instruments, were developed, and then the tests were given to language testing expert of AAU, PhD students of linguistics and classroom teachers for appraisal. This was because the Sign language and Amharic/English teachers in 8th grade were ideal to evaluate the level of difficulty and relevance of the test in relation to the deaf students. To check, the reliability, validity and consistency of the research instruments, the sign language proficiency task, writing task, questionnaire and interviews were administered to a group of 24 deaf students to pilot the study in LeaMcD and Hosanna School for the Deaf.

As a result, I gave the tests to a hearing and deaf teachers who had been teaching sign language, Amharic and English languages for the last several years in grade eight for their critical evaluations of the content and to check whether it was to the level of cognitive capacity of deaf learners before it was administered. The researcher considered the comments given by three evaluators namely, experts in sign language, eighth grade Amharic and English language teachers of the deaf and linguists before administering the test to the target group. The process also entailed addressing the validity of the test. The validity of the test refers to the degree to which a test measures what it intends to measure (Creswell, 2007). Then to estimate the reliability index, the researcher administered the pilot tests to a group of 24 deaf students in Hosanna and LeaMcD School for the Deaf.

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Data Collection: The two types of data (quantitative and qualitative) were collected concurrently**.** Prior to the commencement of data collection, two teachers who have ETHSL proficiency skills for rating and evaluating sign language proficiency of deaf students were selected from the schools. To evaluate written text, 2 linguists (PhD students) from Addis Ababa University were selected. The researcher gave a half day training and orientation for sign language proficiency raters and writing skill raters on how to handle and evaluate the data before and after administration of the instruments. The back ground questionnaire was administered to a total of 76 deaf students.

Ethical consideration was prioritized to keep the consent so that the researcher, before data collection, would meet with the directors of the schools and explain to them about the purpose of the study and present the letter written to solicit the cooperation of the schools. During the administration of the instruments, the deaf students and teachers were informed that the data they provide would be used only for research purpose and that the information they gave would be kept confidential. The directions were read to the participants to make their tasks clear. The administration of the instruments was timed and the participants completed them according to their pace. Data collection was conducted during school days.

Data Analysis

The objective was to determine whether there was any relationship between sign language proficiency and writing skills of deaf students. The data were analyzed using descriptive statistics, chi-square and correlation analyses. A descriptive statistics and the *chi-square* and the Pearson's product moment correlation coefficient (r) were used to specify any significant differences between them. In this study, the researcher combined the classical analytical strategy of interpretive descriptive sequences of activities and analysis- in the sense of comparing and interrelating sign language and written skills of eight grade deaf students in the context of critical literature and descriptive interpretive qualitative research method. The data collected through interview and observation on investigation of writing skills and sign language proficiency were organized into a word processing file for analysis.

RESULTS

Rationale for Signed Language Proficiency

First of all, we know that the acquisition of a first language must be secured to the child. If a child whether hearing or deaf is prevented from active participation in communicative settings in which a perceivable language is used, a normal first language development cannot be expected (Svartholm, 1994). We also know that this first language must be a language of optimal accessibility to the child. For the deaf, this means sign language. Speech alone or invented mixtures of speech and signs (such as Signed English/Amharic, for example) are – to say the least – clearly unsatisfactory as a basis for normal first language development. Neither are they suitable for the development of second language (Svartholm, 1994; Marchack, 2003).

When we come to bilingualism in the education of the deaf children means that deaf children have ETHSL as their primary language. Later on they will learn Amharic or English as their second language, and it will be taught by using principles similar to teaching a foreign language. The deaf are bilinguals in the sense that they use both Sign Language and their second language in everyday life (Grosjean, 1992 and Greeshin, 2007). The degree of sign language proficiency varies from one deaf individual to another, especially as regards sign language fluency skill.

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In many parts of the world, a method called sign supported speech is used as a means of language exposure, especially in deaf education. This is based on the belief that the meager information from lip movements can be supplemented with a sign for each word said. The speaker uses his voice and simultaneously produces signs with approximately the same meaning as his words. Sign supported speech has, however, proved unsatisfactory as a means of exposing deaf students to the national language (Johnston, 1989, 2007). Certain important functions of language are lacking in this method. The shortcomings of sign supported speech are such that understanding it requires a very good command of the language being spoken. Second language learners can only understand a small part of what is said this way.

In this study, careful to note that ‘‘the key function of this signed form of English and Amharic words would be to serve as a model for English/Amharic text, rather than as the primary language for face-to-face communication.’’ This study investigates how deaf learners understand written language through sign supported speech mode of communication and the content of the text and assess the proficiency of sign language development in high and low scoring procedure.

Table 1
Schools participants' involvement in Signed Amharic high and low proficiency groups

Name of the school	**High and Low proficiency Groups - Amharic**				**Total**	
	High Proficiency		**Low Proficiency**			
	N	**%**	**N**	**%**	N	%
School 1	12	60	8	40	20	100
School 2	10	62.5	6	37.5	16	100
School 3	3	20	12	80	15	100
School 4	6	60	4	40	10	100
Total	31	50.8	30	49.2	61	100

Table 1 shows high and low proficiency of deaf students in Signed Amharic proficiency involvement from four schools. As can be observed from table 15, 31 (50.8%) deaf students were in high proficiency top groups (49.2%) were in low proficiency bottom groups. A total of 16 high and low proficiency students from school-2 for the deaf took the highest share i.e. 10 (62.5%) , and school-1 for the deaf and school - 4 i.e. integration school 60% and school - 3 Primary School took the least 20% share respectively. Special schools for the deaf were high signed Amharic proficiency contributors for this study. The differences in sign language performance occurred because special schools deaf children started sign language learning from the nursery classes and continued up to grade four. School -3 regular primary school deaf children might have begun late. This early sign language exposure may contribute for better sign language skill development. School-3 integration school was the least contributor for high proficiency skills. This indicates that integrated regular primary school deaf students showed poor sign language performances.

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Table 2
Participants in Signed English high and low proficiency groups by schools

	High and Low Proficiency Groups- English					
Name of the School	**High Proficiency**		**Low Proficiency**		**Total**	
	N	**%**	**N**	**%**	**N**	**%**
School 1	8	42.1	11	57.9	19	100
School 2	11	73.3	4	26.7	15	100
School 3	5	31.3	11	68.8	15	100
School 4	6	60.0	4	40	10	100
Total	30	50	30	50	60	100

Table 2 display high and low proficiency groups in signed English from four schools. As observed from table 16 likewise as Amharic Signed group data, school -2 proficiency participants were (73.3%), school -4 integration school participants were 60%, School -1 for the deaf participants were 42.1% and the least signed English high proficiency group was school- 3 Regular primary school. The factors for the signed language skill development probably early exposure for mother tongue, peer interaction, instructional system and sign language accessibility, placement conditions, teachers teaching methods, etc, may contribute for sign language proficiency differences between schools.

Table 3
Descriptive statistics for right and wrong responses of Signed Amharic and English mean score

High and Low Proficiency		**Responses of Signed Score**			
		Signed Amharic		**Signed English**	
		Correct response	**Wrong response**	**Correct response**	**Wrong Response**
Low Proficiency	Mean	34.50	70.60	18.67	53.10
	N	30	30	30	30
	Std. Deviation	11.936	11.984	6.748	7.260
High Proficiency	Mean	90.42	14.45	52.93	19.07
	N	31	31	30	30
	Std. Deviation	6.707	6.913	7.697	7.697
Total	Mean	62.92	42.07	35.80	36.08
	N	61	61	60	60
	Std. Deviation	29.764	29.906	18.709	18.695

Table 3 shows descriptive statistics for the right and wrong Signed Amharic and English in High and low proficiency groups. The mean score for correct response in Signed Amharic of high proficiency group

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was 90.42 and wrong response was 14.45. In contrast, low proficiency groups mean score for correct response in signed Amharic was 34.50 and wrong response 70. 60.

The mean score for correct response for high proficiency groups Signed English (52.93) and wrong response was 19.07. In contrast, correct signed English low proficiency group mean score was 18. 67 and wrong response was 53.10. The mean for high proficiency group was higher than that for low proficiency group. The total mean score of correct response in Signed English was not significantly different from wrong response in signed English. This implies that deaf learners had difficulty of understanding English written materials to sign than Amharic written materials.

Table 4
Presents the descriptive statics correct and wrong Signed Amharic responses in high and low proficiency groups by sex

High and Low Proficiency Groups in Amharic Low Proficiency	Sex of the respondent	Correct response of Signed Amharic			Wrong response of Signed Amharic		
		N	Mean	Std. Deviation	N	Mean	Std. Deviation
	Male	19	34.05	11.712	19	70.95	11.712
	Female	11	35.27	12.854	11	70.00	13.000
	Total	30	34.50	11.936	30	70.60	11.984
High Proficiency	Male	19	92.68	5.323	19	12.11	5.656
	Female	12	86.83	7.309	12	18.17	7.309
	Total	31	90.42	6.707	31	14.45	6.913
Total	Male	38	63.37	31.035	38	41.53	31.165
	Female	23	62.17	28.202	23	42.96	28.362
	Total	61	62.92	29.764	61	42.07	29.906

Table 4 reveals the mean and standard deviation for the right and wrong Signed Amharic responses in high and low proficiency groups by sex. The mean score of low proficiency group correct signed Amharic male was 34.05 and standard deviation was 11.71, and wrong signed Amharic male response was 70.95 and standard deviation was 11.71. Female mean score correct response for signed Amharic was 35.27 and wrong response was 70.00. On the other hand, the mean score of high proficiency group correct response of male was (92.68) and wrong response of mean score was 12.11, and the mean score of correct signed Amharic for female was(86.83) and wrong response was 18.17. The mean score of male correct response of signed Amharic was higher than female correct signed Amharic responses. As is observed from the table 20, there is no significant difference between male and female of low proficiency groups of right response Signed Amharic proficiency yielding and wrong response.

On the other hand, there is a significant difference between male and female high proficiency groups Signed Amharic right response mean scores is and wrong responses for signed Amharic. This indicates that grade 8 male and female deaf students of low proficiency groups have almost similar sign language skills in Signed Amharic proficiency. Whereas high proficiency groups of male in Signed Amharic right response (90.42) performed statistically higher than (86.83).

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Table 5
Descriptive statics for correct and wrong Signed English responses in high and low proficiency groups by sex

High and Low Proficiency Groups in English	Sex of the respondent	Signed English					
		Right Responses			Wrong Response		
		N	Mean	Std. Deviation	N	Mean	Std. Deviation
Low Proficiency	Male	12	17.58	6.360	12	54.25	6.254
	Female	18	19.39	7.081	18	52.33	7.941
	Total	30	18.67	6.748	30	53.10	7.260
High Proficiency	Male	23	53.26	7.659	23	18.74	7.659
	Female	7	51.86	8.335	7	20.14	8.335
	Total	30	52.93	7.697	30	19.07	7.697
Total	Male	35	41.03	18.608	35	30.91	18.522
	Female	25	28.48	16.561	25	43.32	16.723
	Total	60	35.80	18.709	60	36.08	18.695

Table 5 reveals the mean and standard deviation for the Signed English proficiency male and female in high and low proficiency groups. The mean score for low proficiency signed English male correct response was 17.58 and standard deviation was 6.36 and wrong response sore mean was 54.25 and standard deviation was 6.25. Female mean score for correct response was 19.39 and standard deviation was 7.08, and wrong response 52.33 and standard deviation was 7.94.

On the other hand, the mean score of high proficiency group correct response of male was 53.26 and wrong response of mean score was 18.74, and the mean score of correct signed English for female was 51.86 and wrong response was 20.14. As is observed from the table 22 that there is insignificant difference between male and female of low proficiency groups results of right response Signed English and wrong response.

On the other hand, there is no significant difference between male and female high proficiency groups right Signed English mean scores and wrong responses for signed English. In general, male and female deaf students in high proficiency group performed almost equal; and similar result was obtained from in both low and high proficiency groups of male and female.

Rationale for Writing Skill

Writing is an important skill in language learning. It is a continuing process of discovering how to find the most effective language for communicating one's thoughts and feelings. In other words people usually write in order to communicate facts, feelings, attitudes and ideas clearly and effectively. It is also a powerful instrument of thinking because it provides students with a way of gaining control over their

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thoughts (Cotton, 2001). Writing enhances language acquisition as learners experiment with words, sentences, and larger chunks of writing to communicate their ideas and to reinforce the grammar and vocabulary they are learning in the class. It is also a critical area of school curriculum and an important part of students' carrier or higher studies after school.

The construct of Amharic and English language proficiency is highly pertinent in the education of deaf students largely because adequate Amharic and English language skills and writing skills are a necessary prerequisite for meeting the demands of educational programs in schools. In this regard, writing skill for deaf learners a crucial one in educational settings and in everyday activities.

Written language is by far the best type of second language exposure in that it is the most accessible to the deaf (Anderson,1994). Deaf learners in our school settings with a national curriculum they have attended schools for eight years using sign language in all subjects including Amharic. However, they read and write their second language poorly. Some have no exposure to sign language at home or previously in school. In addition, the national curriculum was not in full effect when they went to elementary school and therefore they could not benefit from it in their language development. Many of these deaf learners have so poor in comprehending of the Amharic language that they cannot understand even a simple informative text. Most languages have two variants, spoken and written. The fact that written language is perceived visually makes it fully accessible to sighted deaf people. Therefore, the researcher found to look at closer the current proficiency skill of grade 8 deaf learners essay writing skills using Heaton (1990) classroom testing model in this study.

Table 6
Test for independence of proficiency groups with Amharic writing

		High and Low Proficiency Groups - Amharic						Chi-square	
		Low Proficiency		High Proficiency		Total		Value	Sig
Amharic Content categories		**N**	**%**	**N**	**%**	**N**	**%**		
Content knowledge	Very poor	29	96.7	21	67.7	50	82.0	8.933(a)	0.030
	Fair to poor	0	0.0	3	9.7	3	4.9		
	Good to average	1	3.3	5	16.1	6	9.8		
	Excellent to very good	0	0.0	2	6.5	2	3.3		
Total		30	100.0	31	100.0	61	100.0		
Organization of idea	Very poor	25	83.3	11	35.5	36	59.0	16.155(a)	0.001
	Fair to poor	4	13.3	9	29.0	13	21.3		
	Good to average	0	0.0	6	20.5	7	11.5		
	Excellent to very good	0	0.0	5	16.	5	8.2		
Total		29	96.6.0	31	100.0	61	100.0		
Effectively Vocabulary usage	Very poor	23	76.7	11	35.5	34	55.7	12.667(a)	0.005
	Fair to poor	6	20.0	10	32.3	16	26.2		
	Good to average		0.0	8	25.7	9	14.8		
	Excellent to very good	0	0.0	2	6.5	2	3.3		
Total		29	96.7	31	100.0	61	100.0		
Language usage	Very poor	25	83.3	13	41.9	38	62.3	13.443(a)	0.004
	Fair to poor	5	16.7	10	32.3	15	24.6		
	Good to average	0	0.0	5	16.1	5	8.2		

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	Excellent to very good	0	0.0	3	9.7	3	4.9		
Total		30	100.0	31	100.0	61	100.0		
Mastery of Amharic mechanics	Very poor	23	76.0	12	38.7	35	57.4	11.711(a)	0.008
	Fair to poor	6	23.3	9	29.0	15	24.6		
	Good to average	0	0.0	5	16.2	6	9.8		
	Excellent to very good	0	0.0	5	16.1	5	8.2		
Total		29	96.7	31	100.0	61	100.0		

- Sig at 0.05 ($P < 0.05$)

Table 6 presents the percentile in cross tabulation and also chi-square Amharic writing in high and low proficiency levels. In Amharic writing skill, 96.7% content knowledge, 83.3% in organization of ideas, 76.7% in vocabulary usage, 83.3% of language construction, and 76.7% in mechanics low proficiency deaf learners showed very poor performances. Similarly, 67.7% in content knowledge, 35.5% in organization of ideas and vocabulary usage, 41.9% in language construction, 38.7% in mechanics high proficiency deaf students in Amharic writing skills showed very poor writing performances. However, high sign language proficiency group in all content categories of Amharic writing skills performed better than low proficiency groups. This means, 22.6% in content knowledge, 36.5% in organization of ideas, 32.2 % in vocabulary, 25.8% in language usage and 32.3% in mechanics performed good to excellent range of performance. Only 3.3% of low proficiency deaf learners performed a good range of performances. Out of 76 participants 82% of deaf learners content knowledge was very poor, 59% organization of the sentence were very poor, 55% of little knowledge of vocabulary, 62.3% were virtually no mastery of sentence construction and 57.4% were no mastery of conventional mechanics. Both groups exhibited writing difficulties in content knowledge, sentence organization, vocabulary, language usage and mastery of mechanics.

Both the high- and low-achieving groups showed deficits of sentence construction in all aspects of writings. Out of 76 deaf students, 76.7% of them used meaningless words in their sentences with spelling errors. Writing meaningless words was common in both proficiency groups. Further, their sentence construction was collection of words without appropriate message. They could not write meaningfully organized sentences. When they tried to pass message in writings, a lot of errors were observed. They were not enabling to pass quality message in writings. The essay seemed a sentence but lacked significant message; they did not follow Amharic grammar structure, and as a result, it was difficult to pick the message of the writer. The result of this study indicates that deaf students showed very poor writing performances in Amharic language. This revealed that learning to write in second language for both groups is equal unless there are ability/skill differences. Both groups wrote highly fragmented sentences with only content words. Further, to check relationship between low proficiency groups in Amharic writing, the researcher employed chi- square and the result is shown in table 6 above.

The chi-square test confirmed that even if both groups writing skill were very poor, the test was shown that there is a statistically significant difference in high and low proficiency groups in all categories of Amharic written skills $P > 0.05$. The chi-square was made to examine the extent of relationship between high and low proficiency groups in Amharic writing. The finding indicate that the low proficiency group is more in severe difficulties in sentence organization, content knowledge, mechanics, effective choice of vocabulary , language complex construction and mastery of mechanics. Next, a comparison was made on the relation of score of English writing skills of high and low proficiency deaf students.

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Table 7
Test for independence of proficiency groups with English Writing

		High and Low Proficiency Groups - English						Chi-square	
		Low Proficiency		High Proficiency		Total		Value	Sig.
English Content Categories		**N**	**%**	**N**	**%**	**N**	**%**		
English content knowledge	Very poor	30	100.0	24	80.0	54	90.0	6.667(a)	0.083
	Fair to poor	0	0.0	4	13.3	4	6.7		
	Good to average	0	0.0	1	3.3	1	1.7		
	Excellent to very good	0	0.0	1	3.3	1	1.7		
Total		30	100.0	30	100.0	60	100.0	6.800(a)	0.079
Organization of ideas	Very poor	28	93.3	20	66.7	48	80.0		
	Fair to poor	1	3.3	5	16.7	6	10.0		
	Good to average	0	0.0	5	16.7	5	8.3		
	Excellent to very good	0	0.0	1	3.3	1	1.7		
Total		30	100.0	30	100.0	60	100.0		
Vocabulary usage effectively	Very poor	27	90.0	20	66.7	47	78.3	7.185(a)	0.066
	Fair to poor	3	10.0	4	13.3	7	11.7		
	Good to average	0	0.0	5	16.7	5	8.3		
	Excellent to very good	0	0.0	1	3.3	1	1.7		
Total		30	100.0	30	100.0	60	100.0		
Language usage	Very poor	29	96.7	20	66.7	49	81.7	9.098(a)	0.028
	Fair to poor	1	3.3	8	26.7	9	15.0		
	Good to average	0	0.0	1	3.3	1	1.7		
	Excellent to very good	0	0.0	1	3.3	1	1.7		
Total		30	100.0	30	100.0	60	100.0		
Mastery of Mechanics	Very poor	28	93.3	20	66.7	48	80.0	7.333	0.062
	Fair to poor	2	6.7	6	20.0	8	13.3		
	Good to average	0	0.0	3	10.0	3	5.0		
	Excellent to very good	0	0.0	1	3.3	1	1.7		
Total		30	100.0	30	100.0	60	100.0		

- Sig at 0.05 ($P < 0.05$)

Table 7 shows that the relationship of the high and low proficiency groups in English writing skill with the corresponding crosstab result. Low proficiency group in all content categories of English writing skills showed very poor performances in five categories, it ranges from 90 % to 100 % who wrote deficiently. Similarly, high proficiency group in all content categories of English writing skills also displayed very poor writing performances; it ranges from 78% to 90% who wrote incorrectly. However, the percentile score for high proficiency group 20% in English sentence organization, 6.6% in content knowledge, 20% in effectively using vocabularies, 6.6% of proper language construction and 13.3% mastery of mechanics, which ranges good to excellent performed better than the low proficiency groups. Out of 76 participants, 90% did not show knowledge of content, 80% no organization of the sentences, 78.3% little knowledge of the vocabulary, 81.7% dominated by error of spelling, punctuation, capitalization and meaningless words. In general, both groups exhibited writing difficulties in all categories of English. The data of this study indicate that deaf students with high proficiency groups achieved better than low proficiency groups. The finding revealed that the deaf student who had a good proficiency in sign language acquired better writing than low sign proficiency; however, the achievement

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did not confirm whether one is greater than the other. To identify the relationship between high and low proficiency groups' percentile score with English writing, the researcher used chi-square test.

Table 8
Test for independence special and integration schools in Amharic writing skills

		Types of Schools						Chi-square	
		Special schools		Integration Schools		Total		Value	Sig.
Amharic Content Categories		N	%	N	%	N	%		
Content knowledge	Very poor	36	81.8	27	84.4	63	82.9	2.315(a)	0.510
	Fair to poor	2	4.5	3	9.4	5	6.6		
	Good to average	4	9.1	2	6.3	6	7.9		
	Excellent to very good	2	4.5	0	0.0	2	2.6		
Total		44	100.0	32	100.0	76	100.0		
Organization of ideas	Very poor	26	59.1	18	56.3	44	57.9	1.072(a)	0.784
	Fair to poor	10	22.7	10	31.3	20	26.3		
	Good to average	5	11.4	2	6.3	7	9.2		
	Excellent to very good	3	6.8	2	6.3	5	6.6		
Total		44	100.0	32	100.0	76	100.0		
Effectively use Vocabulary	Very poor	24	54.5	19	59.4	43	56.6	1.784(a)	0.628
	Fair to poor	11	25.0	9	28.1	20	26.3		
	Good to average	7	15.9	4	12.5	11	14.5		
	Excellent to very good	2	4.5	0	0.0	2	2.6		
Total		44	100.0	32	100.0	76	100.0		
Language usage	Very poor	27	61.4	22	68.8	49	64.5	1.254(a)	0.740
	Fair to poor	11	25.0	8	25.0	19	25.0		
	Good to average	4	9.1	1	3.1	5	6.6		
	Excellent to very good	2	4.5	1	3.1	3	3.9		
Total		44	100.0	32	100.0	76	100.0		
Mechanics	Very poor	25	56.8	23	71.9	48	63.2	2.180(a)	0.536
	Fair to poor	11	25.0	6	18.8	17	22.4		
	Good to average	4	9.1	2	6.3	6	7.9		
	Excellent to very good	4	9.1	1	3.1	5	6.6		
Total		44	100.0	32	100.0	76	100.0		

P< 0.01

The result of chi-square in table 41 showed that there is statistically significant differences in percentile rank score for high and low proficiency groups in writing in all five categories P > 0.05. This finding revealed that there is statistically significant relationship in high and low groups in writings skill. Even if both groups exhibit low English writing skill, the chi-square indicate that the low proficiency group was more in severe difficulties in sentence organization, content knowledge, vocabulary, mechanics and language construction.

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The results of the percentile rank in table 8 shows that the percentile of the students in special and integrated schools in their Amharic writing skill. Students in special schools in Amharic essay writing 81.8%, content knowledge, 59.1% in sentence organization, 54.5% in vocabulary, 61.4% in language construction and 36.8% in mechanics displayed very poor performances. Only 13.6% deaf students had content knowledge and good language construction, 18.2% had better organization and mechanics and 20.4% used vocabularies effectively, it ranges good to excellent score. Similarly, students in integrated schools in Amharic content categories writing skills also wrote very poor, 84.4% in content knowledge, 56.6% in organization of idea, 59.4% in vocabulary , 68.8% in language construction and 71.9% in mechanics they displayed very poor performance. The results indicated that students from special schools achieve better score in measure of Amharic writing skill tests than their counterpart in integration schools. Out of 76 participants 82.9% did not have content knowledge, 57.9% wrote without organization of the ideas, 64.5% used very poor language construction, and 63.2% used very poor mechanical usage. On the other hand, the findings in measures of Amharic writing skills showed that the participants in both types of schools have significant score differences in the magnitude of the percentile scores in selected Amharic writing skills. Pearson chi-square analysis was, therefore, carried out to check their relation.

Chi-square analysis revealed that there is no statistically significant differences between integration and special schools in all Amharic content as X^2 (1, 76) =2.315, $p > 0.05$. With regard to Amharic writing skills, the results showed that there are no statistically significant differences in integration and special schools. That is, the level of writing skills of deaf students in Amharic languages in both types of schools seems to be similar. It is seen that students in all groups showed that extreme deficiency of writings. They committed a lot of errors. The findings of this data revealed unsatisfactory results in both schools in Amharic writings. The data revealed such descriptors as limited vocabulary, concrete, lack of functional words, bland, poor mastery of verb inflections, plurals, and repetitive, limited, and simple structure of the sentences without carrying meaningful message.

Table 9
Test for independence special and integration schools in English writing skills

		Types of Schools						Chi-square	
		Special schools		Integration Schools		Total		Value	Sig.
English Content Categories		N	%	N	%	N	%		
Content knowledge	Very poor	37	86.0	31	96.9	68	90.7	2.776(a)	0.428
	Fair to poor	4	9.3	1	3.1	5	6.7		
	Good to average	1	2.3	0	0.0	1	1.3		
	Excellent to very good	1	2.3	0	0.0	1	1.3		
Total		43	100.0	32	100.0	75	100.0		
Organization of ideas	Very poor	31	72.1	30	93.8	61	81.3	6.836(a)	0.077
	Fair to poor	5	11.6	2	6.3	7	9.3		
	Good to average	6	14.0	0	0.0	6	8.0		
	Excellent to very good	1	2.3	0	0.0	1	1.3		
Total		43	100.0	32	100.0	75	100.0		
Vocabulary	Very poor	30	69.8	29	90.6	59	78.7%	6.136(a)	0.105
	Fair to poor	7	16.3	3	9.4	10	13.3		
	Good to average	5	11.6	0	0.0	5	6.7		

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	Excellent to very good	1	2.3	0	0.0	1	1.3		
Total		43	100.0	32	100.0	75	100.0		
Language usage	Very poor	33	76.7	30	93.8	63	84.0	3.725(a)	0.293
	Fair to poor	8	18.6	2	6.3	10	13.3		
	Good to average	1	2.3	0	0.0	1	1.3		
	Excellent to very good	1	2.3	0	0.0	1	1.3		
Total		43	100.0	32	100.0	75	100.0		
Mechanics	Very poor	33	76.7	29	90.6	62	82.7	3.725(a)	0.293
	Fair to poor	6	14.0	3	9.4	9	12.0		
	Good to average	3	7.0	0	0.0	3	4.0		
	Excellent to very good	1	2.3	0	0.0	1	1.3		
Total		43	100.0	32	100.0	75	100.0		

P < 0.01

The results of the percentile rank in table 9 shows the percentile of the special & integrated schools with respect to their students' English writing skill. As shown in the table students in special school in all content categories in 86% in content knowledge, 72.1% in organization of idea, 69.8% in efficiently using vocabulary, 76.7% language construction and mechanics deaf students performed very poor. Similarly, students in integrated school in all content categories of English writing skills also performed very poor, they range in 78.8% to 90.7 %. This shows both groups' poor writing skill. When we compare special school with integrated ones, the data shows that special school is statistically better than integration schools in most of content categories of English writing skill. This indicates that students from special school achieve higher percentile score in measure of English writing skill tests than their counterpart integration schools.

Chi-square analysis revealed that there is statistically significant difference between students in integration and special schools in five English content categories as x^2 (1,75) = 2.776, P < 0.05, x^2 (1,75) = 6.836, P > 0.05, x^2 (1,75) = 6.136, P >0.05,x2 (1,75) = 3.725, P > 0.05 and x2 (1,75) = 3.725, p > 0.05. It is clear that students in all groups showed high difficulty of writing in English. They made a lot of errors. Therefore, in the context of deaf education, second language writing is often identical to second language acquisition. The findings of this data revealed unsatisfactory results in both schools in English writings.

Table 10
Amharic and English written skill chi- square *correlation by age of onset*

Amharic and English Content Categories		**Age of onset (Amharic)**	**Age of onset (English)**
Content knowledge	Correlation Coefficient	.357(**)	.221
	Sig. (2-tailed)	0.002	0.057
Organization of the ideas	Correlation Coefficient	.277(*)	.258(*)
	Sig. (2-tailed)	0.016	0.025
Vocabulary usage effectively	Correlation Coefficient	.311(**)	.299(**)

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	Sig. (2-tailed)	0.005	0.009
	Correlation Coefficient	.283(*)	.240(*)
Language usage	Sig. (2-tailed)	0.013	0.038
Mastery of mechanics	Correlation Coefficient	.286(*)	.271(*)
	Sig. (2-tailed)	0.743	0.019
		N = 76	N = 75

** Correlation is significant at the 0.01 level (2- tailed)
* Correlation is significant at the 0.01 level (2- tailed)

Table 10 presents the Amharic and English language written skill of grade eight deaf learners based on relation between ages of onset. As shown in the above table, there is a positive and weak relation between the written skill of deaf learners and age of onset $P < 0.05$. This revealed that deaf learners who were born deaf and prior age three deaf and deaf after age three have no similar written language skills in Amharic and English language expression. Positive relationship indicates that the age of onset has a positive effect on the writing skill of Amharic & English writings of deaf.

Table 11
Comparison of Amharic and English content categories with sign language started period.

Amharic And English content categories		**Sign started language time (Amharic)**	**Sign language started time (English)**	**Degree of hearing loss (Amharic)**	**Degree of hearing loss (English)**
Content knowledge	Correlation Coefficient	-.119	-.116	-.244*	-.034
	Sig. (2-tailed)	.306	.323	.034	.775
Organization of the ideas	Correlation Coefficient	-.120	-.024	-.089	.003
	Sig. (2-tailed)	.303	.838	.444	.982
Vocabulary usage effectively	Correlation Coefficient	-.109	-.024	-.114	.003
	Sig. (2-tailed)	.349	.841	.328	.982
Language usage	Correlation Coefficient	-.097	-.098	-.136	-.083
	Sig. (2-tailed)	.405	.404	.242	.480
Mastery of mechanics	Correlation Coefficient	-.144	-.068	-.084	-.080
	Sig. (2-tailed)	.214	.563	.469	.496
		N= 76	N= 75	N= 76	N = 75

** correlation is significant at the 0,01 level (2 – tailed)

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Table 11 presents Amharic and English language written skill of grade eight deaf learners' based on the relation between sign language started time. As shown in the above table, there is no statistically significant correlation between Amharic and English written skill and the sign language started period P > 0.05. This revealed that deaf learners who started sign language at home and in school have similar written language performance in both Amharic and English written languages expression skills. As shown in the above table, there is no statistically significant correlation between Amharic and English written skill and the degree of hearing loss
P > 0.05. This revealed that deaf learners who were severe and profound have similar written language performance in both Amharic and English written languages skills.

Questionnaire

The main objective of using the deaf students' questionnaire was to find out students' attitude towards sign language proficiency and writing proficiency and the problems that the deaf students have encountered in learning process. The analysis of the data from the deaf students' questionnaire was carried out using descriptive statistics .These are mainly frequency counts and percentage, both of which are simple statistical procedures indicating only the number of respondents who rated each of the items in the questionnaire according to a rating scale provided. The results of the questionnaire of the main study are presented below.

Table 12
Sign language proficiency

No.	Items	Excellent		Very good		good		Not good		Total	
1	How do you evaluate teacher's sign language skill?	N	%	N	%	N	%	N	%	N	%
		2	2.6	20	20.4	38	50.8	16	20.2	76	100
2	To what extent do you understand teacher's SL during teaching & learning process	Highly understand		Moderately understand		To some extent		I cannot understand		Total	
		N	%	N	%	N	%	N	%	N	%
		12	15.8	29	38.2	18	23.7	15	19.17	74	97.4
3	Satisfaction of teacher's sign language during teaching and learning	Highly satisfied		Moderately satisfied		To some extent		Not satisfied		Total	
		N	%	N	%	N	%	N	%	N	%
		8	10.5	20	26.3	30	39.5	16	21.0	74	97.4
4	With whom easily communicate and easily understand ideas	Each other				With teachers				Total	
		N			%	N		%		N	%
		50			65.8	26		34.2		76	100

Item 1 asked the deaf students how they evaluate teachers' sign language skill during teaching and learning process. As displayed in table 62, 20.4% of the deaf students said ' good', 50.8% said ' very good' and the remaining 20% said 'not good'. From the above data, we can observe that the majority of the deaf students reported that the teachers' sign language skill was good and very good. This could imply that teachers able to communicate with deaf students in moderate in teaching and learning process.

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Item 2 presents to what extent deaf students understand teachers' sign language during teaching and learning process. As shown on the above table, 38.2% the respondents reported that they moderately understand, 23.7% to some extent they understand, 19.17% cannot understand and 15.8% highly understand their teachers' sign language during teaching and learning process. These results indicate that deaf students understand teacher's communication during teaching and learning process moderately and to some extent. This shows that there is a gap of communication between deaf students and teachers during teaching and learning process. The sign language proficiency limitation between the deaf and their teachers also affects the academic performances of deaf learners. This requires the improvement of language proficiency in both groups.

Item 3 displays deaf students' satisfaction of teachers' sign language during teaching and learning process. As observed from the above table, 38.2% of deaf students were satisfied to some extent, 26.3% moderately satisfied, 21% not satisfied with the sign language of their teachers. Only 10.5% of the deaf were highly satisfied with the sign language of their teachers. This implies that the majority of deaf students were satisfied moderately and to some extent with their teachers' sign language. This shows that teachers are unable to communicate with sign language, unable to satisfy their students, and unable to import the required knowledge. If there is dissatisfaction in communication, there is lack of clarity of information that would affect achievement performances.

Item 4 shows with whom deaf students more easily communicate and understand ideas. As shown in the above table, 65.8% of deaf students reported that they easily communicate with sign language with each other and 34.2% of the deaf who are able to read lip and postlinguals communicate easily with teachers. This indicates that majority of deaf students communicate easily with each other.
In item 4.1, the deaf were asked about the reason for their easy communication with each other and they replied that they are the same identity groups and at the same time since sign language is their natural language, they understand each other. No communication problem exists among them. One of the deaf students replied in his response that their communication problem is seen while they are communicating with hearing people, otherwise, for them no significant communication problem exists.

Table 13
If sign language provided as a subject in all grade level

No.	Item	Strongly agree		agree		Undecided		Disagree		Total	
5	If sign language is provided as a subject in all grade level	N	%	N	%	N	%	N	%	N	%
		48	63.2	13	17.1	9	11.8	4	5.3	74	97.4

Item 5 asked the deaf students if sign language should be given as a subject in all grade levels. As shown in the above table, 63.2% of 8th grade deaf students strongly agree that sign language used to be given as a subject, and 17.1% agreed that sign language given as a subject in all grade levels. Regarding, the sign language provision as subject to deaf students, the deaf participants were strongly positive. Accordingly, 80.3% of the respondents reported that they have strongly positive toward learning sign language as a subject in all grade levels. Using sign language as a subject help deaf students update their sign language proficiency, learn new sign language and help to develop sign language every time. The percentage of respondents with negative attitude toward learning sign language was 5.3%, which was very low.

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In item 5.1, asked those who gave a positive reply to item 6 to give justification for their responses. To this item they forwarded that sign language is a language, as other languages, which serve as a means of communication. Learning sign language as a subject provides deaf learners with sign language proficiency, and similarly it introduces with new terms and other technological and abstract words. Furthermore, it qualifies deaf people with strong foundation in their mother tongue (sign language), and helps deaf people to understand their second languages and facilitates the communication skill of the these people.

Table 14
Language item easier from reading and writing

No	Item	Writing in Amharic		Writing in English		Both are simple		Both are difficult		Total	
		N	%	N	%	N	%	N	%	N	%
6.	Which of the following is easier?	28	36.8	21	27.6	1	1.3	24	31.6	74	97.4

In item 6, the deaf students were asked to decide in which of the two languages writing was easy for them. In response to this item, 36.8% of deaf participants said that writing in Amharic was easier than writing in English, 31.6% reported that writing in both languages was difficult and the remaining 27.6% said writing in English was easier for them. This shows that writing in Amharic is easier than writing in English. In contrast, the other groups claimed that writing in both languages was difficult as they faced difficulties equally in both languages. Therefore, writing is difficult for the deaf in both languages.

In item 6.1 the students who choose one of the answers from the provided choices were required to give justification for their responses. Deaf students who forwarded writing in Amharic is easier stated that they grew up with hearing families who are Amharic speaking and writing than English speaking and writing. In addition, in a family level when communication was needed, they communicated through writing in Amharic and parents improved their writings. This and school learning conditions facilitated Amharic writing to be easier than English writings. The other postlinguals groups stated that they faced no writing problems during writing process because they had already exercised the speech and writing which is derived from spoken language structure, and then, they easily wrote the materials.

Table 15
The major difficulties during writing process for deaf students

7. Which of the followings are the major deaf students' problems in writing?

Item	N	%
Unable to use words in their appropriate place	3	3.9
Unable to follow grammatical structure	9	11.8
Unable to follow sentence structure	1	1.3
All	63	82.9
Total	76	100

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Item 7, was designed to find out the major writing problems deaf students encountered during writing process. As can be seen from the above table, the majority of deaf students, i.e. 82.9% reported that they were unable to use words in their appropriate place, unable to follow grammatical structure and unable to follow sentence structure were the major problems of deaf students in writing processes. This could indicate that deaf students in all aspects of writing are in problem. Therefore, special attention should be secured from the schools to improve the writing skill of deaf students.

Table 16
Feeling comfortable when they are writing in Amharic and English

No	Item	Yes		No		Total	
		N	%	N	%	N	%
8.	Do you feel comfortable when you are writing in Amharic/English dictations?	11	14.5	63	82.9	74	97.4

In item 8, deaf students were asked if they are comfortable when they are writing in Amharic. In response to this item, majority (82.9%) of deaf students said 'no'. The remaining 14.5% said 'yes'. This could clearly indicate that most of the deaf students feel discomfort or encounter difficulties in writing in Amharic.

In Item 8.1, the deaf students who gave a negative reply to item 16 were asked to give justification to their responses. To this item, majority (82.9%) of the deaf students reported that they felt discomfort in Amharic language writing because Amharic language has a lot of sophisticated Morph-syntactic language usage than English. Deaf students forwarded areas of difficulties during writing as follows: word order, writing words in their appropriate places, using modifiers, using number and gender agreements.

Qualitative Result

The qualitative research approach was used for this study. The researcher used two methods of data collection - interviews and classroom observations- to obtain thick data (Lincoln & Guba, 1985). The researcher was interested in gaining an insight about the teachers and deaf students' sign language, reading, writing and academic achievement experience in the study sites. Therefore, the researcher employed qualitative framework to obtain thick data about phenomena under study. Phenomena in this context refers to the attitudes of teachers and students towards sign language, reading comprehension, and writing skill, learners' academic achievement, overall classroom practices (of the teaching and learning) and lived experiences (Creswell, 2007).

Analysis of the data agreed with the research questions and revealed themes that emerged from the responses to the questions. Four major themes emerged from the analysis. The themes consisted of issues related sign language proficiency and reading comprehension. Under each theme, several sub-themes emerged.

Findings obtained from analysis of qualitative data gathered through interview on academic achievement and literacy print, and classroom observations in each school were used to supplement the findings from quantitative study.

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Table 17
Interview participants of deaf students background

No	Type of school	Deaf Sts. Name	Age	Sex	Hearing level	Onset	SL Started	Parent hearing status	Home Lang.	Hearing aid
1	School-1	A1	19	F	profound	BD	School	Hearing	Speech	ST
2	School-1	A2	19	M	profound	BD	School	Hearing	Speech	NO
3	School-2	V1	18	M	profound	P3	School	Hearing	Speech	NO
4	School-2	V2	20	F	profound	BD	School	Hearing	SL	NO
5	School-3	MK1	18	M	profound	P3	School	Hearing	Writing	ST
6	School-3	MK2	19	F	profound	BD	School	Hearing	Wr.&sp	NO
7	School-4	MA1	18	M	profound	P3	School	Hearing	Speech	NO
8	School-4	MA2	15	M	profound	P3	School	Hearing	Speech	NO

BD = Born deaf P3 = Prior age three SL = Sign Language ST = sometimes

Results of Deaf Students Interviews

The purpose of the interview was explained to the students both at the time of making arrangements for the interviews and just before the actual interview sessions. Students were asked to respond to semi-structured interview questions attached at the end. As near as possible correct interpretation was ensured by having long years experienced sign language teachers to confirm the information generated. In due courses, four proficient sign language translators who were long years experienced teachers from each school were selected. The translation was carried out by total communication in all schools. The translation was recorded theme by theme by the researcher.

The results of the interview helped the researcher to crosscheck the data obtained from the quantitative data. The purpose of the interview, as mentioned earlier was to obtain information from deaf students about their sign language proficiency and writing skills as presented below under two main headings:

1. Signed language proficiency and difficulties they had in signings
2. Writing skill and problems they had in writing

In addition, students were also asked to give their suggestion about what measures to be taken in order to improve their signed language proficiency and written proficiency. The result of the interview to deaf students was thus carried out with the above two response categories. The following is the result of the analysis of the data.

Summary Results of Interviews

There were two types of tasks that deaf students had to carry out in their interview in the four schools. One purpose of interview for the deaf students was to find out students attitudes towards signed language proficiency and writing skill.

In relation to signed language proficiency, deaf students had problems in signing in teaching and learning process. All of the four schools deaf interviewee addressed that in teaching and learning process, lack of adequate sign language depictions for all vocabularies prevailed in all subject areas. The most serious problem was limitation of sign language. The participants described that the language they had in sign language was not enough when they were writing. One of the deaf participants stated *that it seemed for him correct when he was writing but his teacher commented that it was not correct and he always ask himself when he would be correct.* Furthermore, he reported that his teacher was not satisfied on his

writing, but when he explained in sign language, he understood it and he didn't say anything, but in writing time the teacher always criticized that he was not correct and the comments were often discouraging. The other participant said that teaching grammar usage of written language is fundamental for deaf children from the early childhood. One of the participants further added *since she was born deaf, she was not aware speech sounds that in turn resulted in capability to write well since written language order follows the order of speech pattern. Written language is the production of different sound system. Written language also follows the order of speech pattern. Her difficulty of writing resulted from lack of these speech sounds.* She stated that *when she was writing the sentence, she did not know whether it was wrong or right. When she was writing, she assumed everything was right*. This findings indicates that deaf children suffering in limitation of vocabularies and managing of sentence structure. Therefore, teaching the difference and similarities between sign language and written language in teaching and learning process the teachers' responsibility. In addition, they claimed that they clearly understood ideas when they communicated in sign language with each other than teachers. When asked how much they understands the teacher's sign language, most participants reported that they understood partially, and the others participant reported that they understood moderately.

The limitation of sign language resulted in inability to understand and identify the meanings of the words and the content of the subject matter. Similarly, deaf interviewees suggested that a better sign language skill is highly important for better writing skill. They indicated that the limitation of the sign language affected their writing skills.

Concerning the written proficiency of deaf students all of the interviewees reported that they are unable to use vocabulary in their correct order, unable to follow the rules of grammar, unable to use mechanics correctly and unable to write sentences in their correct order were the most serious problem in writing process. They added that they were not comfortable when asked the writing assignment and homework activities for the limitation of their grammar and vocabulary inputs.

In order to improve the writing skill of deaf children the interviewees suggested that early empowering in sign language proficiency, timely, age appropriate input of vocabulary, early written language exercise, teaching from beginning the difference and similarities of sign language and written language will improve the written skill of the deaf children. Giving due attention for the learners in order to improve writing skill by the teachers and administration of the schools will help them improve in all aspects of their writing skills.

Results of Teachers of the Deaf and principals Interviews

Eight grade eight teachers of the deaf from each of the four schools under study gave their views about sign language proficiency and written skills of deaf learners. The teachers of the deaf were approached by this researcher prior to the interview sessions in order to ask for their willingness to take part in the interviews. Those who agreed (nearly all agreed to take part) were then briefed on the purpose of the interview, and a convenient time was fixed for the actual session with the selected samples member. Criteria for selection were based on preference given for the fact that those with at least five years experience would meet the requirements and all the selected samples had ten and above years of teaching experience whereby the majority were language and sign language teachers.

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Table 18
Interview participant teachers' background

No	School Type	Name	Sex	Age	Service year	Area of study	Educ. level	Subject teaching	Teaching grade
1	School-1	AT1	F	54	22	Amharic	BA	Amharic	8
2	School-1	AT2	M	45	19	English	BA	English	8
3	School-1	AT3	M	43	19	English	BA	-----	----
4	School-2	VT1	M	45	10	SNE	BA	------	-----
5	School-2	VT2	M	24	3	Amharic	BA	Amharic	8
6	School-2	VT3	F	30	8	English	Dip.	English	8
7	School-3	MKT1	F	58	11	Amharic	Dip.	Amharic	8
8	School-3	MKT2	F	50	10	English	Dip.	English	8
9	School-3	MKT3	M	48	12	Lead/p	BA	----	-----
10	School-4	MAT1	M	42	15	Physics	Dip.	Physics	8
11	School-4	MAT2	F	35	5	Amharic	BA	Amharic	8
12	School-4	MAT3	F	33	9	English	Dip.	English	8

----- No classes for Directors

Summary Results of Teachers of the Deaf and Principals Interviews

Concerning sign language and deaf people, most of the interviewees described that it is difficult to separate sign language and deaf people. Sign language is used as spoken language for social interaction, media of instruction, meetings and daily activities. Sign language for deaf people it is everything. It is their identification. Deaf students must know their first language to interact and live meaningful life. It is their right. However, they stated that ETHSL expressive capacity is very limited.

Most interviewed teachers reported that deaf students had difficulties of sign language in the learning process. The difficulties that occurred in sign language represent all words/terms. Sign symbols are not adequate for deaf learners to satisfy their learning particularly in teaching and learning process. This limitation of sign language affects their communication, academic achievement and literacy skills. These teachers testified that those who had low sign language ability showed low academic achievements.

During teaching and learning process teachers used signed language, but they used copy of spoken language (Exact Signed Amharic or English). In other words, they are interpreting word by word. They use Total Communication. The sign language was engulfed by this Total Communication approach. The contribution of this approach to sign language development was very limited. This limitation compels deaf students to sign words wrongly related or not related particularly in reading activities. The sign language is under the influence of hearing teachers in educational processes. On the other hand, the observations indicated that what deaf learners wanted to say and what they are signing is not similar. In

addition, what they are signing and what they are writing is totally different. This shows the deaf learners difficulty of mastering the language.

Deaf children's understanding of written materials is incomplete, fragmented and they do not receive the quality message properly due to mixed communication. Teachers' use of sign languages was not satisfactory for deaf learners. This indicates that the gap of communication between teachers and deaf learners exist due to the limitation of total communication to deliver the desired information. If sign language education is provided as subject in every grade level, the gaps of communication may be solved and newly emerging words may soon get representation of sign language in teaching and learning process. If bicultural approach is used in education from early, it might solve the difficulties. The interviewees revealed that from their long experiences of teaching the deaf they learned that total communication is not useful for deaf learners' language development. Now it is shifting time to bilingualism.

If the child is unable to understand properly, he cannot learn the academics effectively. Therefore, natural sign language for a deaf child is a key for academic achievement. All the teachers forwarded that language plays a key role for academic achievement and writen language development. They addressed that laying foundation in sign language skill is the basic for deaf children written skill development. Some interviewees explained that children who began learning sign language in their early age showed better sign language expression than later beginners. They added that early sign language beginners were more computing in sign and academics than aged learners.

Concerning sign language improvement in teaching and learning process, the interviewees stated that sign language as spoken language is growing and changing. The growth of the both languages is the same. Language teaching system for deaf should be changed from preschool to higher school level. Teachers have to gain adequate knowledge in sign language skill so that they could empower deaf people in sign language skills. For deaf learners, foundation of sign language should be laid beginning from early preschool age. In addition, providing scheduled times for sign language development programs such as sign language clubs, sign language development teams and appropriate supplementary teaching recourses in the schools is of great help. They suggested providing sign language as the subject in each grade levels will contribute for the sign language development.

Participant teachers reported that writing skill is associated with phonetic awareness. Deaf learners don't know phonetically arranged speech flow order. For speech users writing is not difficult because they use flow of speech order for writing. For deaf learners to communicate with families, friends and neighbors and teachers writing skill is fundamental. Furthermore, to write personal letters and application writing skill is undeniably important; however, deaf students might not be able to do these because of written skill limitation. A good skill of writing is very important for deaf people to communicate using reading and writing. The participants said that empowering deaf students in sign language possibly improve the learners writing skills. If a deaf child had a good skill of sign language as early age as possible, he/she gets reading and writing easier.

The participant teachers stated that the most common writing problems of deaf students' are inability to write words in their correct order, missing grammatical structure of sentences, lack of getting the overall meaning and the organization of the text. It is difficult for deaf to get the correct grammatical structure because deaf children write in sign language order. For oral language users it is sometimes difficult to understand the written materials of deaf students. The hearing people follow the spoken language grammatical order, and then judge if it is wrong, but deaf people look as if it was correct.

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All of the interviewee teachers reported that vocabulary usage, punctuation, grammar structures and sentence structure usages are the major writing deficit of deaf children in writing process. Particularly, born deaf students made all the mentioned deficits. They could explain what they thought using this skill. They know the idea but limited in vocabulary output, at the same time they write the words that doesn't match or fit with the sentences. Their wording systems are not flourished with grammatical rules. Beyond unorganized writing structure, the participant teachers reported, morphological derivation, inflection, modifiers, lexical germination infixes, prefixes, suffixes, inflectional affixes, and inability to understand linear relation of words, and inability to understand words in their tense structure are common deaf learners' deficits. For deaf learners morphological derivations are headache in Amharic language writing process. The biggest problem was that the teachers were not trained to teach deaf students. To empower teachers with these skills, adequate linguistic and language training is necessary. If they get adequate training on how to teach the deaf, they can teach how to write and read the second language and they might master the literacy skill.

All the interviewee participant teachers suggested that to improve the writing skills of deaf students, adequate vocabulary knowledge input, early grammatical structure skill, early exposure of writing skills, development of grammar skill and early writing skill development play a key role. Teaching Amharic and English grammar structure in relation to sign language or showing their differences in writing is very essential in schools during teaching and learning process. Students should be empowered in sign language and reading and writing skills; to do this the teacher's readiness to develop these skills is very important.

Classroom Observation (Main Study)

Outcome of Sign Language Observation

1. All the participants of this study were highly concerned about limitation of signs for classroom use. There are no signs for certain abstract and scientific terms. Due to lack of signs teachers tended to explain the concepts using informal signs that differ from one teacher to another and one school to the other school. As a result there was no uniformity in teaching. There was no standard and teachers came up with their own signs changing the signs obtained from the previous teachers. When these students come from different schools sign language background to post secondary schools, they faced with sign confusions.

2. Sign language was not given due attention as other languages in the classroom; teachers were not aware that sign language for deaf learners is their mother tongue. It is important to develop sign language by establishing team clubs focusing on culturally and linguistically suitable sign vocabulary and analyzing its efficacy.

3. In schools the natural sign language acquired by deaf children provides the best access to educational content and the second language (reading and writing) was not emphasized. Since the classroom is the primary place in which deaf children acquire their first language, the teacher is the primary role model for deaf children to acquire a strong foundation in sign language.

4. Teachers and deaf students were not empowered in sign language proficiency. This in turn affected students' academic achievement. Classroom instructions were more dominated in speech.

5. The ultimate goal of language (sign language, reading and writing) learning in bilinguals is producing fluent and accurate expression in both languages. Bilingual children seem to acquire the two languages with relative ease. But the attention for both languages in all schools was very poor.

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Outcome of Observation of Reading and Writing

1. Reading and writing are closely related; most educators have paid much more attention to reading, and in most classrooms time spent on task for reading was greater than for writing. In classroom more attention was not given for writing.

2. From classroom observation, the researcher observed various aspects of written language problems (lexical, morphological, syntactic, and pragmatic). The learners' problems were most strikingly in the area of grammatical morphology including omissions, substitutions, and additions of various morphemes in both written languages.

3. During classroom observation, the researcher observed that reading was a problem for deaf children. When they were reading textbook, word identification, vocabulary meaning, morpho-syntax relations were clear problems of deaf children.

4. The common observed problems during writings were: inability to write vocabularies in their appropriate places, inability to follow the grammatical rule of writing, inability to construct sentences and inability to attain general grammatical organization.

1. The other observed behavior was reading comprehension problem. Limitation of the sign language to represent all words and their morphologies was the biggest problem of deaf children in reading process. From their manner of reading lack of confidence was evident in the students. The problem appeared to be limitation of sign language representation for particular word.

2. Evident in the classes was that the deaf students no enthusiasm to learn reading and writing skills. However, reading and writing are fundamental for academic achievement.

3. Moore (2001)strengthen in his book that the importance of literacy skill for deaf learners explained the need for print literacy—reading and writing—is more important for deaf individuals. This clearly indicates that since both print literacy components are crucial for deaf individuals, early supportive environment nourishes effective literacy skills.

DISCUSSION OF FINDING

Signed Amharic and English Proficiency of Deaf Students

I observed from my teaching experience that deaf children have achieved success, in my special school and in general education classrooms, under all different approaches. In Total Communication approaches, the language base on which literacy is founded may be a mixture of English/Amharic-based signing is the most effective mode of communication in the classroom but the number of successes through TC instruction has not been satisfactory to support due to its limited use in developing reading and writing skills in deaf children. I believe such an approach, particularly, is not satisfactory in the development of literacy skill. Most educators would agree that mother tongue is much more powerful than any Amharic/English-based sign system. It is a fully developed language in its own right. Any English-based sign system is a code on spoken language just as Amharic/English print is a code on spoken English/Amharic.

To that end, Landsberg (2005) state that 'without a strong mother tongue base, teaching and learning become complicated and the learning of a second language is much more difficult' As to the other

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scholars agree, social and academic success is related to the acquisition of sign language (Ormel, Hermans, Knoors and Verhoeven, 2009). Besides, lack of mother tongue input in early could be cause for language delays in children with severe and profound hearing losses (Nicholas and Geers, 2003). Deaf people take part in deficient types of education that suppress them in the language and culture of hearers rather than it could have been enrichment model where signing is encouraged as the primary language.

The main purpose this study was to find out the effect of sign language proficiency in relation to writing skill, reading comprehension and academic performances by deaf children. Based on the categories of high and low proficiency, 70.96% of special schools for the deaf students were high Signed Amharic proficiency contributors and similarly 63.33% of special schools for the deaf students were high Signed English proficiency group. The result show that significant differences in sign language proficiency in special and integration schools. This suggests that special school environment is linguistically rich to facilitate sign language acquisition than integration schools. Integration schools need a great attention of sign language proficiency development. This may be an ideal environment for sign language acquisition.

The most surprising finding is that regular school deaf children showed the least signed language proficiency acquisition than counterpart special schools. This goes with the findings of (Marchark et al, 2008). As to the scholars, deprived regular setting deeply affects the communicative environments and belittles both in the relationship and reduces the linguistic scope in vocabulary and conceptualization.

The researcher's classroom observation also confirms that students in integrated schools with hearing peers and classroom teachers do not have sufficient sign skills to communicate with the deaf students at the required academic level. Most of the time, with their hearing peers in the classroom or out of the classroom, they use lip reading, speech and sign language are limited to some extent. This is supported by the works of Shaw and Jameson (1995) who say that signed conversation between hearing and deaf students were very limited when compared to what signs the hearing students knew. In contrast, a sign language conversation was very high in special schools because deaf students gain access to the communication in the classrooms and out of classrooms. This is because and classmates become fluent in ETHSL and use sign language in all interactive activities. This finding is similar to Seigal, (2001). The scholar's finding shows that special schools provide a sign rich learning setting for deaf students. This helps the deaf students to engage in direct conversations with their peers, teachers, specialists, and others within the school setting. These conditions facilitate sign language growths. Integrated schools have students of diverse groups of hearing and non-hearing. The dominant one was speech and the chance of using sign language was reduced. The ability of integration settings to foster a communicative learning environment may be poor for deaf students. This agrees with the findings of Antia (2007) report that deaf students faced communication difficulties in the integrated classrooms. In integrated schools, deaf incline to lip reading than using sign language. In special schools, more opportunities to develop interpersonal relations with sign language were exhibited whereas in integrated schools communication with their teachers and classmates was in a limited way.

On the other hand, there is a significance difference between high and low proficiency correct and wrong responses in signed Amharic and English mean scores. Signed Amharic high proficiency group correct responses mean score was (90.42) and wrong response mean score was (14.45). In contrast, low proficiency groups mean score for correct response in signed Amharic was (34.50) and the wrong response mean score was (70. 60). The mean score for correct response to high proficiency groups Signed English (52.93) and the wrong response mean score was (19.07). In contrast, correct signed English low proficiency group mean score was (18. 67) and wrong response was (53.10). In both

languages, the high sign language proficiency group achieved a higher mean score than low proficiency group. This revealed that deaf students with high proficiency could understand written materials better than low proficiency groups. This shows that sign language proficiency plays a role in understanding written literacy. The teachers' interview also confirmed that children with better sign language skills could easily understand written texts.

In descriptive statistics for comparison of high and low proficiency groups for the signed Amharic and English mean score by male and female, the mean of a high proficiency group of male correct Signed Amharic was (92.68) and for female (86.83). This indicates that there is mean differences in right and wrong Signed Amharic between male and female. In addition, the findings display that there is a significant difference between male and female right and wrong responses of mean score. Right response to Signed Amharic high proficiency male and female groups and wrong responses for signed Amharic. The low proficiency group performed lower mean score than the high proficiency groups in right and wrong responses. On the other hand, there are mean score differences in correct Signed English males (53.26) and correct mean scores of females was (51.86). Besides, and males wrong Signed English mean score was (18.74) and females wrong mean score was (20.14). This shows the difference between males and females proficiency.

In English Signs mean score males achieved better than females. However, there is an insignificant difference between male and female in English high proficiency groups. This reveals that females have similar opportunities for English language exposure as males to exercise and use English signs as males. The low proficiency group performed lower mean score than high proficiency group in English signs. This finding is supported by (Swanwick and Watson, 2005). As they found deaf students relatively differ in their abilities to acquire language. Furthermore, they differ in their level of language they bring from home, the degree to which they can use their hearing and speech reading skills and other non-language-specific influences.

Signed Amharic/English Languages in Teaching and Learning Process

One of the major findings from the deaf learners' questionnaire, interviews of the deaf, teachers and principals, signed Amharic and English language test, reading and writing skills tests, and from my classroom observations confirm that there was a sign language limitation in teaching and learning process. All the deaf students, teachers and principals of the schools in their interviews reported prevalent problems encountering during signing, reading and writing in teaching and learning process due to the lack of adequate sign language representation for all vocabularies in all subject areas. The classroom observation also confirms that sign language shortage in teaching and learning process prevailed. All the participants of this study were highly concerned about the unavailability of adequate signs for classroom use.

The findings of my observation show that Ethiopian Sign Language and other spoken languages are equivalent in their communicative potential; the problem is lack of early exposure to a language, not from the language limitation. The problem is that the schools are not linguistically rich to facilitate sign language acquisition for deaf learners and for themselves properly. The problem is the teaching system of language. The problem is not lack of competence in Ethiopian Sign Language but teachers lack linguistic competences. According to some scholars, bilingual strategy for education, suggest the need for new methods of instruction and the high competence of sign language for teachers of the deaf (Sass-Lehrer & Martin, 1992). It is natural that sign language allows deaf learners to meet the skills and abilities of hearing people in communication, cognition, and play a role in empowering the community.

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Another classroom observation shows that teachers use simultaneous communication based on the English or Amharic word order to ETHSL. This deprives the linguistic development rights of the sign language. The deaf students' interview results reveal that newly employed teachers' capacity of sign language is very poor. It seems that they come to the classroom without sign language skill/training. This is supported by the ideas of one of the deaf participants. In this regard, one of the deaf participants reported: *"In our school, the principal himself doesn't know the sign language. He cannot communicate with us. How could he understand our feelings, how could he talk about sign language and how could he facilitate the sign language learning environment for teachers and students?"* The deaf participants agree that teacher's lack of competence in the language of instruction. They feel that this influenced their sign language development and academics. Teachers lack competence in sign language. These comments were consistent with the data which were collected through classroom observations and reflective journals.

The finding is supported by the works of Andargachew (2008) who says that deaf students and their physics teachers seem to fail to establish common understanding because of lack of sign language. This study also reveals that there was a communication gap between the deaf and their teachers. This is also supported by interview results of a teacher. As to him, it is difficult to say deaf students are learning in real sign language. There is a sign language and deaf people interact with sign language whether the teachers use it or not, understand it or not. When they are communicating each other, they are using sign language but the school situation in reality obliges deaf students to use artificial language that does not support the development of sign language (Supalla, 1991) who against an artificial sign system. Similar to this finding is Ahlgren, (1984) reported that 'Signed Swedish' encountered problems in making themselves understood and in understanding deaf people especially when they were communicating with each other. When responding to an item of the questionnaire, the majority of deaf learners was not satisfied with the sign language of the teachers.

With regard to item that reflect deaf students easily communicating and understanding between the same identity groups, 65.8% of deaf students testified that they easily communicate with sign language each other and 34.2% are able to read lips and postlinguals communicate with teachers. This shows that the majority of deaf students communicate easily with each other with the same identity group using the real sign language. One of the deaf interviewees addressed that their *communication problem is seen while they are communicating with hearing people; otherwise, among them there is no significant communication problem.* They justified that they are the same identity group; at the same time, sign language is their natural language with which they understand each other.

To sum up there is a sign language competency gap between the deaf and their teachers. *The observation revealed that classroom instruction took place to sign- based Amharic and English or simultaneous communication; in contrast, deaf use their natural sign language.* If deaf children are exposed only to Signed English, Supalla (1991) explains they may exhibit "impaired potential for natural language acquisition and processing, impairment of their capacity to create and comprehend grammar, unless they are able to create their own linguistic structures/sign language".

One of the longest experienced teachers reported that *total communication was a "total confusion" for deaf students; it didn't contribute to the sign language development.* The other interviewee added that *it may be difficult to say deaf students are learning sign language. The sign language usage is under influence of hearing teachers and regular educational processes.* This shows that total communication did not function as expected like any other natural sign language. However, the natural sign language

acquired by deaf children provides them the best access to educational content and the second language (reading and writing).

According to Marchak (2009), children with deaf parents preferring natural sign language have larger vocabularies than those children who do not. The scholar admits to say that those with early and consistent exposure to sign language had larger sign vocabularies than those without such exposure. In this regards, classroom observations confirmed sign language is the native language of deaf children and is the only accessible language for deaf children. Andargachew (2008) in his three schools' study report, he observed a serious scarcity of sign language to represent technical and scientific physics terminologies in 7th and 8th grade physics textbooks. In addition to that there was a little effort to organize and enhance the level of sign language. In connection with this idea, are found busy on Total Communication approach, and even most of deaf teachers did not identify total communication from natural sign language of the deaf. If the classroom is the primary place in which deaf children acquire their first language, the teachers should be the primary role model for deaf children to acquire a strong foundation in sign language.

Therefore, providing sign bilingual strategy is very crucial. This strategy is based on linguistic and educational theories. The theory predicts that (language) skills that have been acquired through learning a sign language will facilitate the acquisition of reading and writing (Cummins, 2006). The approach of Cummins advocates for deaf children's need to acquire a natural sign language for cognitive development and as basic ground for second language acquisition. The impact of this on the structure of schooling is that the school must prepare the children for acquisition of a first natural language for second language acquisition, socialization and development of world knowledge (Cummins & Swain, 1986; Liddell & Erting, 1989).

Most of the interview participant teachers stated that language teaching system should be changed from preschool to high school level for deaf learners. This could focus on three areas. First, teachers should gain adequate knowledge in sign language, to empower deaf people in sign language skills. Second, the deaf learners' foundation should be laid beginning of preschool school age. Third, teacher training institutions should arm teachers with the necessary skills of teaching the deaf.

As the response to the questionnaire of deaf students about the contribution of sign language for the academic achievement depicted that 59.2% of the respondents said 'yes' and the remaining 40.8% said 'no'. This could clearly indicate that the majority of deaf participants has understood that better sign language skill contribute to their academic achievement. The response of students ascribes that the possibility of transfer between the academics such that skills acquired in signed languages could positively influence the academic performances of the students. Deaf interview participants added that sign language proficiency can contribute to academic achievement. It is clear that language plays a key role for academic achievement. If the child is unable to understand properly, he cannot learn the academics effectively. Not only the deaf child but also teachers require skills of sign language since sign language is used as a medium of instruction in schools. One who wants to teach deaf learners the sign language, he should know sign language very well. The skill of language is important for both parties. Sign language is the native language of deaf children and is the only accessible language for deaf children. This accessible language provides opportunities for fluent communication and creates optimal cognitive development for deaf children. However, classroom observation reveals that sign language development is not well recognized by teachers of the deaf. Development of sign language and

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empowerment of deaf learners with this skill will provide deaf children with basic foundation of reading and writing as well as better academic achievement.

As the responses of deaf students show, the sign language is used as a subject in all grades. In this regard, (80.3%) of grade 8th deaf students strongly (agreed) that sign language was given as a subject in all grade levels. They justified that using sign language as a subject helps deaf students update their sign language proficiency, learn new sign language and help to develop sign language every time.

Furthermore, they added that sign language is a language, like any other language serves as a means of communication. It provides deaf learners with sign language proficiency and it introduces with new terms and abstract words. In addition, it qualifies deaf people with a strong foundation in their mother tongue (sign language), helps deaf people to understand their second languages and facilitates the communication skill of the people. This finding is supported by the works some scholars like (Marschark & Hauser, 2012). As the scholars agree that offering sign language as a school subject for deaf children in regular education as well as those in special education contexts will generally improve the level of sign language skill among deaf children.

Writing Skill in Teaching and Learning Process

One of the objectives of this study was to examine the eighth grade deaf students written skill in our context and to explore the deficiencies of deaf learners in writings. Researchers and educators serving students who are deaf have given considerable attention to students' proficiency in written expression. The assessment of deaf students' writing skill was based Heaton (1990) model on five Amharic and English sub-scales, essay writing proficiency. The items were reliably judged by two independent judges and they showed high internal consistency and high test-retest reliability. The overall assessment of the children's writing was validated by means of a correlation which was high and significant $p > 0.01$) level, which indicates that the assessors were able to use the ratings reliably.

Looking at inter-rater reliability and concurrent validity, the researcher evaluated the rating scores for 76 deaf participants of 8th grade in English and Amharic writing proficiency. According to frequency distribution evaluation results in free writing by deaf participants in Amharic, both raters' results show that 82% of deaf students exhibited deficits in Amharic content knowledge, 59% of organization of idea problems, 55.7% of ineffective/little vocabulary, 62.3% of language construction problems, 57.4% of poor mastery of mechanics. Deaf students were performed very poor Amharic writing. Most of the deaf students fail to treat a topic adequately, and many had a problem in writing and difficult to identify sentence structure. Out of 76 deaf students, 76.7% of used meaningless words in their sentences with spelling errors (See Appendix L). In addition, 90% of deaf students exhibited deficits in English content knowledge, 80% of organization of ideas, 78.3% of ineffectively using vocabulary, 81.7% of language construction, 80% of mastery of mechanics deaf students was very poor in English writing, or difficulty of writing. Furthermore, 81.6% of them wrote meaningless words that did not carry messages (see Appendix L). They were not able to write complete sentences that carry clear meanings. Only 20% in English sentence organization, 6.6% in content knowledge, 20% in effectively use vocabularies, 6.6% of proper language construction and 13.3% mastery of mechanics, which ranges good to excellent. They wrote a correct grammar order in English. The research finding reveals that the overall writing performance of deaf students was uninformative and very poor. Their sentence construction is a mere collection of words without appropriate message. This finding is consistent with the works of McCoy et al. (1996b) who found that approximately 76% of the errors in ASL were produced by proficient deaf

adults while writings. From the written materials, the researcher observed various aspects of written language problems: lexical, morphological, syntactic, and pragmatic problems.

Moreover, they could not write meaningful and organized sentences. When they tried to pass messages in writing, a lot of errors were observed. They were in a difficulty to pass messages correctly in writing. It is difficult to identify the proper modifiers, agreements, determiners, etc. in such sentences. The sentence of deaf students found lacking quality message since do not follow Amharic and English grammar structure. As a result, it was difficult to pick the message of the writer. The result of this study indicates that deaf students show poor writing performance in both languages. They were poor in word organization, sentence structure, and grammar structure in the general organization of the sentences.

Interesting similarities and differences could be observed between Amharic and English writing of deaf study participants. Regarding their similarities, the majority of the deaf participants produced linguistically non-standardized forms of writing and concerning their differences their writing skill deficits are less in Amharic language than in English. Such result is also observed in the works of (Maxwell & Falick, 1992; Yoshinaga-Itano, Snyder, & Mayberry, 1996b). As these scholars, the "deaf can make numerous errors at the sentence level and may write uninteresting, uninformative, and not coherent sentences". In addition, other scholars to address the issue similarity that deaf students have considerable delays and variances in written language (Mayer, 1998, 1999; Moores & Sweet, 1990). As the researcher observed the written works of deaf learners, inability to write vocabularies in their appropriate places, to follow the grammatical rule, to construct sentences and general grammatical organization problems need serious attention of deaf education.

Similarly, the questionnaire result also shows that most of the deaf participants (82.9%) reported that the major problems encountered during the writing process were inability to use words in their appropriate place, inability to follow grammatical structure and inability to follow sentence structure. When asked whether they were comfortable in Amharic writing or not, similarly, the majority of deaf students, i.e. 82.9% of the students said 'no', in that they have low interest of writing, while the remaining 14.5% said 'yes'. Since written language is the product of speech sound, phonetic awareness plays a key role in constructing the correct grammar structure.

According to deaf participants in the interview "*written language is the production of different sound system. Written language also follows the order of speech pattern. My difficulty of writing comes from unaware of these speech sounds. When I was writing the sentence, I did not know whether it was wrong or right. When I was writing it seemed right*. In addition, the other deaf participant stated that it *seems correct when I am writing but my teacher said it is not correct. I always ask myself when I am going to write correct sentences".* Furthermore, he said that his teacher was not satisfied with his writing; but when he explained in sign language, he understood the message and didn't say anything, but in writing, he always commented with offensive words that he was not correct. The teacher always told him during his writing that he used only the content words, and his sentences lack modifiers, inflections, and other sentences organizations. When inquired why they wrote content words only, they stated that when they came to school they learned the sign language only word by word not with grammatical structure. Hence, this factor may influence deaf children to write content words. The writing systems were not supported by grammatical rules. Some interview participants' teachers associated the children's writing problems with poor language input, inefficient teaching system and inefficient teachers and wrong perception of the deaf students. According to researcher observation, the teaching strategies are not in a way of deaf understanding.

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The findings from the interviews of teachers of the deaf show that their common problems in writing were sentences with full of spelling errors, poor grammar order, sequence problems, general text organization difficulties and writing short sentences which lack message quality. According to Marschark et al, (2002), " deficits in vocabulary, syntax and inability to use abstract language, all of which have been documented for a large portion of deaf children, directly impede the acquisition of literacy skills and thus limit their academic experiences". In addition, delays or deficits in the classroom language further limit academic experiences. Words are the basis for grammar. The arrangement of words in their grammatical order requires grammatical knowledge. The study shows that born deaf students made all the mentioned deficits. They could not write explaining what they think. They knew the idea but as they had limited vocabulary input, they write the words that didn't match or fit with the sentences. When they were asked to write a kind of task in classroom written activities, they write only a few lines of fragmented sentences. The classroom observations reveal that there are no opportunities of helping deaf students to develop their writing skills. Each teacher rushes to cover the topics of the semesters as no time was arranged to support deaf with writing skill development.

The classroom observation also confirms that classroom discourse seems to be oriented towards traditional methods of teaching (e.g. Lecture methods, rapid question-answer method and drilling) because these methods are most of the time easy way of teaching and often favored to cover the portion of the year. However, teachers may also be required to enhance deaf children's knowledge of the written language systems as (Padden & Ramsey, 2000). Besides, Woolsey, Satterfield, & Robertson, (2006) suggested that teachers should increase children's knowledge of the sublexical structures (letters, graphemes/ phonemes, and syllables) in the written and spoken languages. In addition, teachers may stimulate children's knowledge about the orthographic/phonological and morphological structure of the written language by exploiting child's skills in the sign language. For instance, Paul (1998) notes that '… children can be introduced to the notion of word roots through exercises in which they have to detect similarities in the forms of morphologically related signs'.

Two interview participant teachers forwarded that they are always trying to bring deaf learners to their spoken culture; they do not want to go to their sign language. During this time, they do not recognize that they are making mistakes since they don't know about the sign language and they don't want to know the sign language grammar. They always say there is a limitation of sign language and grammar rule; they don't try to fill the gaps. They view the deaf writing on their hearing ways, and they look at a wrong ways. These ideas suggest that to reconsider about sign language and written language of the deaf learners, first we should go to them and bring them to the second language.

Both the high- and low-achieving groups showed deficits of sentence construction in all aspects of writings. However, high sign language proficiency group in all content categories of Amharic writing skills performed better than low proficiency groups. A low proficiency group in all content categories of Amharic writing skills achieved very poor; only 3.3% of deaf students performed a good range of performance. On the other hand, a high proficiency group in all content categories of Amharic writing skills also achieved very poor, however, 22.6% of wrote correct content knowledge, 36.5% of wrote organization of ideas, 32.2% of used effective vocabulary, 25.8% of used good language construction and 32.3% of them performed mechanics good to excellent range of performance. Both groups exhibited writing difficulties in sentence organization, grammar structure, content discussion, mechanics, modifiers, and gender and number agreements. Writing meaningless words was common in both proficiency groups. This reveals that learning to write in a second language is difficult for both groups equally regardless of their proficiency differences. Both groups wrote highly fragmented sentences with content words and the

sentences were difficult to identify in convention. This finding indicates that deaf people become illiterate through the language of the hearing community to which they belong. The chi-square test confirmed that even though both groups writing skill were very poor; the test has shown that there is a statistically significant difference between high and low proficiency groups in all categories of Amharic written skills. The finding indicates that the low proficiency group faces more severe difficulties in aspects. This finding is supported by Beijsterveldt and Hell (2010) finding that high and low proficient signers did not differ with basic measures of textual writing. The researcher found that proficiency in sign language affects the written production of those linguistic forms. The teacher interview results imply that if deaf children have a good skill of sign language they can improve their reading and writing. In teaching sign language structure and written language structure differences, it is possible to enhance writing skills.

In terms of English language essay writing, the percentile score for high proficiency group content knowledge, organization of ideas, mechanics, vocabularies, language construction was higher than the low proficiency group. A low proficiency group in all content categories of English writing skills performed very poor, none of the students wrote correctly. Similarly, a high proficiency group in all content categories of English writing skills also displayed very poor, however, better performed than low proficiency groups, 20% of in the English sentence organization, 6.6% of in content knowledge and language construction 20% of effectively used vocabularies, and 13.3% of mastery of mechanics performed which ranges good to excellent. Both groups exhibited writing difficulties in those five categories. The data of this study indicate that deaf students with high proficiency group achieved better than low proficiency group. The finding indicates that the deaf student who had a good proficiency in sign language acquired better literacy than low sign proficiency; however, the chi-square test analysis confirmed that even if both groups exhibit low English writing skill, the low proficiency group had more severe difficulties in sentence organization, knowledge of the subject, mechanics, effective sentence construction and vocabulary usage than high proficiency group.

This finding agrees with the theories that stress the "Common Underlying Proficiency" of languages (Cummins, 1981) and the fact that mother tongue proficiency is a reliable and an influential predictor of reading and writing development (Hakuta, 1990). Most studies on writing language skills concluded that the '… majority of deaf students, including those at the highest level, is notably different and somewhat behind their hearing peers (Berent et al., 2007; Biser, Rubel, & Toscano, 2007). Explicitly making connections between signs and written words support transfer between sign language and written language (Hermans, Ormel, & Knoors, 2010). Therefore, this studies also addresses that attention to students' proficiency in writing language should be given in teaching and learning process.

In response to the questionnaire that inquires one was easier from Amharic and English writing, 36.8% of the deaf participants said that writing in Amharic was easier than writing in English, 31.6% reported that writing in both languages is difficult and the remaining 27.6% said that writing in English is easier for them. This revealed that writing in Amharic is easier than writing in English. Deaf students justified the reason that Amharic is easier in writing process than English because we grew up with hearing families who are speaking and writing in Amharic Language. In addition, in a family level when communication is needed, they communicate through Amharic writing, during this time errors are corrected by their parents. Their background information informed that most of deaf learners (90.8%) came from Amharic speaking families. This is true because there may be family support and learning environment favors Amharic writing. As deaf interview results indicate that writing in both languages is difficult but due to all this, Amharic writing seems easier than English.

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The other study finding revealed that students from special schools have better mean score in both languages writing skills than in their counterpart integration schools. Most of the deaf students 86% of them have very poor content knowledge in special schools in Amharic writing skills, 72.1% in organization of idea, 69.8% inefficiently using vocabulary, 76.7% of these students perform poor and virtually no mastery of sentence construction and mastery of mechanics performed very poorly. Similarly, the results of integrated school students show that in all content categories of Amharic writing skills also performed very poorly, they range from 78.8% to 90.7 %. This showed that students from special schools achieve higher mean scores on the Amharic writing skill test than their counterpart integration schools. However, the chi-square analysis reveals that there are no statistically significant differences between integration and special school students in all Amharic writing categories as x^2 (1, 76) = 2.315, p > 0.05. The Amharic language writing skills of deaf students in both types of schools seem to be similar. It is clear that students in both groups faced with high difficulty of writings. This finding clearly shows that deaf students in both programs had high difficulty of Amharic writings. This finding is consistent with the work of Antia, et al. (2005) that suggested public schools may experience difficulty with grammatical constructions throughout their school years.

Students in special school in all content categories of English writing skill were very poor. 86% in content knowledge, 72.1% of organization of ideas, 69.8% of vocabulary usage, and 76.7% of language construction and mechanics of deaf students were very poor. Similarly, students in integrated school in all content categories of English writing skills also achieved very poor, this means only 1.3% to 6.6 % wrote correctly. This shows that both groups weak writing skills. When we compare special school students with integrated ones, the data show that students in special schools are statistically better than students in integrated schools in most of categories of English writing skill. In addition, chi-square analysis reveals that there is statistically significant differences between integration and special school students in the organization of the sentence, content knowledge, vocabulary, language construction and mechanics of the English categories as can be shown as x^2 (1,75) = 2.776, P < 0.05, x^2 (1,75) = 6.836, P > 0.05, x^2 (1,75) = 6.136, P >0.05, x2 (1,75) = 3.725, P > 0.05 and x2 (1,75) = 3.725, p > 0.05. It is clear that students in all groups showed high difficulty of writing in English. Based on the performance of written work of students' data reveal that such descriptors as limited vocabulary, vagueness, lack of functional words, bland, poor mastery of verb inflections, plurals, and repetitive, limited, and simple structure of the sentences without carrying meaningful message. Teachers interview results from both types of schools attests that the students' exhibit, inability to use vocabularies in their correct places, follow the rules of grammar, use punctuations correctly and write sentences in their correct order. This all are found common deficits of the learners in both languages.

On the other hand, there is a positive and a weak relation between the written skills of deaf learners' age of onset P < 0.05. This indicates that deaf learners who are born deaf, prior age three deaf and deaf after age three have no similar Amharic and English written language skills. Positive relationship indicates that the age onset has a positive effect on the writing skill of Amharic & English of deaf. On the other hand, there is no statistically significant correlation between Amharic and English written skill and the sign language started period P > 0.05. This reveals that deaf learners who started sign language at home and in school have similar written language performance in both Amharic and English written languages.

In response to the interview that inquire the suggestion to improve the writing skill of deaf learners, deaf students and their teachers suggested that writing skill is fundamental for deaf children to compete with majority of hearing people. Hence, an age appropriate input of vocabulary, an early supporting system of writing skill beginning of preschool, telling the relation and differences between sign language and

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written language order in both languages, and early written language exercise contribute for writing skill development. Teachers also add that readiness and capacity show these skills in the classroom will contribute to the improvement of the skill.

The above findings agree with Paul (1998) that '… at first the necessary step is that deaf children must learn written languages are not related to sign languages. Deaf children do not always realize that the written language is related to the spoken language by hearing people and unrelated to the sign language. In addition, deaf children have to learn that there exist important differences between written languages and sign languages'. This result is supported by works of (Padden & Ramsey, 2000). According to these scholars, teachers may also try to develop deaf children's knowledge of the written and speech language systems.

In addition, teacher interview results show that sign language and written language development programs in schools, early vocabulary knowledge input, early grammatical skill and early exposure of writing skills play an important role in the improvement of writing skills. Besides, teaching Amharic and English grammar structure in relation to sign language, identification of words or showing the differences in writing are very essential in encouraging the performance of writing skill. Giving, due attention of the learners, in order to improve writing skill, by the teachers and administration of the schools is of paramount importance. The literature suggests improving deaf students' writing proficiency calls for increased instructional accountability. In support of the finding above, (Berent et al., 2007; Channon & Sayers, 2007; White, 2007) say "teachers should be accountable with an efficient and valid means of assessing writing skills".

CONCLUSION AND RECOMMENDATION

Based on the findings of the study and the conclusions drawn above, the following recommendations are made. The findings of the study have important implications for the concerned parties, namely, Ministry of Education, special and integrated schools, educational policy makers, teachers, school principals, deaf learners, and parents.

Signed Language proficiency: Communication has the ability to connect thought and symbol into language, and is the beauty of learning. The effective development, understanding, and expression of language are fundamental to any educational and social experience and are particularly crucial for deaf children. Effective communication, education and social growths depend on a language-rich environment. Language rich classrooms could facilitate academic learning. However, the finding of this study reveals that there were sign language limitations available in all subject areas. This created a gap of understanding print literacy and academic achievement in the learning process of deaf students.

On the other hand, the study findings reveals that deaf students with high signed proficiency laid the bases to perform better in Amharic and English reading comprehension, in written proficiency as well as in academic achievement. This shows that language proficiency is highly associated with literacy skill and academic achievement. Many studies indicated that high language skills in sign have been found to associate with higher literacy skills in children who depend primarily on sign and increase access to learning. Therefore, early access to fluent language is central to deaf children's gaining literacy skills. This requires special attention in the development of sign language proficiency. For those children who are not able to benefit fully from spoken language, an early foundation in language through ETHSL would appear to be a promising alternative. This study encourages deaf students to learn with their

mother tongue. The Constitutional also encourage children to learn with their mother tongue. There for it is constitutional right.

- Preparation of deaf people for life in two cultural and language community is a primary bilingual program. It is the negotiation of two languages (signed and spoken/written) and two culture (the culture of the deaf community and the hearing world). The development of sign language skills is fundamental to the objective of providing uninhibited access to curriculum content via a fully accessible language and a basis for acquisition of Amharic/English as a second language. In this regard, institutions should invest quality training in order to improve the qualification sign language teachers.

- On the other hand, integrated school students showed poor sign language proficiency than counterpart special school students. This indicates that lack of full access to a complete language and/or delays in language development can limit the learning of language and academic concepts. Teachers need to recognize and capitalize on the benefits of language, particularly Ethiopian Sign Language, reading, writing and their contribution to academic performance.

- The findings of this study reveal that the contributions of Signed English and Amharic/ Total Communication in the development of natural sign language/mother tongue were small and unsatisfactory as were in the improvements of Amharic/English language skills in deaf children. The explanation for why this Total Communication use speech and signs does not function as expected. Literature confirmed that if deaf children are exposed only to Signed English, they may exhibit "impaired potential for natural language acquisition and processing," impairment of their capacity to create and comprehend grammar unless they are able to create their own linguistic structures. In effective, educational practices in special and integration schools did not meet the aspirations of deaf learners.

- Therefore, paradigm shift would be needed in deaf education away from unsatisfactory communication and education system. A signing community cannot ignore the fact that signing in English/Amharic occurs, but the linguistic description of a natural signed language as a language in its own right must be properly distinguished from artificial sign system.

Written skills: The other findings results reveal that deaf students wrote the linguistic specifications of the translation equivalent in sign language. This shows that deaf learners have access in only sign language. It is difficult for deaf children set up a written language system, when the syntactic, the semantic, and especially the morphological specifications of the spoken word equivalents are not already available. Understanding this issue is vital to help deaf learners.

Educators of the deaf need to understand deaf children have difficulties in learning to read and write. Many deaf children have delays in their face-to-face language development that can negatively affect literacy learning. Early literacy is positioned with respect to the development of face-to-face language and the subsequent development of reading and writing. The findings reveal that high sign proficiency group in all content categories of Amharic and English writing skills achieved higher mean score than low proficiency group. This displays that sign language proficiency is the base for writing skill. The priority should be given to that child to acquire first language proficiency during preschool and early schools at least to master the above issues.

- In reality the deaf students have inadequately developed Amharic and English syntax, morphology and vocabulary. The fact is, however, that deaf students made numerous errors at the sentence level in writing are explored in this study. In addition, the fact that many deaf students have difficulty with writing might stem from exposure to models of good writing. The teachers of deaf should emphasize on approaches to writing that capitalize on producing basic sentences in writing. Since their writing in the study seem lacked quality messages, uninformative and coherent sentences. This calls us educators to make a change on instructional strategies of teachers and modification or revitalization of materials.

- The findings of this study reveal that the common observed problems of the deaf during writings were inability to write vocabularies in their appropriate places, to follow the grammatical rule of writing, construct sentences and attain general grammatical organization. They were poor in word organization, sentence structure, grammar structure in general organization of the sentences. This issue also need emphasis deaf children have to develop a written lexicon that contains the appropriate semantic, syntactic, morphological, and orthographic information for each of the words they learn. The construction of such a written lexicon is vital part of learning to read as words are the building blocks of languages. In addition, the deaf need to be taught similarities and differences between sign languages and written languages. Instruction need to be well organized, clearly and effectively delivered, and include learning activities that are appropriate in length, depth, and focus on written language skill development.

- The findings of the study reveal that deaf students from special schools had higher mean score in measure of both written language skills than those in their counterpart integration schools. Special schools students displayed better sentence construction than integrated schools. However, this finding clearly shows that deaf students in both programs had high difficulty in Amharic and English language writings. This implies in both school programs deaf children suffers in literacy skills. This suggests us to take measure on strengthening written skill classes in both programs.

- This study finding revealed that severe writing impairment was found in deaf students. Writing is the basic foundation for school education. Literacy proficiency is the back bone for other curriculums. Students who experience difficulty in learning to read and write cannot fully participate in classroom learning; hence they are at high risk for school failure, are at high risk for lifelong problems with employment, and have diminished avenues for pleasure. Therefore, it is crucial that schools for the deaf should take proactive steps in transforming their schools in to bilingual deaf education. If they provide deaf learners with access to education in the language of their own, namely through Ethiopian Sign Language, deaf learners will have access to reading and writing as well as education.

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