

**READING AND WRITING LITERACY OF DEAF STUDENTS AND ITS
IMPACT ON THEIR ACADEMIC ACHIEVEMENT: A STUDY IN
SELECTED PRIMARY SCHOOLS IN DIRE DAWA ADMINISTRATION**

M.A THESIS

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**Reading and Writing Literacy of Deaf Students and Its Effect on Their
Academic Achievement: A Study in Selected Primary Schools in Dire Dawa
Administration**

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DEDICATION

I dedicated this thesis to my mother Meymuna Ame, my wife Ebsitu Mohammed and to my beloved brother Ahmed Aliyi for their extraordinary scarifies and partnership in the success of my life.

STATEMENT OF THE AUTHOR

I, the undersigned, hereby declare and affirm that the thesis presented is my original work. I have adhered to all ethical and technical principles of scholarship in the research, data collection, analysis, and compilation of this thesis. Any scholarly material included in the thesis has been appropriately cited. This thesis is being submitted in partial fulfillment of the requirements for the master's degree in Special Needs and Inclusive Education at Haramaya University. It will be archived in the Haramaya University library and available for borrowing according to library rules. I solemnly declare that this thesis has not been submitted to any other institution to obtain an academic degree, diploma, or certificate. Limited quotations from this thesis may be used without special permission, provided proper acknowledgment of the source is made. Permission for extensive quotations or reproduction of this thesis, in whole or in part, may be granted by the head of the department if it is deemed to be in the interest of scholarship. Otherwise, permission must be obtained from the author of the thesis.

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BIOGRAPHICAL SKETCH

The author was born in the Oromiya Regional State, East Harerge Zone, Bedeno District (Woreda) in July 1991. He attended primary and secondary schools in Bedeno town from 1997 to 2007 G.C. After completing secondary school, he attended Sebeta Special Needs Education Teacher Training College in 2008 G.C and graduated with a Diploma in July 2011. Following this, he worked as a teacher in the Oromia Regional State at Chinaksen Woreda for four years. He then joined Haramaya University to attend the BA Summer Program in the Special Needs and Inclusive Education department, graduating on August 30, 2021. Subsequently, in 2022, he joined Haramaya University again to pursue his M.A. Degree in Special Needs and Inclusive Education.

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ABBREVIATIONS AND ACRONYMS

ASL	American Sign Language
Db	Decibel
DHH	Deaf and Hard of Hearing
EGRA	Early Grade Reading Assessment
ESDP	Education Sector Development Program
ESL	Ethiopian Sign Language
HLE	Home Literacy Environment
IDEA	Individuals with Disabilities Education Act
NAEP	National Assessment Education Program
NGO	Non-Governmental Organization
SEN	Special Educational Needs
SVR	Simple View of Reading
SVW	Simple View of Writing
UDHR	Universal Declaration of Human Rights
UN	United Nation

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**Reading and Writing Literacy of Deaf Students and Its Effect on Their
Academic Achievement: A Study in Selected Primary Schools in Dire Dawa
Administration**

Murad Aliyi Jamal

ABSTRACT

*This study aimed to assess the reading and writing literacy of deaf students and its effect on their academic achievement at Dire Dawa administration town primary schools. A mixed-method approach was employed with concurrent parallel design. Four primary schools were selected through the purposive sampling technique. Quantitative and qualitative data were collected from 48 deaf students, 52 language teachers, and 3 Special Needs Education teachers using tests, questionnaires, and interviews. Deaf students, Amharic language teachers, and special needs teachers were selected using a purposive sampling technique. Other language teachers were selected through a census method. The quantitative data obtained through tests and questionnaires were analyzed using frequency, percentage, mean, standard deviation, and multiple regression as well as Hayes Process Macro software to examine the effect of moderator variables. The qualitative case study data obtained through interviews was analyzed using thematic analysis. The study results revealed grade six deaf students significantly face challenges in reading comprehension and writing skills, specifically understanding the passage's main ideas, vocabulary, spelling, punctuation, and essay composition. The regional exam results for grade 6 showed that 34 students scored below the passing mark of 40, while 14 students achieved scores of 40 or above. The regression results indicated a statistically significant relationship between academic achievement and reading and writing literacy. An R^2 of .981 suggests that these literacy skills contributed to 98% ($R^2 * 100\%$) of deaf students' academic achievement. In addition, the teaching expertise of language teachers in using instructional methods and materials, communication barriers, and lack of qualified teachers influenced the relationship between reading, writing, and academic achievement among deaf students. Thus, it is recommended that language teachers implement literacy programs for deaf students to enhance reading comprehension and writing skills, focusing on conveying the passage's main ideas, vocabulary expansion, spelling, and essay composition. At the same time, schools should create inclusive environments, provide resources such as sign language interpreters and teaching aids, and promote equal access to education. At the policy level, the Ministry of Education should develop strategies for literacy skills for students who are deaf in inclusive education policies, provide training and resources for the schools, and allocate funds to support deaf students' education.*

Keywords: *reading, writing, effect, academic achievement, deaf student*

1. INTRODUCTION

This chapter provides an introduction to the study by first discussing the background and context, followed by a statement of the problems, basic research questions, the objective of the research, the significance of the study, the scope of the study, and finally, an operational definition of key terms.

1.1. Background of the Study

The call for universal access to education for all children, established in the 1948 UN Universal Declaration of Human Rights, remains a global pursuit. However, numerous barriers impede individuals worldwide from realizing their right to education, with disabilities being a significant obstacle. Approximately 10% of children globally face challenges related to physical, sensory, intellectual, or mental health, with nearly 80% of these children residing in developing nations (Hailemariam and Barkesa, 2022). Hearing loss is one of the most prevalent sensory impairments globally.

Hearing impairment is defined by IDEA as an impairment in hearing, whether permanent or fluctuating, that adversely affects a child's educational performance. Deafness is defined as a hearing impairment that is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification. Thus, deafness may be viewed as a condition that prevents an individual from receiving sound in all or most of its forms. In contrast, a child with hearing loss can generally respond to auditory stimuli, including speech (Congress, U. S., 2004).

Deafness, affecting 5.3% of the global population, is the most prevalent sensory impairment, and its profound impact on language, speech, and cognitive development raises significant societal and individual concerns (Haile, *et al.*, 2023). Deafness can lead to social isolation, communication difficulties, and a reduction in opportunities for education and employment. This not only affects the individual's quality of life but also has a significant economic impact on society as a whole. As the global population continues to age, the prevalence of hearing loss is expected to increase, making it even more crucial to address this issue and provide support and resources for those affected by it.

Literacy is a pivotal facet of academic development, serving as an indispensable skill for learning. The cultivation of literacy skills in children is significantly facilitated through storytelling, aiding language development by imparting an understanding of narrative structures and the relationships between questions and answers (Girgin, 2013). Proficient literacy skills are crucial for effective participation in classroom instruction, as they enable students to gain and convey content knowledge across various school disciplines. Children with hearing impairments encounter challenges in both expressive and receptive language learning, leading to difficulties in literacy acquisition, including reading comprehension, recounting, correlating questions and answers, identifying key details in texts, and expressing ideas through writing (Balcha, 2020).

Despite ongoing professional discussions, many deaf and hard of hearing learners, particularly those raised in spoken language contexts, face challenges in achieving above-average performance on standardized language and literacy measures, despite early interventions. Scholars emphasize the importance of prioritizing language acquisition over speech intelligibility for deaf and hard of hearing learners, necessitating proficiency in linguistic elements such as lexicon, morphology, syntax, and semantics (Staden, 2022). The diverse linguistic backgrounds, learning styles, and communication preferences of deaf or hard of hearing students contribute to a continuum of language histories, influencing the potential for multilingual development and learning difficulties (Hannah Dostal, Rachael Gabriel, Joan Weir, 2017).

Reading literacy is defined as the ability to comprehend and apply written language forms essential to societal demands or values by the individual. Readers derive meaning from texts for various purposes, including learning, participating in reader communities, and enjoyment (Hassanzadeh, 2019). Scholars posit that reading is a cognitive skill evolving from the interaction between the nervous system and cultural experiences (Cohen, 2001).

Writing is a means of communication, as well as a tool for learning and reasoning. The development of literacy is closely linked to writing, and novice writers commonly face challenges. Similar to reading, intentional efforts during the teaching process influence writing proficiency, with individuals often gravitating toward writing as a natural extension of their reading habits (Malik and Ud Din, 2019).

Ethiopia has implemented various reform initiatives in general education, emphasizing student progress and school improvement. However, the reforms have primarily overlooked the unique needs of deaf students, resulting in historically lower academic performance compared to their hearing counterparts (Basha, 2014). In Ethiopia, few studies have examined the literacy of students with hearing impairments. For instance, Basha (2014), Ersamo (2022), and Hanna (2010), initiated the issues in their studies. EGRA (2010) study also initiated the literacy skills of primary schools students without disabilities. The summary of their studies revealed the absence of appropriate accommodations, early sign language, literacy instruction, and other support mechanisms has hindered deaf children from acquiring the necessary skills for academic success.

Recognizing this critical gap, the country must address the specific needs of deaf students through comprehensive educational reforms, ensuring equal opportunities for academic success and dismantling longstanding barriers in the educational system. Prioritizing appropriate accommodations, early sign language, and literacy instruction is essential for empowering deaf children to thrive academically and fostering an inclusive educational environment. The government and educational authorities must acknowledge and address this long-standing issue to provide equitable opportunities for all students.

The Dire Dawa administration has experience of welcoming students with SEN in school settings. Different schools in the city enroll a variety of learners with disabilities, including deaf students. Although researchers have conducted various studies in this area, they have not studied deaf literacy extensively. This study focused on the literacy (reading and writing) levels of students who are deaf and its impact on their academic achievement in primary schools in Dire Dawa Administration. It has important implications for language teachers, school administration, educational policies, practices, and outcomes.

1.2. Statement of the Problem

The foundational role of language proficiency in literacy acquisition, particularly in reading and writing, is paramount for the academic development of children. Deaf learners, as highlighted by Miller (2004), and Moores (2001), possess the same intellectual potential as their hearing counterparts. However, achieving high academic standards may require additional effort. The

development of literacy skills is not inherently hindered by deafness; rather, factors such as access to language from birth, whether spoken or signed, absence of other disabilities affecting education, ample opportunities for incidental learning, and a supportive environment are crucial for effective literacy development (Donald, *et al.*, 2006).

Reading and writing play pivotal roles in essential literacy skills. Poor reading and writing skills, even with accommodations, pose challenges for students, potentially limiting their post-school opportunities and diminishing their sense of autonomy and fulfillment. The root problems causing difficulties for a significant number of deaf students in acquiring these skills need comprehensive attention for sustainable solutions.

Learning to read and write presents substantial linguistic, social, and emotional challenges for deaf individuals, resulting in many high school graduates reading at levels significantly below their grades. Despite various teaching strategies, literacy levels among deaf individuals have not witnessed substantial improvement, warranting a closer examination of factors directly influencing learners' literacy acquisition (Brooke and Tanner, 2013).

In my nine years of teaching experience, I have had the opportunity to work with deaf students in both fourth and seventh grades, during which I have observed significant gaps in their literacy skills. Many of these students lacked a foundational understanding of sign language, faced challenges with writing, and struggled to comprehend the texts they encountered. Furthermore, I noted that some language teachers used teaching methods that did not adequately address the unique needs of deaf learners. This pressing issue has motivated me to conduct research on literacy in reading and writing among primary school deaf students.

While numerous studies have explored deaf literacy issues, particularly in reading and writing, recent research in Ethiopia has unveiled gaps in understanding sign language proficiency, written skills, and reading strategy use among deaf children. For instance, Bereket (2022), Hanna (2010), and Tesfaye (2014) are the existing studies on the literacy skills of deaf students in Ethiopia including Early Grade Reading Assessment (2010) which mainly focused on students without disabilities indicates a significant need for further investigation into this area. A study conducted by Bereket (2022) explored the reading comprehension strategies employed by deaf students at Mekane Eyesus School for the Deaf. The findings revealed that problem-

solving strategies were used more frequently than other types, followed by supportive strategies, while global reading strategies were the least utilized. The overall reading comprehension strategies used were at a medium level, indicating that deaf students are aware of and use various reading comprehension strategies. However, this study did not examine the impact of reading comprehension on the academic performance of deaf students in primary schools.

A study by Tesfaye (2014) studied the sign language proficiency and writing skills of deaf students. The study found that deaf students with high proficiency in sign language performed better in writing skills than those with low proficiency. Students in special schools also outperformed those in integrated schools. Deaf students exhibited deficits in writing skills, including content knowledge, organization of ideas, vocabulary usage, language construction, and mastery of mechanics, likely due to the lack of exposure to natural sign language.

The study by Hanna (2010) examined the reading comprehension skills of pre-lingual deaf students in grade five in Addis Ababa. The results showed that the students' reading comprehension skills were poor, despite having good word identification skills. The study found that there was a positive relationship between word identification and reading comprehension, but this relationship did not completely explain the comprehension difficulties encountered by deaf students. Additional factors, such as linguistic comprehension, were required to explain deaf students' difficulties with reading comprehension.

The Early Grade Reading Assessment (EGRA, 2010) study revealed that reading achievement is very low in Ethiopia, with many children unable to read with sufficient fluency to encourage comprehension. However, the study also found that if children have the skills to read text fluently, they also have the skills to comprehend what is read. The study highlights the importance of focusing resources and policy efforts on reading instruction, particularly in the early grades and providing teachers with language-specific training on how to teach reading. The EGRA study highlights improvements in literacy for certain student populations but falls short of addressing the reading and writing skills of deaf students and their impact on academic achievement. In addition to this the EGRA neglected deaf and blind students in sample of the study.

The existing body of research lacks a comprehensive examination of reading and writing literacy among deaf students in integrated primary schools. While studies have examined the literacy skills of deaf students, they primarily focused on boarding schools for the deaf. Meanwhile, deaf students in inclusive primary schools have not yet been studied. Furthermore, the impact of these literacy skills on the academic performance of deaf students has received insufficient attention. Additionally, there are significant gaps in the assessment of teaching strategies, the use of instructional materials, communication barriers, and the availability of qualified teachers for deaf students.

This study aims to address existing gaps in research by examining the current reading and writing literacy levels of sixth-grade deaf students, as well as how their proficiency in these areas impacts their overall academic performance. Furthermore, it investigates the influence of teaching expertise on the relationship between reading, writing, and academic achievement in selected primary schools within the Dire Dawa Administration. The findings of this study provide valuable insights to inform instructional interventions and teaching resources designed to enhance literacy outcomes for deaf students in integrated educational settings.

1.3. Basic Research Questions

1. What is the current status of reading, writing, and academic achievement among sixth-grade deaf students in selected primary schools?
2. To what extent do reading and writing skills influence the academic achievement of deaf students?
3. To what extent do language teachers' teaching expertise interact with the influence of reading and writing skills on the academic achievement of deaf students?
4. What challenges do deaf students encounter in acquiring reading and writing skills in inclusive classrooms?

1.4. Objectives of the Study

1.4.1. General Objective

This research aims to investigate the reading and writing literacy of deaf students in Dire Dawa Administration primary schools.

1.4.2. Specific Objectives

The specific objectives of this study was to:

- Assess the status of reading, writing, and academic achievement of deaf students in selected primary schools of Dire Dawa Administration.
- Determine the influence of reading and writing literacy on deaf students' academic achievement.
- Determine the extent language teachers' teaching expertise as a moderator interacts with the influences of reading and writing skills on the academic achievement of deaf students.
- Explore the challenges deaf students face in acquiring reading and writing literacy in inclusive classrooms.

1.5. Significance of the Study

The problems with deaf children's education are distinctive and complex. For students to learn and succeed, complete communication must be available in the learning environment. This study that explored the reading and writing literacy levels and challenges faced by deaf students in primary schools in the Dire Dawa Administration had important implications for deaf students, language teachers, educational practices, policies, and outcomes. By gaining insights into the specific literacy difficulties experienced by deaf students, the findings informed the design of targeted intervention strategies and curriculum adaptations to better support their development of reading and writing skills. The results also had the potential to guide improvements in instructional strategies for language teachers through enhanced professional development and training that concerned deaf literacy and sign language skills. In addition, it examined the extent to which classroom teaching and learning processes affect the interaction between deaf students' literacy level and their academic performance. Overall, the study contributed valuable knowledge that could positively affect literacy outcomes for deaf students locally while also adding to the global understanding of effective strategies for fostering literacy skills in inclusive educational contexts.

1.6. Delimitation of the Study

The scope of this research study was limited in several key ways. Conceptually, the study focused only on examining the current status of reading and writing literacy and its effect on the academic performance of deaf students, particularly in the Amharic language used for

instruction in these schools, as well as the challenges faced by deaf students and language teachers in teaching and learning. The research only examined deaf students and did not explore challenges related to hard of hearing and multiple disabilities. Specifically, the research looked at reading (reading comprehension) and writing (writing vocabulary, spelling, punctuation, and essay composition) literacy skills among grade six deaf students.

The researcher selected only deaf students for the study to focus the scope in a manageable way given the time and resource constraints. Methodologically, concurrent/convergent parallel design in mixed research was employed, combining quantitative techniques such as questionnaires and assessment tests with qualitative methods including interviews. The geographic scope of the study was confined to the Dire Dawa Administration, concentrating on four primary schools that had a significant population of deaf students. The results shed light on the academic achievement and reading and writing literacy of deaf students in this area, as well as the role of teaching expertise as a moderator effect between literacy skills and academic achievement with implications for interventions and practices in education.

1.7. Limitation of the Study

The limitations of this study were considerable, as it required a significant sample size, encompassed all components of reading skills, and involved additional methods of data analysis. It is important to emphasize the key issues that notably influenced the overall findings of the research. A primary limitation was the lack of sufficient references regarding reading and writing literacy among deaf students, particularly in the context of Ethiopia and the Dire Dawa administration. The researcher could not adequately address all components of reading skills that needed further investigation. For instance, reading fluency, which is a significant problem among deaf students in primary and secondary schools, remains underexplored. Therefore, future researchers may concentrate on these limitations in their studies.

1.8. Operational Definition of Key Terms

Academic achievement: in this study refers to the measurable outcomes of deaf students' achievement as determined by grade six regional exam results in specific subjects.

Deaf students: students who were born deaf or became deaf before acquiring language, as well as those who don't use hearing aids.

Reading literacy: is defined in this study as the ability to understand written language and interpret the meaning presented in written texts between deaf and hearing students.

Writing literacy: is also defined as a deaf student's ability to communicate ideas effectively through grammatically correct sentences, proper spelling, punctuation, organization, and vocabulary, as demonstrated on assessments.

Primary school: in this study refers to the primary first cycle (grades 1 through 6) as new Ethiopian education roadmap.

2. REVIEW OF RELATED LITERATURE

This literature review aimed to explore reading and writing skills and the effect of reading and writing literacy on the academic performance of deaf students. In addition, teaching expertise was also explored as an interaction effect between literacy and academic achievement.

2.1. Deafness and Language Development

Students with hearing impairments, including deafness, encompasses a diverse group of individuals who experience various degrees of challenges related to their hearing capabilities. Hearing impairment, as defined by the World Health Organization, refers to a significant reduction in the ability to hear sounds, ranging from mild to profound hearing loss (Ntinda *et al.*, 2019). This condition presents unique challenges in academic settings, affecting communication, social integration, and overall educational outcomes. Thus, deafness may be viewed as a condition that prevents an individual from receiving sound in all or most of its forms. In contrast, a child with hearing loss can generally respond to auditory stimuli, including speech (Congress, U. S., 2004).

The concept of deafness encompasses a wide range of definitions and cultural identities, reflecting both a medical condition and a unique cultural experience. Traditionally, deafness has been viewed through a medical lens, characterized by a deficiency in hearing capability, which can result from various causes including genetic factors, diseases, and accidents that affect the auditory system (Nugraha and Hermina, 2024; Kiyaga and Moores, 2003). This medical perspective often highlights the deficits associated with deafness, such as difficulty in communication and social interaction, which can lead to barriers in educational settings and social isolation (Gent *et al.*, 2007; Gannon *et al.*, 2024; Scherer *et al.*, 2023). However, a significant counter-narrative exists within the Deaf community that defines deafness as a cultural identity rather than merely a disability.

This paradigm shift has gained momentum through advocacy for the recognition of Deaf culture, language, and community. Scholars emphasize that many individuals within the Deaf community view their identity with pride, aligning it with that of a linguistic minority rather than a pathologies group (Hamill and Stein, 2011; Woll and Ladd, 2012; Borghouts *et al.*, 2022). This perspective is particularly recognized in educational philosophies that embrace bilingual-

bicultural models, which incorporate national sign languages and promote understanding of Deaf culture in curricula (Anglin-Jaffe, 2020).

Children's language development and achievements are impacted by deafness in several ways. For deaf children, language development and literacy issues are important and sensitive issues since deafness may affect language acquisition and development (Alothman, 2021). Deaf children's capacity to learn and comprehend language is crucial to their exploration of their surroundings. The auditory channel allows most children to be receptive or able to take in language. Children who are deaf do not experience this. A deaf child cannot develop full linguistic intake or input, even with the use of various communication modalities like written language, finger spelling, and sign language (Alothman, 2014; Herman *et al.*, 2014).

The process of language development in children who are deaf is intricate. Finding a simple and efficient way to communicate with a deaf youngster is crucial, which can be done through spoken or sign language. According to Lederberg *et al.* (2013), there are instances where it is evident that severely deaf children acquire language exclusively through visual, gestural, and sign language from an early age. Children who are deaf typically grow up in hearing-oriented environments. It's possible they had no exposure to sign language at a young age. In certain instances, this could result in a youngster having less opportunity to acquire language. A deaf child's primary challenge is being isolated from the normal speaking environment (Webster, 2017).

As mentioned in Alothman, (2021) Language development in deaf children is significantly influenced by their proficiency level. For instance, the degree of deaf children's competence influences the degree of their mastery over language when they interact with two languages, such as sign and spoken/written language, simultaneously. One could argue that deaf children might develop their language in different ways as a result of these interactions. The relationships a deaf child has with others in their immediate environment, including their parents, are crucial because they have the potential to impact how quickly they pick up language. From birth, deaf children of deaf parents may benefit from language exchanges, and language development is a typical process.

Since learning a language is so important, deaf children should be provided with all possible opportunities to develop their language skills, including accessible language and a linguistically supportive environment, at least in the initial stages of their life (Mathews, 2017).

2.2. Literacy Development of the Deaf

2.2.1. Simple View of Reading

The Simple View of Reading (SVR) offers a foundational framework for understanding reading comprehension, particularly for deaf students who often encounter unique challenges in literacy acquisition. The SVR posits that reading comprehension is the product of both decoding skills and linguistic comprehension, underscoring the necessity to develop both areas for enhancing reading ability in deaf learners. The simple view of reading model states that language comprehension and decoding are two interrelated processes that are necessary for reading comprehension. In general, language comprehension refers to the capacity to derive an understanding of linguistic information conveyed orally, whereas reading comprehension is the ability to create meaning from language expressed on paper. The process of decoding entails having the ability to automatically detect words in print so that the learner can access the correct meaning in their mental lexicon.

Reading comprehension is necessary in languages, for people to be able to make sense of what they are reading. The National Association of Educational Progress (National Assessment US, 2014) stated that a student must be able to read and understand as well as to be able to synthesize, explain, and analyze what he/ she reads to become a proficient reader. The ability to visualize aids both understanding what is being read and enables the reader to identify when she/he is struggling to understand what she/he reads. Poor comprehension monitoring has also been suggested as an area of deficit in hearing impaired students (Razalli *et al.*, 2018).

2.2.2. Simple View of Writing

As previously stated, reading and writing have a close and reciprocal relationship that is essential for a child to learn to become a writer. Reading and writing are like "two buckets drawing water from the same well or two buildings built on a common foundation," as Shanahan eloquently explained this relationship. As mentioned in (Mayer and Trezek, 2019) The SVW, a framework that is similar to the idea of a SVR and proposes that reading comprehension is the

result of decoding and language comprehension, is a useful resource to consider what makes up these fundamental requirements. Though a lot has been said about the SVR and how well it captures the requirements for learning to read, less has been said about how the SVW may be used to describe the qualities that are crucial for writing development.

This perspective conceptualizes writing as the result of two essential abilities: ideation (text generation) and transcribing. The act of putting words on paper, or the process of physically encoding spoken language sounds into print (such as spelling and handwriting), is known as transcription. To write fluently and avoid interfering with the text-generation process, these transcription abilities must have a certain level of automaticity and correctness. The creation of the message a writer wishes to convey is referred to as ideation or text generation. Since ideas and thoughts must first be encoded in oral language before they can be transcribed in print, this process is inevitably dependent on oral language representations.

It's important to remember that visual support such as speechreading, cued speech, and signed forms of spoken language may be used to help some deaf children with their auditory access. However, it's important to remember that visual support is secondary to the access that hearing technology provides. Visual support can be a helpful tool for deaf children, but it should not replace the use of hearing technology. Hearing aids and cochlear implants provide direct access to sound, which is essential for language development and communication. Visual support can enhance and supplement auditory access, but it should not be relied upon as the primary means of communication. Parents and educators need to work together to create a comprehensive approach that includes both hearing technology and visual support, tailored to the individual needs of each deaf child.

2.2.3. Reading Literacy of the Deaf

When reading is done well, it starts with a flutter of patterns on the retina and ends with a clear understanding of the intended meaning of the text. Reading is therefore both a "perceptual" and a "cognitive" process. These two conventional divisions are connected and distorted by the process (Rumelhart, 2013). Reading has been called a difficult process because it depends on the text, the context, and the writers and readers interacting in the right ways, at the very least (Hailemariam and Barkesa, 2022). Deaf students often experience reading challenges, with their

reading abilities lagging behind those of hearing students. As children grow older, their ability to access the curriculum becomes increasingly dependent on reading. They transition from "learning to read" to "reading to learn." Consequently, the reading difficulties experienced by the deaf population are likely to have a growing impact on their education and future employment (Hassanzadeh, S., and Nikkhoo, F. 2019). According to Van Staden (2013), it is crucial to assess their reading literacy regularly and implement effective reading assistance measures to address these challenges.

Recent reading research indicates that multiple important variables impede a student's ability to comprehend what they read. For instance, phonemic awareness, which is the capacity to process the sounds of individual letters; vocabulary skills, which are necessary for good readers to comprehend what they read because they constantly process words to make sense of what they have read; low prior knowledge, which is inadequate general knowledge; motivation, which is the ability to keep reading even when students lose interest or become disengaged from it; and reading strategies (Bereket, 2022).

As Morere, D., and Allen, T., (2012) stated, early vocabulary, speechreading, letter-sound knowledge, word recognition accuracy and speed, parental involvement in education, student communication skills, working memory capacity, automaticity and processing speed, and early English or ASL language proficiency are all factors that have been linked to reading success, according to research. As suggested by Perfetti and Sandak (2000), early access to and mastery of a first language is a significant aspect of the reading achievement of deaf individuals. This is supported by their involvement in language skills in both English and ASL.

2.2.4. Writing Literacy of the Deaf

Many students find writing to be a challenge; students with disabilities such as those with deafness or hearing loss can be amongst the children with the lowest scores (NAEP, 2017). According to (Malik and ud Din, 2019) stated in Marschark, Lang, and Albertini, quantified that a 17–18 year old deaf student writes at par with hearing peers who are 8–10 years old, indicating a disparity in writing skill levels between hearing and deaf peers due to the challenges and delays in the writing process. One of the biggest challenges for deaf individuals is writing language because they have a smaller vocabulary and lack semantics and morpho-syntactic

structure. According to Wolbers *et al.* (2012) deaf children's writing contains grammatical faults that translate some features of ASL into English. Thierfelder and Stapleton (2016) discovered that the most common writing errors in a deaf community in Hong Kong are connected to word selection, the use of articles, and the use of plural marking. These findings relate to the type of error noticed in the writing production of the deaf population. This was noted in a sample of texts written by five deaf adults who spoke Hong Kong Sign Language as their native language.

Grammar mistakes, short sentences, and unconventional writing language usage are all mentioned by Mayer (2010) about deaf persons. Malik, M. (2019) stated that, with unwavering determination, studies have discovered that deaf writers face difficulties with lower-level skills like grammar, spelling, and punctuation, as well as higher-order skills like idea generation, content sequencing, and revision.

In support of these ideas, Alothman (2021) stated that when comparing learners who are deaf with their hearing peers, children who are deaf face challenges as they grow in their literacy and cognitive abilities, which can lead to writing difficulties. A number of these challenges have been emphasized in the literature. For example, deaf students tend to produce shorter sentences, avoid complex syntactic constructions, use a more restricted vocabulary, frequently remove function words (like articles and prepositions), occasionally use more words than necessary, frequently take off major sentence components (like the verb "to be" or auxiliary verbs), and create sentences with the wrong word orders.

2.3. Factors That Affect Literacy Development of Deaf

Scholars have studied factors affecting children's literacy success to develop strategies for promoting literacy development in children. Among the various factors that impact the development of children's reading and writing skills (Korat *et al.*, 2013). Some are explained as follows.

2.3.1. Instructional Methods and Learning Materials

Instructional strategies are a key aspect of the role of the teacher. The teacher's interpretation of his or her role, what is taught, how it is taught, use of resources, attitudes, and beliefs determines how the learners feel about themselves and what they are learning.

Research evidence suggests the adoption of a learner-centered strategy based on the structure and function of the brain can improve learners' academic performance (Wilson D, 2015). Teachers should also bear in mind at all times that deaf students are capable of learning and they should expect more from them (Mahmutović and Povolakić Hadžiefendić, 2020).

One prominent instructional method is visual and written support, which has been shown to enhance comprehension among deaf students significantly. Highlight that language teachers adapt their teaching strategies by incorporating visual aids tailored to the specific challenges faced by deaf learners, thereby facilitating their understanding of the language (Yunisari et al., 2021). According to Herring and Woolsey (2020), active learning techniques like peer tutoring have been recommended to enhance engagement and participation among deaf students. Argue that these methods not only promote active involvement but also improve academic outcomes for deaf learners. Furthermore, guided reading approaches, which allow for tailored instruction based on individual student needs, are particularly effective in developing literacy skills among deaf students (Schaffer and Schirmer, 2010).

The importance of culturally relevant materials cannot be overlooked. Integrating local cultural contexts into instructional materials can significantly enhance the relevance and relatability of the content for deaf students, thereby improving engagement and understanding. Teachers can incorporate more visual elements like charts, diagrams, videos, and visual stories during their lessons. Furthermore, written instructions can complement verbal explanations to ensure that deaf students do not miss out on any critical information. This approach is supported by the findings of, who emphasizes the need for inclusive learning media that address the unique challenges faced by students with disabilities (Siswono *et al.*, 2023). Aljedaani *et al.*, (2022) mentioned that the need for accessible learning materials and technologies became paramount, as deaf students require visual aids and clear communication methods to facilitate their learning.

2.3.2. Communication Barriers

One of the primary communication challenges for deaf students is their reliance on sign language, which may not be understood by their hearing peers or teachers. Effective communication is strongly linked to student engagement and academic success; when deaf students struggle to communicate, they often feel isolated and disengaged from the learning

process (Hendry *et al.*, 2020). This isolation can be exacerbated in environments where teachers are not trained in sign language or do not employ inclusive teaching strategies that accommodate deaf learners.

One of the primary challenges is the lack of training and familiarity with sign language among teachers. Emphasize that effective communication is crucial for student engagement and academic achievement; however, many teachers do not possess the necessary skills to communicate effectively with deaf students (Hendry *et al.*, 2020). This lack of proficiency can lead to misunderstandings and a sense of isolation for deaf learners, as they may struggle to engage with the curriculum and participate in classroom discussions. Similarly, highlights that teachers often resort to verbal communication, which is not accessible to students with moderate to severe levels of deafness, necessitating the use of nonverbal communication methods (Yusuf *et al.*, 2022).

The educational challenges faced by deaf students extend beyond communication barriers. 's analysis reveals that deaf individuals encounter medium to high levels of educational challenges, with a significant number indicating the necessity of sign language interpreters to comprehend scientific material effectively (Ziadat and Rahmneh, 2020). As noted by Hammad and Awed (2023), this highlights the critical role of trained professionals in supporting deaf students' academic success. Furthermore, the lack of awareness and understanding of deaf culture among educators can lead to inadequate support and resources.

2.4. Academic Achievement of Deaf Students

Academic achievement is often conceptualized as the extent to which a student meets established educational benchmarks, usually indicated through grades, test scores, and overall performance in academic settings. A student who sets academic achievement as his or her goal and works hard to attain it will participate in class activities since they provide a way for them to advance toward that objective. Grades, diplomas, certificates, and the like will ultimately be used to verify this (Mahmutović and Povelakić Hadžiefendić, 2020). In every educational setting, one of the most significant indicators of understanding and acquisition of knowledge is successful academic achievement. Helping students enhance their academic achievement may

depend much on recognizing and quantifying the factors impacting their performance in the class (Rahmani, 2011, p. 803).

Issues regarding factors that may affect the academic success of Deaf and Hard of Hearing students are considered the most important topics addressed by several researchers in the past years (Crowe, Marschark, Dammeyer, and Lehane, 2017). According to Qi and Mitchell (2012), the achievement of DHH students is still far behind their hearing peers despite promising developments in their education. This underscores the need for educational adjustments and support factors. Providing support for DHH students in higher education helps them to address barriers that may affect their academic success in primary school (Lang, 2002).

The academic achievement of DHH students in Ethiopia presents a complex interplay of educational frameworks, social dynamics, and cultural contexts. Research highlights the challenges and barriers these students face, as well as the factors that influence their academic performance at various grade levels.

One major issue impacting the academic achievement of DHH students in Ethiopia is the lack of appropriate educational resources and inclusive practices. A study in Gondar City reveals that deaf students experience significant barriers to both academic and social inclusion, primarily due to communication challenges and inconsistent teaching methodologies (Rehman and Munir, 2024). In regular schools, deaf students often confront isolation and lowered expectations from teachers, which compounds their academic challenges (Rehman and Munir, 2024). Furthermore, the socio-cultural context in Ethiopia, combined with limited access to sign language resources, severely impedes the education of these students, particularly among communities where sign language is not widely recognized or utilized (Tedla and Negassa, 2019).

Disparities in academic performance between DHH students and their hearing peers are notable, with findings indicating that DHH students often underperform due to various factors, including socioeconomic status and communication abilities (Marschark *et al.*, 2015; Wolde and Belachew, 2019). Additional studies reveal that chronic undernutrition and other health-related issues significantly contribute to poorer educational outcomes among students, reflecting broader challenges in the Ethiopian education system (Abebe *et al.*, 2017). The Ethiopian

education sector has started acknowledging these disparities, with some initiatives aimed at integrating more inclusive education practices and improving resources for DHH students (Tedla and Negassa, 2019). Despite these efforts, significant gaps in achievement persist, necessitating continued advocacy for the rights of DHH children to quality education.

In this study, academic achievement refers to the measurable outcomes of deaf students' achievement as determined by grade six regional exam results in specific subjects. The regional exam results of 48 grade six deaf students were analyzed. According to the Dire Dawa Administration Education Bureau, the passing mark for the 2016 E.C. grade six regional exam for deaf and blind students was 40 and above. The analysis of these exam results aimed to determine the central tendency and variability of the scores. The study also reviewed the average exam scores of these students based on grade six regional examination results from the 2016 E.C.

2.5. Previous Studies Conducted Regarding Reading and Writing Literacy of Deaf Students in Ethiopia

2.5.1. An Overview of Studies on Reading and Writing of Deaf Students

Research has consistently shown that deaf students in Ethiopia face challenges in developing reading comprehension strategies. Bereket (2022) conducted a study to assess the reading strategies used by deaf students at Mekane Eyesus School for the Deaf. The study found that problem-solving strategies were employed more frequently than other types of strategies, while global strategies were used the least. The overall level of reading comprehension strategy use among the students was moderate. The findings suggest that educators should focus on helping learners develop their reading comprehension techniques, with a special emphasis on global strategies.

Further research by Hanna (2010) examined the Amharic reading comprehension skills of fifth-grade pre-lingual deaf students. The study found that while pre-lingual deaf students had no trouble recognizing real words from pseudo-words, they struggled with reading comprehension. The study highlighted the importance of providing pre-lingual deaf students with access to Amharic dictionaries, meaningful language development, and parental and teacher assistance.

Tesfaye (2014) conducted a study on the signed language proficiency and writing skills of deaf children in special and integrated primary schools in Addis Ababa. The study found that higher signed proficiency among Deaf learners was associated with better academic success, writing proficiency, and reading comprehension. However, there were issues with vocabulary, sentence structure, and organization in writing for both integrated and special education children.

These studies suggest that deaf students in Ethiopia face challenges in developing reading comprehension strategies and literacy skills. The findings highlight the importance of providing deaf students with access to language development opportunities, parental and teacher support, and educational materials. Additionally, the studies emphasize the need for educators to focus on developing deaf students' reading comprehension techniques and writing skills. Overall, the research suggests a comprehensive approach is needed to support the literacy development of deaf students in Ethiopia. This approach should include language development, parental and teacher support, and access to educational materials and resources.

2.5.2. Early Grade Reading Assessment in Ethiopia

According to EGRA (2010) results, the reading proficiency levels had significantly increased in several languages, including Wolayttatto, Sidamu Afoo, and Amharic, which also showed significant improvements in reading comprehension and oral reading fluency scores. A notable decrease in reading scores was noted in the Aff Somali language, and there were also regions where scores did not demonstrate any progress. Overall, the study shows that there have been improvements in certain language reading skills, but there are still areas that require attention.

The Ethiopian EGRA is not intended for high-stakes accountability, assessing early reading performance across school systems, or providing details on children's literacy efforts. It is a one-to-one, oral assessment that cannot be used for cross-language comparisons. The document describes a process of equating the 2014 and 2016 EGRA tools to establish comparability between administrations. This involved conducting a small research project using a common-persons research design, which controls for differences in content on Oral Reading Fluency subtasks. The equating process aims to ensure comparability and consistency of the test tool across different administrations, although specific details about validity and reliability are not provided. The 2016 EGRA pilot in Ethiopia used Nexus 7 tablets with Tangerine software to

administer a tool in seven languages and a Mini EGRA in three languages. 52 test assessors were deployed in 13 teams to collect data in 65 sample schools. They were trained on tablet administration techniques and practiced in the classroom to gain practical experience before entering the field.

Limitations of EGRA

There were circumstances when it was necessary to replace some of the learners in the already selected sample – such as deaf or blind students. Replacement of such learners was done after sample selection and was done by the assessor in consultation with the supervisor (not the teacher). Early Grade Reading Assessment (EGRA) 2016 Midterm Report p.24.

In the context of the EGRA assessment in Ethiopia, there were instances where certain students with disabilities needed to be replaced in the selected sample. This indicates that there has been little attention to the special educational needs in the learning environment yet. The assessment primarily focused on oral assessments, which may not have been suitable for accurately evaluating the reading and writing literacy of deaf students who rely on sign language or other visual communication methods.

The tools used in the assessment, administered via tablets and emphasizing oral reading fluency, may not have been adapted to address the specific needs of deaf students. This lack of adaptation could have led to inaccurate assessments of the reading and writing skills of deaf students. Furthermore, the absence of specific assessments tailored for deaf students indicates a gap in the assessment process, overlooking the unique challenges and requirements of deaf students in developing their reading and writing abilities. As a result, the replacement of deaf students in the sample without specific accommodations for their needs may have further contributed to the limitations in accurately capturing the reading and writing abilities of this student population.

2.6. Policy and Strategic Documents in Ethiopia Regarding Deaf Literacy

2.6.1. A Master Plan for Special Needs Education/Inclusive Education in Ethiopia

The document is a Master Plan for Special Needs Education/Inclusive Education in Ethiopia for the period 2016-2025. It outlines the government's commitment to inclusive education and the rights of all children to access quality education. The plan focuses on providing education to children with disabilities, learning difficulties, behavioral problems, and those who are gifted

and talented. It also addresses the education of children deprived of education due to cultural influences, living on the streets, or in emerging regions and pastoral areas.

The Master Plan aims to strengthen the structures and environment enabling inclusion and identifies major structural deficiencies in the provision of special needs education. It outlines six strategic pillars, including policy framework, supporting structures and administration of education, capacities and human resources, provision of education, evidence-based policy-making, and costing and financing.

The plan emphasizes the importance of monitoring, review, and evaluation, with measurable outcomes and indicators. It also discusses the creation of a policy environment conducive to special needs education and inclusive education, and the need for financing frameworks to address provisions for education and support for special needs education. The document includes detailed strategic priority activities, responsibilities, outcomes/indicators, and timelines for each pillar, as well as references to the ESDP V for further guidance.

The document discusses several aspects of literacy and education for deaf students. It states that the education law mandates sign language as the medium of instruction for students with hearing impairment. Deaf students need to be taught sign language and written languages. To support this, the Ministry of Education is to recruit a sign language interpreter to develop a model and guidelines for regions to provide sign language interpretation services and training. Furthermore, the Official Ethiopian Sign Language Dictionary is to be designed and disseminated. The document emphasizes the use of sign language as a medium of instruction to ensure access to learning for deaf children, with skilled teachers using signs available and highlights the need for a curriculum conducive to students with hearing impairments.

Overall, the Master Plan aims to ensure equity and fairness in the Ethiopian education system and to provide education to all learners, regardless of poverty, gender, ethnic background, language, learning difficulties, and impairments.

2.7. Theoretical Framework

2.7.1. Metacognitive Theory

Metacognitive theory is the understanding and regulation of one's cognitive processes, which significantly impacts learning and academic performance. It consists of two components: metacognitive knowledge and metacognitive regulation. Research shows that metacognitive awareness is crucial for enhancing academic achievement, with a positive correlation between metacognitive skills and performance across various contexts. For instance, Öztürk and Şenaydın (2019) research indicates that metacognitive strategies are essential for effective reading and language proficiency, and for writing, students use planning, monitoring, and evaluation techniques to improve their performance.

Metacognitive theory emphasizes the importance of metacognitive strategies in improving reading comprehension and literacy skills among learners. Studies show that implementing these strategies, such as selective attention and self-reflection, leads to improved reading performance (Muhid *et al.*, 2020). According to Morrison *et al.*, (2012) Metacognitive awareness, or understanding one's own learning processes, is also crucial for reading comprehension among deaf students. Research also shows that fostering metacognitive strategies can lead to better literacy outcomes. However, many deaf students use reading strategies passively, indicating a need for more structured guidance in reading instruction (Banner and Wang, 2010). As stated by Hailemariam and Barkesa (2022), metacognitive strategies play a crucial role in enhancing reading comprehension and overall literacy skills in teaching deaf students.

A critical aspect uncovered in the literature is the metacognitive awareness of deaf readers. Studies suggest that deaf students frequently overestimate their comprehension abilities, indicating a need for improved metacognitive strategies to enhance understanding of their reading processes (Morrison *et al.*, 2012; Banner and Wang, 2010). This insight highlights the need for instruction that explicitly teaches comprehension monitoring and the application of reading strategies, which is deeply intertwined with the SVR framework.

Numerous studies show that mastering and developing metacognitive strategies significantly affects writing performance across various contexts. For instance, a study by Villaruz and Palma

(2024) demonstrates a profound link between metacognitive awareness of writing strategies and academic writing skills, positing that students who possess such awareness are better equipped to manage their writing processes effectively. This conclusion is supported by findings from Ramadhanti and Yanda (2021), who argue that metacognitive strategies, such as self-monitoring and evaluating, enhance students' writing capabilities, noting that explicit instruction in these strategies facilitates better writing performance. This relationship is equally vital for deaf students, whose unique learning challenges necessitate tailored approaches to foster metacognitive awareness and strategic use of writing processes.

In the context of deaf education, interactive and strategic writing instruction methods have proven effective. For instance, the study conducted by Wolbers *et al.* (2011) highlights that implementations of Strategic and Interactive Writing Instruction (SIWI) resulted in significant improvements in writing skills, showcasing that deaf students made notable gains in high-level writing skills and grammatical accuracy. Similarly, research by Ashraf *et al.* (2021) further supports this notion, asserting that cognitive models enhance writing skills in students with hearing impairments, thereby illustrating the importance of employing metacognitive strategies in teaching writing to this demographic. Furthermore, this finding is echoed in the work of Hameed and Al-Zubeiry (2019) which underscores the role of metacognitive strategies in advancing academic writing among students.

2.7.2. Constructivism Theory

Constructivist theory fundamentally emphasizes that knowledge is not a passive acquisition but an active process where learners construct their understanding and meaning from experiences. Constructivism posits that learning occurs through processes such as reflection and collaboration, which are essential for meaningful knowledge construction (Sukinawan and Haq, 2024; Shah, 2022). In the realm of education, constructivism has been effectively applied in developing teaching methodologies that foster active engagement among learners. Candra and Retnawati (2020) highlight that student-centered constructivist learning prioritizes the active role of students in constructing meaningful knowledge, underscoring the creative links between existing knowledge and new information.

The perspective of constructivism in the reading and writing literacy of deaf students emphasizes the importance of scaffolding, active learning, instructional aids, and technologies to foster effective literacy practices tailored to their unique needs. Constructivism posits that learners construct new knowledge through experiences and interactions, which is particularly relevant for deaf students who may face distinctive barriers in traditional literacy experiences.

Scaffolding is a crucial strategy in constructivist education, particularly for deaf learners. Research by Borgna *et al.*, (2010) indicates that providing structured support before learning activities can enhance comprehension and retention among deaf students. Their studies showed that scaffolding, such as presenting key concepts ahead of lectures, significantly impacted students' metacognitive accuracy and learning outcomes. This aligns with Staden's assertion that reading pedagogy must embrace individual differences and the processes involved in learning to read, promoting adaptable scaffolding strategies based on learners' preparedness and linguistic backgrounds (Staden, 2013).

Active learning is another essential component of constructivist approaches, where students are engaged in the learning process rather than being passive recipients of information. For instance, Trezek and Mayer (2019) advocate for differentiated instruction that recognizes the diverse strengths of deaf learners, allowing them to engage with reading in ways that suit their profiles, such as focusing on visual language skills. These strategies encourage students to take ownership of their learning through direct engagement with materials and peers. For instance, Suhendi *et al.* (2021) highlight the necessity of active participation in the learning process as a fundamental component of constructivist teaching, reinforcing that knowledge is constructed through active involvement rather than passive reception. In the context of writing, this means engaging deaf students in hands-on, collaborative writing tasks that facilitate peer feedback and cooperative learning.

The use of instructional aids and technologies is vital in supporting reading literacy among deaf students. Recent studies, such as those by Rudner *et al.* (2014) highlight the positive impact of using technological interventions, like computerized literacy training that incorporates sign language. Such tools can reinforce vocabulary and reading comprehension, making the learning experience more interactive and accessible. Similarly, Gates and Musyoka (2020) demonstrate

that technology integration, using models, equips teachers with tools to enhance language arts skills through effective representation and collaboration, essential for deaf students who rely heavily on visual information processing.

2.8. Conceptual Framework

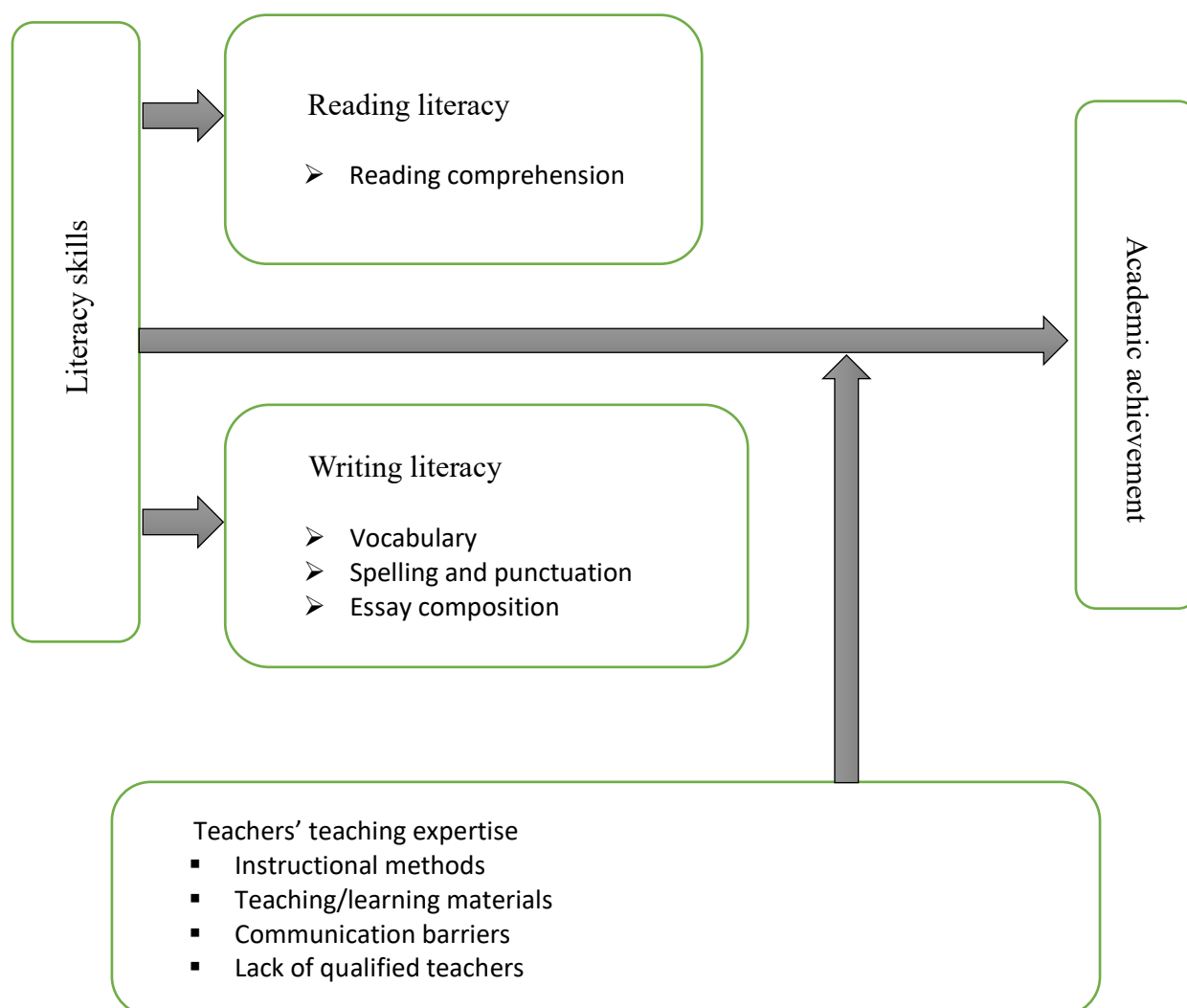


Figure 1: Conceptual Framework

The conceptual framework underlying this study is grounded in the relationship between reading and writing literacy and academic achievement among deaf students, with the independent variables of reading literacy operationalized as reading comprehension skills and writing literacy encompassing writing vocabulary, spelling, punctuation, and essay composition posited to have a direct impact on the dependent variable of academic achievement. However, the relationship between these variables is influenced by the moderating variable of teaching expertise, encompassing instructional methods, teaching materials, communication barriers, and the availability of qualified teachers. Strong teaching expertise is expected to positively

moderate the relationship between reading and writing literacy and academic achievement. In contrast, weak teaching expertise is anticipated to moderate this relationship negatively, hindering the academic achievement of deaf students.

Moderating variables are new variables constructed by a researcher by taking one moderating variable and multiplying it by predictor variables to determine the joint impact of both on the dependent variable (Cresswell 4th edition, research design).

3. RESEARCH DESIGN AND METHODOLOGY

This chapter addressed topics pertaining to the research methodology that was utilized and the justification for its application in this investigation. These included the study area, the research design, sources of data, sampling procedures, data collection procedures and instruments, method of data analysis, and ethical considerations.

3.1. Description of the Study Area

This study was carried out in the primary schools of the Dire Dawa city administration. The city is located in the eastern part of Ethiopia and is administered as a city. It is 516 km away from the capital city of Ethiopia, Addis Ababa (according to the Ethiopian distance calculation). CSA (2010) states that 68% of administration residents live in cities. The statistics on the enrollment share of urban and rural areas show that in 2009, the urban share was 62.8 and the rural share was 37.2. By 2014 E.C. the rural share had risen to 45.1. The administration population projection shows a fair supply and access to elementary education, with 17.75% of the urban population and 28.17% of the rural population having access to it. In 2013 and 2014 E.C., the number of children enrolled with disabilities rose to 1136 and 1615, respectively. Sex-disaggregated data generally shows that, over the four years from 2010 to 2014, there were comparatively more boys than girls with disabilities (Dire Dawa Administration Education Bureau, 2022)

There are 32 governmental schools in Dire Dawa Administration (eight secondary and twenty-four primary schools) and Dire Dawa University, a higher education institution. The area under this study was selected because of the best practices in the implementation of inclusive education among other neighboring areas. Various learners with disabilities, including deaf students, are enrolled in different schools. For instance, Afetessa primary and secondary schools, Sabyian number one primary schools, Sabyian number three primary school and Gande primary school are mentioned as having more integrated practices for students with special educational needs (Dire Dawa Education Bureau, 2021).

3.2. Research Design

The purpose of this study was to investigate the reading and writing literacy of deaf students and its effect on their academic performance. This study follows the pragmatism paradigm

because pragmatism in mixed methods research advocates for combining methods freely based on practical research needs rather than strict allegiance to philosophical paradigms. The world is not seen as an absolute unity by pragmatics. Likewise, rather than following a single technique for data collection and analysis, mixed methods researchers consider a variety of approaches (W. Creswell, 2018). The focus is on what works best to address the research problem.

According to Creswell (2014), concurrent triangulation involves the simultaneous collection of quantitative and qualitative data by the researcher, who then compares the two databases to see whether there are any disparities, convergence, or a combination of the two. To counterbalance the inherent limitations of one approach with the strengths of the other or, conversely, the strength of one contributes to the strength of the other. This method involves collecting both quantitative and qualitative data simultaneously within a single research study phase.

The study uses a convergent parallel design to address both descriptive quantitative questions about the current status of reading and writing literacy and academic performance as well as the teaching expertise as an interactional effect. Additionally, learning challenges that deaf students face in the school were addressed in qualitative inquiry through an interview guide. The convergent parallel design provides a more comprehensive approach than either approach alone. In this regard, Johnson and Christensen (2010) claimed that there are significant potential benefits to be gained from combining methods, including thorough findings, enhanced confidence in results, increased validity, more perceptive comprehension of the underlying phenomena, and encouragement of more creative methods for gathering data as well as provide a more complete picture of the research topic. Therefore, the reason behind selecting this design was to utilize multiple methods to address potential biases and limitations of single methods and triangulate data to increase the reliability and accuracy of the findings. In addition, it was due to effective management of time, money, and resources.

3.3. Sources of Data

The researcher gathered data from primary and secondary sources.

3.3.1. Primary Sources of Data

The primary data for the study was collected from deaf students and language and special needs teachers.

3.3.2. Secondary Sources of Data

The secondary data was collected from grade six 2016 regional exam student records across the four primary schools.

3.4. Participants, Sample Size, and Sampling Techniques

The population of this study comprised deaf students, and language and special needs teachers, who lived in selected governmental primary schools in Dire Dawa City. There were 24 primary schools in the city. The researcher selected 4 primary schools among those 24 using a purposive sampling technique. The presence of deaf students and more effective processes for integrating them were the primary considerations in selecting these schools. The sampling was conducted with three different target populations. Students with deafness, language teachers, and special needs education teachers.

All 48 language teachers were selected through a census method, resulting in a 100% sampling rate. The researcher opted for census sampling to encompass all 48 language teachers from the four primary schools, as the small population size facilitates thorough data collection and eliminates sampling error. By surveying every teacher, the researcher ensures that all viewpoints are captured, leading to richer and more accurate insights. The census method is particularly beneficial in studies involving small populations size, as it enables comprehensive data collection while minimizing the biases that can occur with sampling (Aruleba and Adediran, 2021; Napitupulu, 2023).

Four Amharic language teachers were selected from a total of forty eight, yielding a selection rate of 8.3%. Additionally, three special needs teachers were chosen from a total of ten, resulting in a sampling rate of 30% for participation in the interview. The researcher utilized a purposive sampling technique to ensure that the Amharic and special needs education teachers interviewed had specific expertise and experience teaching grade six deaf students since grade one. All 48 (31 male and 17 female) deaf students were purposively selected from grade six to participate

in the assessment test and questionnaire, representing a 100% sampling rate. This study exclusively focused on sixth-grade students who are pre-lingual deaf.

The purposive sampling technique facilitates an in-depth exploration of the unique challenges these students encounter in language acquisition, as the selected teachers can offer relevant insights and detailed accounts. Furthermore, this sampling technique aligns closely with the research objectives, thereby ensuring that the findings are both comprehensive and informative. Yıldız (2023), notes that purposive sampling is often preferred in studies requiring a rich source of information, as it allows researchers to manage the sampling process effectively while aligning with their research aims.

Table 1: Target Population, Sample and Sampling Techniques.

No	Respondents	Target Population	Sample	%	Sampling Technique
1	Primary schools	24	4		Purposive sampling technique
2	Language teachers	48	48	100	Census method
3	Amharic teachers		4	8.3	Purposive sampling technique
4	Special Needs Education teachers	10	3	30	Purposive sampling technique
5	Deaf students	48	48	100	Purposive sampling technique
	Total	106	103	97.1	

3.5. Methods of Data Collection

The researcher for this study used an interview guide, questionnaire, and test to gather relevant information from respondents.

3.5.1. Interview Guide

During an interview, oral and written inputs are presented, and responses are given in the same format. It can be applied to in-person interviews as well as occasionally over the phone (Creswell, 2014). The researcher employed a depth interview in this technique for the reason

additional data that was difficult to gather using other techniques was gathered by the researcher. Thus, the goal of conducting interviews with participants was to learn about their thoughts and feelings regarding various topics.

Semi-structured interviews were used in the study to collect data from respondents in all categories. DiCicco-Bloom, B., and Crabtree, B. (2006) stated that a semi-structured interview is a qualitative method of inquiry that combines a pre-determined set of open-ended questions (questions that prompt discussion) with the opportunity for the interviewer to explore particular themes or responses further. This method was the appropriate one to find out the status of the reading and writing skills of deaf students as well as the key effects on the academic achievement of deaf students. The interviewer was free to pursue matters as situations dictate, ask questions about unclear answers, and obtain more complete information. The questions were open-ended, enabling participants to express their views freely. The sampled participants included special needs teachers and Amharic language teachers.

The interview likely focused on understanding how deaf students' academic achievement is influenced by challenges related to their reading and writing skills. The questions were designed to delve into the experiences, challenges, and perspectives of the respondents. During the interview, participants were asked about their encounters with deaf students in reading and writing, including both the difficulties and successes they experienced in their educational endeavors. Additionally, the interview explored the types of support systems that were provided and their effectiveness in promoting literacy skills, the methods of communication between teachers and students, the approaches that were most or least effective, and the impact of teaching practices on the development of reading and writing skills. There was also an examination of the specific resources or accommodations that were most frequently utilized.

3.5.2. Questionnaire

A questionnaire consists of a list of questions printed or typed in a specified order on a form or series of forms (Creswell, 2014). The questionnaire included close-ended questions were measured on a Likert scale. Demographic questions collected information on factors such as age, gender, and work experience of the respondents. Language teachers and deaf students' perception questions provided feedback on deaf students' literacy levels and how these affect their academic achievement.

The questionnaire prepared for language teachers aims to gather insights on their experiences in teaching deaf students, exploring their preferred teaching methods and materials utilized within inclusive classrooms, as well as identifying any communication barriers encountered between them and their deaf students. Meanwhile, the questionnaire designed for deaf students focuses on assessing the specific reading difficulties they face, particularly concerning reading comprehension, alongside writing challenges concerning mechanics, organization, and composition. Additionally, it seeks to capture their perceptions of how these reading and writing difficulties influence their overall academic achievement.

Overall, the multifaceted questionnaire aimed to correlate deaf students' literacy proficiencies with academic performance metrics. The questionnaire was distributed to Afan Oromo, Aff-Somali, English language teachers, and deaf students. The participants were selected from four primary schools to ensure diversity in experiences and perspectives.

3.5.3. Reading and Writing Test

The researcher used a reading comprehension and writing skills components test for this study.

Reading task

A reading comprehension exam intended to assess the reading ability of deaf learners. Reading passages and literacy texts served as the foundation for assessing reading comprehension. The test was prepared with multiple-choice items. As Marscharck and Spencer noted in Basha T. (2014), multiple-choice items are the most commonly used form of assessment for deaf learners' reading comprehension. It consisted of ten multiple-choice questions and a text intended to assess the student's reading vocabulary and understanding of the main idea of the passage.

There are three levels of reading comprehension categories, according to Vivan, as stated in Bereket H. (2022): a struggling reader (a reading comprehension score of below 60%), the instructional reader (a reading comprehension score of 60% to 89%), and the independent reader (a reading comprehension score of 90% and above). Therefore, the current researcher discussed the result of the reading comprehension level of grade six deaf students related to this category.

Writing task

Writing can be tested in two different ways: directly and indirectly. In an indirect writing assessment, students can be required to revise a passage that has multiple grammatical, spelling, and punctuation issues and then rewrite it with all the necessary modifications. Essay tests

controlled writing, guided writing, free expository writing, and summaries are examples of the direct testing of writing (Basha, 2014). Therefore, the researcher used both direct testing of writing and indirect writing assessments to get one's thoughts, feelings, memories, skills, and down on paper without censoring or editing. In this regard, participants were asked to rewrite a sentence and paragraph that had grammar, vocabulary, spelling, and punctuation errors by themselves.

Gebremariam and Asgede (2023) state teachers were asked to rate their level of agreement using the numbers (4, 3, 2, 1), which represent the assessment criteria from highest to lowest agreement alternatives. However, an analytical scoring writing rubric has also shown the level of control over paragraph writing (Suastra, I., and Menggo, S., 2020). A different score is used for the rating scale than for the analytical scoring approach. On a scale of 1 to 4, 1 denotes little to no control over the element in the issue, 2 is some control, 3 is considerable control, and 4 is total control. The total weighted scores correspond to a rating in the range of 1 to 4.

Likewise, Basha, (2014) identified the five writing dimensions to be scored by using ratings that varied from 1 to 4. According to research conducted by national and international scholars mentioned earlier, the raters (language experts) utilized a rating scale in this writing test ranging from 1 (very good) to 5 (very poor).

In summary, reading comprehension was evaluated using multiple-choice questions that assessed vocabulary and understanding of the text. Writing skills were measured through open-ended questions requiring students to write short paragraphs.

3.5.4. Document Review

The study focused on grade six students who are deaf in four selected primary schools within the Dire Dawa administration. The researcher reviewed the average exam scores of these students based on grade six regional examination results from 2016 E.C. The researcher chose to use the regional examination as a measure because it is free from fraud and corruption, making it a true indicator of student achievement.

3.6. The Validity and Reliability of Instruments

According to Kalton and Moser (1989), the logical relationship between the study's objectives and the questions on the instrument is the primary basis for determining whether or not it is

measuring what it is designed to. To maintain validity, the researcher took several steps. To ensure face validity, the researcher had the research objectives, instruments, and procedures reviewed by advisors and experts in special needs education and language to confirm that they effectively measured the intended variables. For content validity, the researcher developed the research instruments by thoroughly reviewing the relevant literature on literacy barriers, reading comprehension, and writing skills of deaf students. This helped ensure the instruments adequately covered all aspects of the constructs being measured. To establish construct validity, the researcher operationalized the key constructs of reading comprehension, writing skills, and academic achievement based on a conceptual model.

The literacy skills test was designed in Amharic and included reading passages and essay writing tasks. The test comprised ten multiple-choice questions for reading comprehension and eleven writing tasks with blank spaces for writing skills. The items in the reading comprehension and writing tests were categorized into vocabulary, main idea comprehension, spelling, punctuation, and essay composition. The test was prepared by primary school Amharic language teachers based on the grade six Amharic language textbook and was evaluated by classroom teachers to ensure its appropriateness for grade six deaf students. They provided input, and the necessary changes were implemented. Additionally, with the guidance of two Haramaya University language experts, the test was checked as aligned with the grade six Amharic syllabus and teacher guide to assess the proficiency level of deaf students. This alignment helped the researcher identify the specific reading and writing skills to be tested.

For reliability, the researcher checked for internal consistency on all items in the questionnaire using Cronbach's alpha. A pilot test was conducted to assess the internal consistency of the questionnaire administered to sixteen language teachers and grade six students at two Primary Schools in Dire Dawa town. The instrument comprised five items designed to measure the teaching expertise of language teachers and three items designed to measure deaf students. The reliability analysis yielded a Cronbach's alpha coefficient of $\alpha = .87$ and $\alpha = .93$ respectively, indicating strong acceptable internal consistency among the items.

3.7. Data Collection Procedure

The data collection began with obtaining permission letters from the Special Needs and Inclusive Education Department and Dire Dawa Education Bureau. Questionnaires were

distributed to respondents, along with consent forms for students, and teachers. Field notes and checklists were used for documentation. Regular reviews with the research advisors ensured timely progress and adherence to protocols.

In data collection procedures quantitative data were collected first. A questionnaire was administered to gain demographic information, assessment tasks related to reading and writing literacy skills, and the teaching-learning process of teachers were given to deaf students and language teachers from selected primary schools. Their responses were compiled into a database for analysis. Collecting data through questionnaires from respondents provided robust, triangulated insights into deaf students' literacy development and how the factors impacted their academic performance. The 2016 E.C. regional exam results of grade six deaf students were also reviewed to analyze their academic achievements.

Secondly, qualitative data was gathered using an interview guide. Teachers of Amharic language and special needs education were interviewed through a semi-structured format to gain insights into their experiences with teaching reading and writing, as well as the challenges faced by deaf students in their schools. The interviews were audio-recorded and subsequently transcribed for analysis.

3.8. Methods of Data Analysis

Data from the questionnaires, which included demographic information about the participants, scores from reading and writing tasks for deaf students, results from the grade six regional exams, and assessments of instructional delivery as an indicator of teaching expertise among language teachers, were entered and analyzed using SPSS version 25 statistical software. Descriptive statistics provided frequencies, percentages, means, and standard deviations to understand the demographic characteristics of participants, reading and writing task scores, and grade six regional exam results. From inferential statistics, multiple regression was used to examine the effect of reading and writing levels of deaf students on their academic achievement. In addition, Hayes' (2022) process macro model 1 software in regression was also used to examine the impact of language teachers' teaching expertise as a moderator variable to determine the interactional effect between the reading and writing skills of the deaf and their academic achievement. The significance value level was considered at .05.

For the qualitative data, the interviews with Amharic language and special needs teachers were audio-recorded, transcribed, and analyzed using thematic analysis. Both deductive and inductive approaches were used to code the data and identify emerging themes around experiences with literacy development from within and across interviews. Thematic analysis revealed three key themes. The first theme had two sub-themes, the second had three sub-themes, and the third had four sub-themes. The themes from different data sources were then interpreted and triangulated to develop robust findings about the reading and writing literacy level of deaf students and its impact on their academic performance in selected primary schools.

3.9. Ethical Considerations

Research ethics describes the various tasks a researcher completes during a study. Individual protection needs and research requirements are the two main ethical regulations in a study, according to Creswell (2014). Before starting the actual data collection, a formal letter from the department was received. The goals of the study were explained to the participants, who also had a chance to answer questions during the interview and questionnaire. To ensure confidentiality, the researcher used pseudonyms to identify and recognize specific people. To obtain genuine responses from respondents and generate more reliable data, ethical considerations such as fairness, respect for individuals, and collaboration from the schools, and consent from participants or stakeholders were also heavily stressed.

4. RESULTS AND DISCUSSION

This chapter concerns data presentation, analysis, and interpretation of data collected through questionnaires, interviews, and document review. The quantitative and qualitative data are integrated into this chapter. The qualitative data is utilized as complementary to the quantitative data. Therefore, qualitative data includes the data collected through interviews and document review, whereas quantitative data includes the data collected through questionnaires and tests.

4.1. Results for Quantitative Part

This section highlighted the study's findings, detailing participants' demographics. It addressed reading and writing tasks, examining how comprehension and writing proficiency among deaf students affect academic achievement. It also explored teachers' expertise concerning reading and writing skills and academic success.

4.1.1. Demographic Characteristics of the Participants

This part presents the personal information of participants invited to fill out reading and writing literacy tasks and questionnaires. The interview inquiry respondents were four Amharic language teachers and three special needs teachers from four selected schools.

Table 2: Demographic Background of Deaf Students

Variables	Category	Frequency	%
Gender	Male	31	64.6
	Female	17	35.4
	Total	48	100.0
Age	11-15 years	32	66.7
	16-20 years	12	25.0
	21 and above	4	8.3
	Total	48	100.0
Family background	Hearing	44	91.7
	Deaf	4	8.3
	Total	48	100.0
Age of onset	Pre-lingual	48	100.0

As depicted in Table 2, the demographic analysis of grade 6 deaf students across the four selected primary schools reveals significant insights into gender distribution, age range, family backgrounds, and age of onset of deafness. The gender breakdown indicates a male majority, with 31 male students (64.6%) and 17 female students (35.4%). Age data shows that more than half of the students fall within the 11 to 15-year range 32 students (66.7%), while a significant portion is also in the older category of 16 to 20 years 12 students (25.0%), and only 4 students (8.3%) are 21 years and older. This age distribution suggests that most students are in their early to middle adolescence. Furthermore, the family background indicates that most students (44, or 91.7%) come from hearing parents. In contrast, only 4 students (8.3%) have either a deaf father or mother. Notably, all identified deaf students are pre-lingual, meaning they became deaf before acquiring spoken language.

Table 3: Demographic background of teachers

Variables	Category	Frequency	%
Gender	Male	34	70.8
	Female	14	29.2
	Total	48	100.0
Age	26-30 years	13	27.1
	31-35 years	22	45.8
	36 years and above	13	27.1
	Total	48	100.0
Academic status	Diploma	13	27.1
	Degree	35	72.9
	Total	48	100.0
Work experience	5-7 year	3	6.2
	8 and above	45	93.8
	Total	48	100.0
Teaching subjects	Amharic	11	22.9
	English	14	29.2
	Afan Aromo	13	27.1
	Af-Somali	10	20.8
	Total	48	100.0

As shown in Table 3, the demographic analysis of teachers across four selected primary schools indicates a predominantly male workforce, comprising 34 male teachers (70.8%) compared to 14 female teachers (29.2%). Age distribution data reveals that most of the teaching staff are mid-career professionals, with 13 teachers (27.1%) aged 26 to 30 years and 22 teachers (45.8%) aged 31 to 35 years. This trend suggests a relatively young and energetic workforce likely to be actively engaged in professional development initiatives. Conversely, only 13 teachers (27.1%) are aged 36 years or older, highlighting a youthful demographic among the teaching staff.

The analysis of academic status and work experience further supports the notion that these teachers are well-equipped. A significant majority, 35 teachers (72.9%), hold a degree, while 13 teachers (27.1%) possess a diploma. The work experience distribution reveals that 45 teachers (93.8%) have extensive teaching experience, with 3 teachers (6.3%) having worked 5 to 7 years.

The subjects taught by the teachers were diverse. The analysis shows that English is the most commonly taught subject, with 14 teachers (29.2%). This is closely followed by Afan Oromo, with 13 teachers (27.1%), and Amharic language instruction, which includes 11 teachers (22.9%). Lastly, the Af-Somali subject has the fewest teachers, comprising 10 individuals (20.8%).

4.1.2. Reading Comprehension and Writing Skills Results

Under this topic research question one, the current status of reading and writing literacy of deaf students was analysed. The respondents for these reading and writing tasks were deaf students selected from four primary schools. Descriptive statistics were used to present the findings related to this research question. The results obtained from reading comprehension and writing tasks are listed below in Tables 4 and 5.

Table 4: Descriptive Analysis for Reading Comprehension Tasks

Items	Category	Frequency	%
Understanding 1	Correct answer	13	27.1
	Incorrect answer	35	72.9
	Total	48	100.0
Understanding 2	Correct answer	22	45.8
	Incorrect answer	26	54.2
	Total	48	100.0
Understanding 3	Correct answer	22	45.8
	Incorrect answer	26	54.2
	Total	48	100.0
Understanding 4	Correct answer	13	27.1
	Incorrect answer	35	72.9
	Total	48	100.0
Understanding 5	Correct answer	12	25.0
	Incorrect answer	36	75.0
	Total	48	100.0
Vocabulary 1	Correct answer	15	31.3
	Incorrect answer	33	68.7
	Total	48	100.0
Vocabulary 2	Correct answer	22	45.8
	Incorrect answer	26	54.2
	Total	48	100.0
Vocabulary 3	Correct answer	13	27.1
	Incorrect answer	35	72.9
	Total	48	100.0
Vocabulary 4	Correct answer	17	35.4
	Incorrect answer	31	64.6
	Total	48	100.0
Vocabulary 5	Correct answer	17	35.4
	Incorrect answer	31	64.6
	Total	48	100.0

As depicted in Table 4: A descriptive analysis of reading comprehension tasks focused on understanding the main idea of the passage among 48 grade 6 deaf students indicated significant challenges in comprehension skills. In Item 1, only 13 respondents (27.1%) answered correctly, while a substantial majority of 35 (72.9%) provided incorrect responses. Similarly, Items 2 and 3 each yielded correct responses from 22 respondents (45.8%), with incorrect responses from

26 (54.2%). The trend of low correct answers persisted in Item 4, where only 13 respondents (27.1%) answered correctly, while 35 (72.9%) answered incorrectly. Item 5 showed the lowest performance, with just 12 respondents (25%) answering correctly and 36 (75%) answering incorrectly.

The analysis of reading comprehension tasks focused on reading vocabulary from the given passage revealed notable difficulties in responding correctly to the questions presented. In Reading Vocabulary Item 1, 15 respondents (31.3%) answered correctly, while the majority 33 (68.7%) responded incorrectly. The trend observed in Item 3 persisted, with only 13 respondents (27.1%) providing correct answers, while 35 (72.9%) answered incorrectly. In Item 2, there was a slight performance improvement, as 22 respondents (45.8%) answered correctly compared to 26 (54.2%) who responded incorrectly. Furthermore, Items 4 and 5 each revealed that 17 respondents (35.4%) answered correctly, while 31 (64.6%) provided incorrect responses. The overall results remain concerning.

The analysis of reading comprehension tasks performed with 48 sixth-grade deaf students revealed significant challenges in understanding both the main idea and vocabulary. Most of the students struggled to identify the main idea of the passages and found it difficult to comprehend the vocabulary used.

Table 5: Descriptive Analysis of Writing Skills Tasks

Items	VP		P		A		G		VG		Total		Mean
	F	%	F	%	F	%	F	%	F	%	F	%	
Spelling and Punctuation 1	18	37.5	21	43.8	3	6.3	5	10.4	1	2.1	48	100.0	1.96
Spelling and punctuation 2	25	52.1	12	25.0	6	12.5	3	6.3	2	4.2	48	100.0	1.85
Spelling and punctuation 3	17	35.4	22	45.8	5	10.4	3	6.3	1	2.1	48	100.0	1.94
Spelling and punctuation 4	22	45.8	16	33.3	6	12.5	2	4.2	2	4.2	48	100.0	1.88
Spelling and punctuation 5	15	31.3	6	12.5	22	45.8	4	8.3	1	2.1	48	100.0	2.38
Vocabulary 1	8	16.7	10	20.8	12	25.0	18	37.5	-	-	48	100.0	2.83
Vocabulary 2	13	27.1	5	10.4	15	31.3	15	31.3	-	-	48	100.0	2.67
Vocabulary 3	20	41.7	13	27.1	7	14.6	8	16.7	-	-	48	100.0	2.06
Vocabulary 4	25	52.1	20	41.7	2	4.2	1	2.1	-	-	48	100.0	1.56
Essay composition 1	12	25.0	26	54.2	7	14.6	3	6.3	-	-	48	100.0	2.02
Essay composition 2	22	45.8	15	31.3	8	16.7	3	6.3	-	-	48	100.0	1.83

N.B: VP= 1, represents very poor, P=2, represents poor, A=3, represents average, G=4, represents good, and VG=5 represents very good. Mean: VP=0-1.49, P= 1.5-2.49, AV=2.5-3.49, G= 3.5-4.49, and VG=4.5-5.0 (Bluma, 2012).

A descriptive analysis of writing skills tasks, specifically focusing on spelling and punctuation among 48 grade 6 deaf students, revealed substantial difficulties across all tasks. In Spelling and Punctuation Item 1, 18 respondents (37.5%) scored very poor, 21 (43.8%) scored poor, 3 (6.3%) scored average, 5 (10.4%) scored good, and 1 (2.1%) scored very good, yielding an overall mean of 1.96, categorizing it as poor. Item 2 showed even lower performance, with 25 respondents (52.1%) scoring very poor, 12 (25.0%) poor, 6 (12.5%) average, 3 (6.3%) good,

and 2 (4.2%) very good, resulting in a mean of 1.85. Spelling and Punctuation Item 3 exhibited similar trends, where 17 respondents (35.4%) scored very poor, 22 (45.8%) poor, and the remaining respondents did not surpass the average, leading to a mean of 1.94. In Item 4, 22 respondents (45.8%) scored very poor, while the overall mean was 1.88, categorized as poor indicating pervasive challenges. Although Spelling and Punctuation Item 5 saw slightly better performance, with 22 respondents (45.8%) scoring average and an overall mean of 2.38, it still fell within the poor range. These findings underscore the significant need for targeted instructional strategies to enhance spelling and punctuation skills among these students.

The analysis of writing skills tasks focused on vocabulary writing among 48 deaf students indicated varied proficiency levels, with noticeable difficulties in specific areas. In Vocabulary Item 1, 8 respondents (16.7%) scored very poor, 10 (20.8%) scored poor, 12 (25.0%) scored average, and 18 (37.5%) scored good, leading to an overall mean of 2.83, which falls within the average range. In Vocabulary Item 2, performance was slightly lower, with 13 respondents (27.1%) scoring very poor, 5 (10.4%) poor, 15 (31.3%) average, and 15 (31.3%) good, resulting in a mean of 2.67, also indicating average performance. However, Vocabulary Item 3 showed significant challenges, as 20 respondents (41.7%) scored very poor, and the overall mean dropped to 2.06, categorizing it as poor. The most concerning results came from Vocabulary Item 4, where 25 respondents (52.1%) scored very poor, 20 (41.7%) scored poor, and only 2 (4.2%) scored average and another scored good, leading to an overall mean of 1.56, indicating very poor performance. Collectively, these findings highlight the critical need for targeted vocabulary instruction to support the development of writing vocabulary skills among deaf students.

Essay composition tasks which were categorized as similarities and differences in sentence composition, revealed significant challenges in writing skills. In essay composition Item 1, 12 respondents (25.0%) scored very poor, 26 (54.2%) scored poor, 7 (14.6%) scored average, and 3 (6.3%) scored good, resulting in an overall mean of 2.02, categorizing this performance as poor. The results were even more concerning for essay composition Item 2, where 22 respondents (45.8%) scored very poor, 15 (31.3%) scored poor, 8 (16.7%) scored average, and 3 (6.3%) scored good, yielding an overall mean of 1.83, placing it within the poor range. These findings underscore a pressing need for enhanced instructional strategies aimed at improving

essay composition skills among deaf students, as the majority of respondents exhibited difficulty in effectively expressing their ideas in written form.

Generally, the above descriptive analysis of 48 deaf grade 6 students' performance in reading comprehension and writing skills tasks revealed significant challenges in both areas. In reading comprehension, students struggled to identify the main idea of passages and comprehend vocabulary. Similarly, in writing skills, students faced substantial difficulties in all assessed areas, including spelling, punctuation, writing vocabulary, and essay composition, with the majority scoring "very poor" and "poor" in most tasks.

4.1.3. Academic Achievement of Deaf Students

The analysis focused on the academic achievement of sixth-grade deaf students based on the 2016 regional examination results from four selected primary schools. A descriptive analysis was conducted, comprising calculations of the mean, and standard deviation.

The regional exam results of 48 grade six deaf students were analyzed to determine the central tendency and variability of the scores. The results indicated a mean score of 39.1, $SD = 11.38$, which suggests that on average, the students scored slightly below the midpoint of the exam scale. According to the Dire Dawa Administration Education Bureau, the 2016 E.C. grade six regional exam passing result was 40 and above mark (Dire Dawa Administration Education Bureau, 2024).

The distribution of scores was visually represented as a histogram (Figure 2).

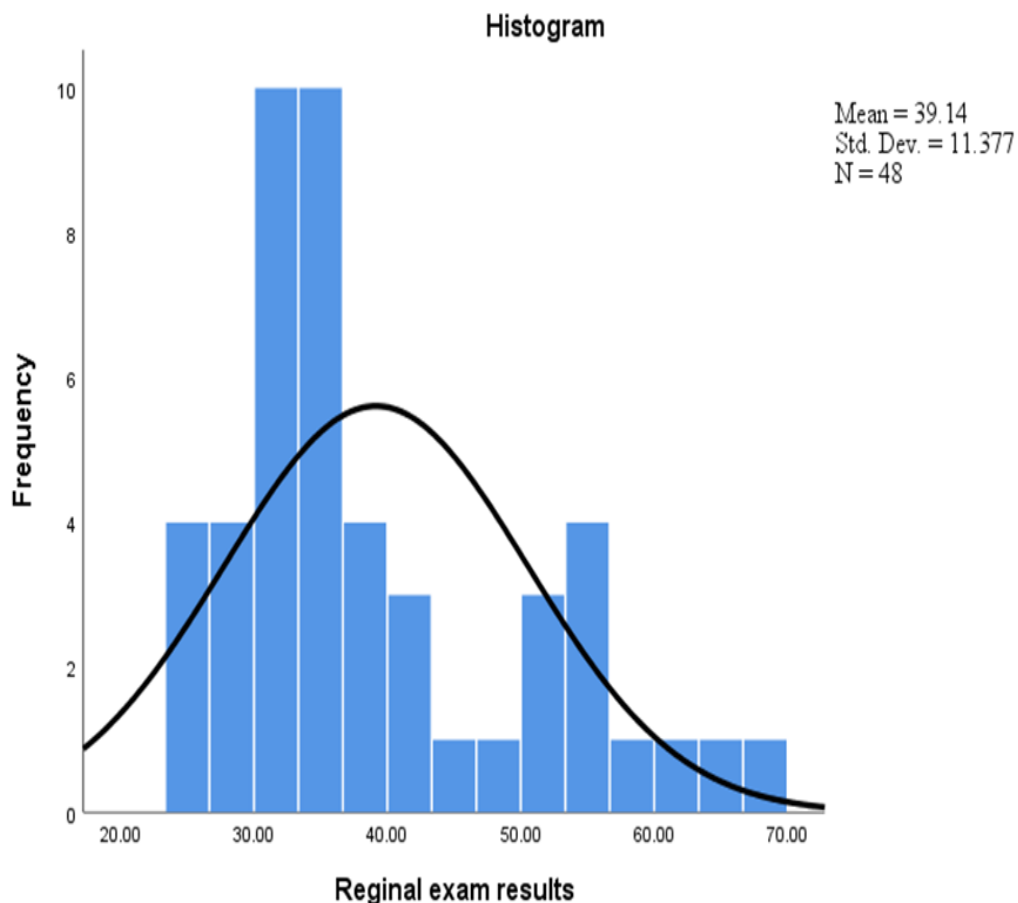


Figure 2: Grade six regional exam results of deaf students in 2016 E.C.

The above figure is a histogram indicating the distribution of regional exam results of Amharic, Afan Oromo and Aff-Somali subjects for 48 deaf students. The histogram has a mean score of 39.14, SD= 11.38 indicating that students performed slightly below the passing mark of 40. The majority of students scored between 30 and 40, with a smaller number of students scoring in the 50-60 range and even fewer scoring above 60. The normality test indicates that the data is significantly skewed (skewness = 0.96, kurtosis = -0.07), suggesting that the data is approximately normal. The distribution appears to be slightly skewed to the right, suggesting that more students have lower scores than higher scores. The overall exam results suggested that on average, the students scored slightly below the midpoint of the exam scale.

4.1.4. The Impact of Reading and Writing Skills on the Academic Achievement of Deaf Students

The results of the multiple regression analysis indicate a strong positive relationship between the predictors (writing skills, reading comprehension) and the dependent variable (academic achievement) in grade six deaf students. The model explained approximately 98.1% ($\Delta R^2 = .980$) of the variance in academic achievement, with a significant change in R^2 .981, $F(2, 45) = 1141.591$, $p < .05$. The standard error of the estimate .14454 suggests that the model is relatively accurate in predicting academic achievement. The strength of the relationship between the predictors and the dependent variable is reflected in the model's multiple correlation coefficient $R = .990$, indicating that the combination of writing skills and reading comprehension is a robust predictor of academic achievement. The results are presented in table 6 below.

Table 6: Model Summary

<i>Model Summary</i>										
Mode	<i>R</i>	<i>R Square</i>	Adjusted of	Std. Error of the	Change Statistics				<i>Sig.</i>	<i>F</i>
					R Square	Estimate	R Square Change	F Change		
1	.990 ^a	.981	.980	.14454	.981	1141.591	2	45	.000	

a. Predictors (Constant): Writing Skills, Reading comprehension

b. Dependent Variable: Academic Achievement

A multiple regression analysis was conducted to examine the relationship between reading comprehension, writing skills, and academic achievement. The ANOVA results indicated that the regression model was statistically significant, $F(2, 45) = 1141.591$, $p < .05$. The results indicate that the regression model was a strong fit to the data and that the predictors (writing skills and reading comprehension) were significant predictors of academic achievement.

The standardized coefficients (Beta) from the regression analysis indicate the relative strength of reading comprehension and writing skills in predicting academic achievement. The standardized beta coefficient for reading comprehension ($\beta = .606$, $t = 5.555$, $p < .05$) had a statistically significant and positive relationship with academic achievement. Writing skills ($\beta = .389$, $t =$

3.569, $p < .05$) also had a statistically significant and moderate positive relationship with academic achievement. Overall, the standardized coefficients clarify that while both reading comprehension and writing skills are important predictors of academic achievement, reading comprehension exhibits a stronger influence. The results are presented in table 8 below.

Table 7: Coefficients Summary of the Effect of Predictors on Academic Achievement.

		<i>Coefficients^a</i>				
		Unstandardized Coefficients	Std. Error	Standardized Coefficients <i>Beta</i>	<i>t</i>	<i>Sig.</i>
Model		B				
1	(Constant)	.124	.047		2.619	.012
	Reading comprehension	.602	.108	.606	5.555	.000
	Writing Skills	.339	.095	.389	3.569	.001

a. Dependent Variable: Academic Achievement

4.1.5. The Role of Teaching Expertise in the Relationship between Reading, Writing, and Academic Achievement of Deaf Students

This topic examined the extent to which teacher expertise influenced the relationship between reading and writing skills and the academic achievement of deaf students.

Table 8: Conditional Effects of Reading Comprehension at values of the moderator(s):

Product terms key: Int_1:	Reading comprehension	x	teaching expertise		
	R2- change	F	df1	df2	P
X*W	.0834	24.8162	1.0000	44.0000	.0000

Focal predictor: Reading comprehension (X)
Moderator variable: Teaching expertise (W)

The results of the moderated regression analysis indicated that the interaction between reading comprehension and teaching expertise was significant in predicting academic achievement among grade six deaf students. Specifically, the interaction term between reading

comprehension and teaching expertise ($X*W$) explained a substantial proportion of the variance in academic achievement, $\Delta R^2 = .0834$, $F(1, 44) = 24.8162$, $p < 0.05$. This finding suggests that the impact of reading comprehension on academic achievement varies depending on the level of teaching expertise. This means that the effectiveness of reading comprehension in predicting academic achievement depends on the level of teaching expertise. The overall model accounted for 8.34% of the variance in academic achievement.

Table 9: Conditional Effects of Reading Comprehension on Academic Achievement at Different Levels of Teaching Expertise

Teaching expertise	Effect	Se	<i>t</i>	<i>P</i>
-.5309	2.0074	.1596	12.5746	.0000
.0000	1.6329	.1127	14.4933	.0000
.5309	1.2584	.1059	11.8875	.0000

A moderated regression analysis was conducted using Hayes' Process Macro Model 1 to examine the impact of reading comprehension and teaching expertise on academic achievement among sixth-grade deaf students. The results indicated that the conditional effects of reading comprehension on academic achievement varied significantly depending on the level of teaching expertise.

Specifically, the results showed that when teaching expertise was low (-.5309 SD), the effect of reading comprehension on academic achievement was positive and significant ($t = 12.57$, $p < .05$), indicating that reading comprehension made substantial contributions to academic achievement even at low levels of teaching expertise. Furthermore, when teaching expertise was moderate (.0000 SD), the effect of reading comprehension on academic achievement was also positive and significant ($t = 14.49$, $p < .05$), indicating that moderate levels of teaching expertise further enhanced the relationship between reading comprehension and academic achievement. When teaching expertise was high (.5309 SD), the effect of reading comprehension on academic achievement approached significance ($t = 11.89$, $p < .05$), indicating that high levels of teaching expertise have strengthened the relationship between reading comprehension and academic achievement.

These results suggest that teaching expertise plays a significant role in moderating the relationship between reading comprehension and academic achievement among grade six deaf students. Specifically, the results indicate that reading comprehension significantly contributes to academic achievement across all levels of teaching expertise, although the effect size may vary.

Table 10: Conditional Effects of the Writing Skills at Values of the Moderator(S):

Product terms key: Int_1:	writing skills	x	teaching expertise		
R2- change	<i>F</i>	df1	df2		<i>P</i>
X*W	.0330	6.8215	1.0000	44.0000	.0123
Focal predictor: Writing skills (X)					
Moderator variable: teaching expertise (W)					

The results of the moderated regression analysis indicated that the interaction between writing skills and teaching expertise was significant in predicting academic achievement among grade six deaf students. Specifically, the interaction term between writing skills and teaching expertise (X*W) explained a substantial proportion of the variance in academic achievement, $\Delta R^2 = .0330$, $F(1, 44) = 6.8215$, $p < .05$. This finding suggests that the impact of writing skills on academic achievement varies depending on the level of teaching expertise. This means that the effectiveness of writing skills in predicting academic achievement depends on the teaching expertise level. The overall model accounted for 3.3% of the variance in academic achievement.

Table 11: Conditional Effects of Writing Skills on Academic Achievement at Different Levels of Teaching Expertise

Teaching expertise	Effect	Se	<i>T</i>	<i>P</i>
-.5309	1.5172	.1633	9.2935	.0000
.0000	1.2960	.1131	11.4604	.0000
.5309	1.0747	.1152	9.3288	.0000

The moderating role of teaching expertise on the relationship between writing skills and academic achievement among grade six deaf students was analyzed. The results also indicated that the conditional effects of writing skills on academic achievement varied significantly depending on the level of teaching expertise. Specifically, the results showed that when teaching expertise was low (-0.5309 SD), the effect of writing skills on academic achievement was significant ($t = 9.29, p < .05$), indicating that at low levels of teaching expertise, writing skills significantly contribute to academic achievement. However, when teaching expertise was moderate (0.0000 SD), the effect of writing skills on academic achievement was positive and significant ($t = 11.46, p < .05$), suggesting that writing skills made significant contributions to academic achievement. Furthermore, when teaching expertise was high (0.5309 SD), the effect of writing skills on academic achievement approached significance ($t = 9.33, p < .05$), indicating that writing skills also have contributed to academic achievement at high levels of teaching expertise. These results suggest that teaching expertise plays a significant role in moderating the relationship between writing skills and academic achievement among grade six deaf students.

4.2. Results for Qualitative Part

4.2.1. The Challenges Faced By Deaf Students in Acquiring Reading and Writing Literacy

The qualitative part of the study was conducted through interviews with Amharic language teachers and special needs education teachers who had experience working with grade six deaf students. The purpose was to explore, from their perspectives, the challenges faced by deaf students in acquiring reading and writing literacy in inclusive primary classrooms. Thematic analysis of the interview transcripts revealed three major themes: difficulties in reading comprehension, limitations in writing skills, and the language teachers' teaching expertise in the students' literacy outcomes. These themes closely aligned with the quantitative results and provided an in-depth contextual understanding of the underlying issues.

Table 12: Summary Table of the Sample for the Qualitative Part

Pseudonym	Description
ALT1	Amharic Language Teacher One
ALT2	Amharic Language Teacher Two
ALT3	Amharic Language Teacher Three
SNE T1	Special Needs Education Teacher One
SNE T2	Special Needs Education Teacher Two
SNE T3	Special Needs Education Teacher Three
SNE T4	Special Needs Education Teacher Four

The pseudonyms used in table 12 correspond to the following: ALT1 represents Amharic Language Teacher One, ALT2 represents Amharic Language Teacher Two, and ALT3 represents Amharic Language Teacher Three. Additionally, SNE T1 represents Special Needs Education Teacher One, SNE T2 represents Special Needs Education Teacher Two, SNE T3 represents Special Needs Education Teacher Three, and SNE T4 represents Special Needs Education Teacher Four.

Table 13: Major Themes and Sub-Themes for Interview Results

Major themes	Sub-themes
Reading skills	<ul style="list-style-type: none"> • Reading comprehension related to understanding the passage ideas • Reading comprehension related to vocabulary in the passage
Writing skills	<ul style="list-style-type: none"> • Punctuation and spelling • Writing vocabulary • Essay composition
Teaching expertise	<ul style="list-style-type: none"> • Instructional methods used by language teachers • Teaching materials • Communication barriers • Lack of qualified teachers

Challenges Related to Deaf Students' Reading Comprehension

The qualitative data from the interview results also supports the quantitative finding, as there were significant challenges that deaf students face in reading comprehension skills. As the interview results show, they have difficulties understanding what they read and comprehending the vocabulary from the passage.

Grade six Amharic language teachers highlighted significant challenges in developing reading comprehension skills among deaf students.

According to the Amharic language teachers (ALT 2) said:

Deaf students often face challenges with reading comprehension, especially when it comes to understanding and remembering vocabulary from reading passages, as well as grasping the main idea of the text. Additionally, they struggle to articulate the main message of the passage, highlighting a gap in their reading comprehension skills. These challenges emphasize the importance of adapted literacy support to improve their reading comprehension abilities, ultimately influencing their academic performance in Amharic subjects.

An Amharic language teacher (ALT 4) added that:

I have been teaching 6th-grade deaf students since 1st grade for the past six years. They have serious reading comprehension problems. Their problem with reading is not understanding the vocabulary in the paragraph, nor understanding the idea of the paragraph. Deaf students often face challenges with reading comprehension, especially when it comes to understanding and remembering vocabulary from reading passages and grasping the main idea of the text.

Deaf students struggle with reading comprehension due to limited exposure to language, resulting in smaller vocabularies and less familiarity with language structures.

One Amharic language teacher (ALT1) commented

Deaf students may have smaller vocabularies and be less familiar with language structures because a large portion of early language development occurs through spoken interaction and listening. They find it more difficult to determine meaning, comprehend context, and make connections between concepts in texts as a result.

The interview results related to reading skills, deaf students' reading comprehension becomes a significant challenge in the absence of an adequate language foundation. To close this gap and enhance their comprehension of passages, specialized teaching methods and language interventions are essential. The language teachers also added that due to their limited language exposure, particularly in early childhood, deaf students have difficulty with vocabulary. They struggle to comprehend the context and important ideas in reading materials because of this lack of exposure. These difficulties are exacerbated by a lack of clear vocabulary training and visual aids, which impairs their engagement and reading comprehension.

Challenges Related to Deaf Students' Writing Skills

The qualitative data from the interview results also support the quantitative findings, highlighting the significant challenges that deaf students face in their writing skills. The interview results indicate that deaf students encounter difficulties in writing, particularly in mastering mechanics such as spelling and punctuation. Writing composition presents a major issue for deaf students.

The highlights from Amharic languages, the gaps in vocabulary and grammar knowledge, frequently make these challenges worse. ALT 1 and ALT 2 stated that it can be difficult for deaf learners to internalize punctuation and spelling rules that are typically learned through hearing and repeated writing practice because they rely largely on visual language due to their limited access to spoken language sounds. Additionally, their comprehension of how punctuation arranges ideas and how words are spelled correctly is impacted by their early exposure to inconsistent print and language models.

The language teachers also described the writing abilities of grade six deaf students as struggling with fundamental writing skills, particularly punctuation and spelling. According to the teacher, one of the Amharic teacher (ALT 3) said:

Deaf students consistently made errors in writing skills areas, failing to use appropriate punctuation and spelling in writing assignments, even in composition tasks that were intended to assess their mastery of these skills. Additionally, a restricted writing vocabulary limits their ability to express ideas clearly, often due to less exposure to diverse language contexts.

In addition, one of the Amharic language teachers described that composing essays is further complicated by the need to organize thoughts and use appropriate language conventions skills that may be underdeveloped because of limited practice.

An Amharic language teacher (ALT 1) noted that:

Composing essays is further complicated by the need to organize thoughts and use appropriate language conventions, skills that may be underdeveloped from limited practice. These challenges underscore the necessity for targeted instructional strategies to enhance writing skills. I think deaf students in the class require appropriate instruction and support to develop their writing proficiency, specifically in using writing mechanics and essay writing, to improve their overall writing abilities.

The results concerning essay composition indicated grade six deaf students struggle with organizing and composing essays due to gaps in structuring thoughts and language use. Limited exposure to rich language, developing vocabulary and grammar skills, and a lack of strong language foundations make expressing complex thoughts challenging.

An Amharic language teacher (ALT 4) noted that:

Many may find it difficult to logically connect ideas or sequence them in writing because they were not exposed to rich language models at a young age. Deaf students may struggle to write simple essay if their language skills are weak. Additionally, some deaf students require more supervised support to develop composing essays because writing is a multi-step skill that requires planning and revision. Because of these difficulties, their writing may come across as lacking if specific teaching strategies centered on language development and essay structure are not used.

Challenges Concerning Language Teachers' Teaching Expertise

The interview results gathered from SNE teachers support the quantitative findings that teaching expertise contributes to the academic challenges faced by deaf students. The respondents shared various perspectives regarding teaching methods, materials, communication barriers, and the qualifications of teachers.

Results from an interview with special needs teachers revealed that their colleagues' instructional methods often neglect the unique learning needs of deaf students. Specifically, teachers tend to rely on traditional teaching methods, which may not be tailored to address the specific requirements of deaf students. Furthermore, the teachers noted that there is a lack of engagement between teachers and deaf students, which hinders peer instruction and fosters a sense of isolation among deaf students. Teaching materials such as visual aids, which are essential for deaf students, are often underutilized or not employed at all. The teachers emphasized the need for teachers, specifically language teachers, to adapt their instructional methods and provide equal access to learning opportunities for deaf students.

Regarding classroom teaching and learning process, an interview with a Special Needs Education teachers, (SNE T2) said that:

Language teachers often use instructional methods during teaching and learning, but they may not always focus on facilitating meaningful teaching methods to promote cooperation between deaf students and their hearing peers. This may be due to a lack of awareness of the effectiveness of instructional methods for deaf students, as teachers might not implement strategies that specifically address the unique needs of deaf

learners. In my opinion, the teachers' lack of effective teaching and learning methods for deaf students has affected the academic success of these students.

The results from SNE teachers regarding teaching methods and materials used by language teachers for deaf students emphasize the lack of collaborative learning opportunities and cooperative strategies employed by language teachers. It highlights the marginalization of deaf students and inadequate adaptation of teaching materials, which collectively hinder their academic success.

One respondent (SNIE 3) noted:

As a special needs teacher, I have observed that language teachers often fail to recognize the potential for collaborative learning among deaf students and their peers without disabilities. Typically, teachers do not utilize cooperative learning strategies such as peer tutoring and group activities that facilitate deaf students' participation and social interaction with their classmates. What's more, there appears to be a lack of effort to engage deaf students and promote peer interaction during the teaching process. Furthermore, teaching materials, including visual aids, are often not adapted for deaf students, leading to their marginalization in the classroom. I think this lack of attention to the needs of deaf students can significantly impact their success in academic.

In response to the question regarding communication barriers faced by deaf students, the respondent, a special needs and inclusive education teacher who serves as a sign language interpreter (SNE T1), highlighted several critical issues. He said that:

Language teachers often do not have experience in utilizing sign language, opting instead for total communication methods. This method restricts deaf students from fully expressing themselves, as teachers often struggle to understand their attempts at communication. Furthermore, the limited presence of sign language interpreters in the classroom significantly hampers students' involvement in literacy skills, such as reading and writing.

The interview with special needs education teachers highlights both effective practices for teaching students with disabilities, including the deaf, and significant shortcomings. There is a shortage of special needs education teachers and insufficient training and professional

development, particularly in sign language instruction. This limitation may hinder literacy development and academic achievement for these students.

Moreover one of the Special Needs Education teachers (SNE 2) noted:

There is a shortage of special needs education teachers, which can compromise the quality of instruction and support provided to deaf students. Inadequate training and professional development opportunities for teachers, including instruction in sign language, can also impact the effectiveness of teaching practices. Teachers may struggle to provide the necessary instruction and accommodations for these students without adequate training and support. In my opinion, these limitations may have far-reaching consequences, including compromised literacy development and academic achievement for deaf students.

4.3. Discussion of Findings from the Two Data Sets

The discussion of the results was structured based on both quantitative and qualitative findings, including the challenges faced by deaf students in their reading and writing abilities, the impact of these abilities on their academic performance, and the role that teaching expertise plays in the connection between deaf students' academic achievement and their reading and writing abilities. There may be broad concepts in the term "teaching expertise" that require further research. However, as can be covered in more detail below, this study focused primarily on low-qualified teachers, communication barriers, instructional methods, and instructional materials.

4.3.1. Difficulties in Reading and Writing Skills of Deaf Students

Deaf students often encounter significant challenges in reading comprehension due to limited vocabulary, language access, background knowledge, and phonological awareness. Many deaf students have a smaller vocabulary than their hearing peers, which can hinder their understanding of texts.

The results of the descriptive analysis reveal a trend of low reading comprehension skills among grade 6 deaf students in understanding the main idea of a passage and vocabulary in the text. In the section assessing the understanding of the main idea of the passage, only 34.16% of students answered correctly, while a substantial 65.84% responded incorrectly. This highlights that the majority of students struggled to grasp the central themes within the passages, suggesting

difficulties in comprehending essential information. Similarly, in the vocabulary component, the results were almost parallel, with 35% of students providing correct answers and 65% giving incorrect responses. This indicates that a significant portion of the students also faced challenges in understanding vocabulary within the context of the reading materials. Overall, these results reveal that both comprehension and vocabulary present considerable obstacles for grade six deaf students, with more than half of the students struggling to achieve correct responses in both areas. The findings emphasize the need for targeted instructional strategies that can address these difficulties and support the development of reading comprehension skills among deaf students.

According to Ersamo (2022), she has used three levels of reading comprehension to categorize the reading comprehension scores of deaf students. These are an independent reader (a reading comprehension score of 90% and above), an instructional reader (a reading comprehension score of 60% to 89%), and a frustrated reader (a struggling reader) (a reading comprehension score of below 60%). Correspondingly, the finding is lower than the average result expected in assessment tests (average = 50%).

Most teachers of interview participants in this study reported that the main reading comprehension problem of deaf students was poor vocabulary skills and comprehension of information from written texts. To comprehend reading materials, the deaf must get adequate language input from an early age, but they do not.

These results agree with the report by Basha, (2014) that deaf students' reading comprehension was poor in the Amharic language. As noted by Alothman (2021) more specifically in areas like comprehension, inferential comprehension, and word recognition, deaf children struggle with both skill sets.

Besides what has been discussed in this study above, the Ethiopian Early Grade Reading Assessment (EGRA) should be raised. Although there is no specific previous research on deaf or hard-of-hearing children's reading comprehension skills to compare the results of this study, the EGRA does indicate that Ethiopian primary school students' reading comprehension skills are poor. Six languages (Afan Oromo, Amharic, Harari, Sidama, Somali, and Tigrigna) from the 11 administrative entities (nine regions and two city administrations), as the administrative

system before five years, in Ethiopia were used in a mother tongue EGRA with Grade 2 and Grade 3 students in 2010 (Ersamo, 2022). However, the Ethiopian Early Grade Reading Assessment study's neglect of students with disabilities, including deaf students, indicates a lack of inclusivity and exclusion of special educational needs. By excluding this population, the study's findings may not be generalizable, and missed opportunities to identify specific challenges and strengths of these students. This omission highlights the need for education research that is inclusive of students with disabilities and considers their unique needs and experiences.

Similar to this finding, a study by Basha (2014) revealed that deaf students often encounter significant challenges that adversely affect their reading comprehension in educational settings. A primary issue is limited vocabulary, as they typically have a smaller range of words compared to their hearing peers. This vocabulary limitation can be attributed to reduced exposure to spoken language and difficulties in acquiring new words, particularly for those who primarily depend on sign language. Such limitations directly impact their ability to understand contextual words within reading passages, which is crucial for overall comprehension.

The consistency of these results suggests that the deaf students in this study require additional support and targeted instruction to enhance their reading comprehension skills. The difficulty in responding correctly to reading vocabulary and understanding the passage's main idea questions implies that deaf students may be struggling with word recognition, comprehension of contextual clues, or both. The consistent poor performance across all items implies a pervasive challenge that needs further attention and intervention.

The results of writing skills tasks among grade 6 deaf students and interviews with participants revealed significant challenges in several areas, including spelling and punctuation, vocabulary writing, and essay composition.

In the Spelling and Punctuation category, 40.4% of students were rated as very poor and 32.1% as poor, indicating that a significant portion of students struggled with basic writing mechanics. Only 17.5% of students achieved an average rating, 7.1% rated it as good, and a fewer 2.9% reached very good scale. The mean score for this category was 1.94, reflecting widespread difficulties in this area. In the Vocabulary section, the challenges persisted, with 34.4% rated as

very poor and 25.0% as poor. Additionally, 18.7% received an average rating, while 21.9% achieved a good. The mean score of 2.22 suggests that, while there was a slightly better performance compared to spelling and punctuation, vocabulary still posed significant challenges. The Essay Composition results exhibited a similar trend, where 35.4% of students were rated very poor and 42.7% as poor. A smaller percentage achieved ratings in the average (15.6%) and good (6.3%) categories. The overall mean score was the lowest among the three categories at 1.90, indicating considerable difficulties in structuring and conveying ideas in writing. Many students struggled to meet the required writing skills in spelling, punctuation, vocabulary, and essay writing, highlighting a critical need for focused interventions to improve these vital writing competencies.

These results are in line with research by Basha (2014), which found that deaf children in integrated and special education programs had significant difficulties writing in Amharic. Based on the scores of writing abilities of deaf students, they were faced with restricted vocabulary, lack of clarity, absence of functional terms, inadequate command of mechanics such as spelling and punctuation, and limiting structure of the sentences without making significant messages. Despite this, they cannot compose sentences in the proper sequence, follow grammatical rules, include vocabulary in the right places, and utilize punctuation appropriately. These are all identified as the learners' shared deficiencies in both languages.

Similar to these results, Research has consistently shown that deaf students experience significant spelling deficits in writing compared to their hearing peers, particularly in elementary schools (Apel and Masterson, 2015). Writing error analysis indicated that deaf children exhibit a higher prevalence of mixed errors where more than one type of error occurs in a single word and a greater frequency of phonologically plausible misspellings compared to hearing students. Similarly, other studies have reported writing difficulties regarding the word and vocabulary errors utilized by deaf students. Nugroho and Lintang Sari (2022) noted that deaf students often face challenges with vocabulary, word order, and language structure, which affects their understanding and application of appropriate grammar in their writing. As a result, their written language tends to be misspelled, repetitive, omission, and structurally simplistic (Jin and Liu, 2016).

These findings suggest that deaf students in this study require comprehensive reading and writing instruction that addresses their specific needs and challenges. The results highlight the importance of explicit instruction in areas such as comprehending the passage, spelling and punctuation, vocabulary development, and essay composition.

4.3.2. The Impact of Reading Comprehension and Writing Skills on Academic Achievement

The findings of the multiple regression analysis suggest a significant and positive relationship between the predictors (reading comprehension and writing skills) and the dependent variable (academic achievement) in grade 6 students who are deaf. The results indicate that approximately 98.1% of the variance in academic achievement can be explained by the combination of reading comprehension and writing skills. This is a substantial proportion of the variance. The multiple correlation coefficient $R = .990$ indicates a strong positive relationship between the predictors and the dependent variable, suggesting that the combination of reading comprehension and writing skills is a robust predictor of academic achievement. Reading comprehension was found to have a significant and positive relationship with academic achievement ($\beta = .606$, $t = 5.555$, $p < .05$), suggesting that reading comprehension has a statistically significant and positive relationship with academic achievement. The findings also suggest that while the relationship is not as strong as that of reading comprehension, writing skills have a statistically significant and positive relationship with academic achievement ($\beta = .389$, $t = 3.569$, $p < .05$). This indicates that as writing skills increase, academic achievement also tends to increase.

The above results highlight significant challenges in developing reading and writing abilities among deaf students. The teacher's observations and responses emphasize the need for adapted literacy support to improve deaf students' reading and writing abilities, which ultimately influences their academic performance in Amharic subjects. The teacher's description of the general reading and writing abilities of Grade 6 deaf students reveals that they struggle with fundamental writing skills, particularly punctuation and spelling. The teacher notes that deaf students consistently make errors in writing skills areas, failing to use appropriate punctuation and spelling in writing assignments, even in composition tasks designed to assess their mastery of these skills. Furthermore, a restricted writing vocabulary limits their ability to express ideas

clearly, often due to less exposure to diverse language contexts. Composing essays is further complicated by the need to organize thoughts and use appropriate language conventions, skills that may be underdeveloped from limited practice.

These findings underscore the necessity for targeted instructional strategies to enhance writing skills in deaf students. The teacher emphasizes that deaf students require appropriate instruction and support to develop their writing proficiency, specifically using writing mechanics and essay writing, to improve their overall writing abilities. The teacher's experiences teaching deaf students highlight the persistent nature of these challenges, with deaf students continuing to struggle with reading comprehension, such as vocabulary understanding, and articulating the main message of the text.

This finding agrees with the previous studies. For instance, the study by Mayberry *et al.* (2010), that many deaf individuals experience difficulties in developing reading skills, with average reading levels often remaining below those of their hearing peers. This gap in reading proficiency can lead to challenges in understanding academic content, thereby affecting overall academic achievement. Besides, writing skills are equally crucial for academic success, as they enable students to express their understanding and engage with academic tasks effectively. Research indicates that deaf students often use nonstandard grammatical forms in their writing, which can hinder the clarity and effectiveness of their communication (Wolbers *et al.*, 2011). Furthermore, the study emphasizes the importance of specialized writing instruction, which has been shown to improve the writing skills of deaf students significantly. The ability to write effectively not only aids in academic assessments but also prepares students for future employment opportunities, as proficient writing is often a requirement in professional settings (Huda, 2023).

Furthermore, these findings have implications for the education of deaf students more broadly. The results suggest that deaf students who have strong writing skills and reading comprehension are more likely to achieve academic success. Therefore, it is essential to provide deaf students with equal access to educational opportunities that foster the development of these skills. Overall, the results highlight the importance of prioritizing the development of these skills in

educational settings and suggest that targeted interventions could lead to improved academic outcomes for deaf students.

4.3.3. The Role of Teaching Expertise in the Relationship between Reading, Writing, and Academic Achievement

The findings of a moderation analysis using Hayes' (2022) Process Macro Model 1 regression analysis suggest that teaching expertise plays a significant moderating impact in the connection between reading comprehension, writing skills, and academic achievement among grade six deaf students. The findings indicate that reading comprehension and writing skills have a significant and positive impact on academic achievement among deaf students while teaching expertise plays a moderating role in these relationships.

The results of the first analysis examined the relationship between reading comprehension, teaching expertise, and academic achievement indicate that reading comprehension has a significant and positive effect on academic achievement. Specifically, the interaction between reading comprehension and teaching expertise explained 83.4% of the variance in academic achievement $\Delta R^2 = .0834$, $F(1, 44) = 24.8162$, $p < .05$, suggesting that the impact of reading comprehension on academic success varies depending on the teacher's level of expertise. Furthermore, the results indicate that reading comprehension significantly contributes to academic achievement across all levels of teaching expertise, although the effect size may vary. When teaching expertise was low, the effect of reading comprehension on academic achievement was positive and significant, indicating that reading comprehension made significant contributions to academic achievement even at low levels of teaching expertise. Furthermore, when teaching expertise was moderate and high, the effect of reading comprehension on academic achievement was also positive and significant, indicating that moderate and high levels of teaching expertise further enhanced the relationship between reading comprehension and academic achievement.

The second analysis examining the relationship between writing skills, teaching expertise, and academic achievement indicates that writing skills have a significant and positive effect on academic achievement. Specifically, the interaction between writing skills and teaching expertise accounted for 33% of the variance in academic achievement $\Delta R^2 = .0330$, $F(1, 44) =$

6.8215, $p < .05$, indicating that the effectiveness of writing skills also depends on the teacher's teaching expertise level. These results underline that both reading comprehension and writing are significantly moderated by teaching expertise. Furthermore, the findings indicated that when teaching expertise was low, writing skills significantly contributed to academic achievement, and when teaching expertise was moderate, writing skills also significantly contributed to academic achievement. Furthermore, when teaching expertise was high, writing skills again contributed to academic achievement, although the effect approached significance.

Overall, these findings suggest that teaching expertise is a critical factor in predicting academic achievement among grade six deaf students. Thus, reading comprehension and writing skills are important predictors of academic achievement, but their effectiveness depends on the level of teaching expertise.

The interview results from special needs education teachers provide valuable insights into the challenges and limitations faced by deaf students in academic settings. The teachers' responses highlight several key issues that contribute to the academic failure of deaf students, including ineffective teaching methods, lack of engagement and peer instruction, inadequate utilization of visual aids, communication barriers, and insufficient training and support of teachers. Specifically, teachers often rely on traditional teaching methods that do not cater to the unique needs of deaf students, which can lead to disengagement and marginalization of deaf students in the classroom. Additionally, teachers fail to promote meaningful interaction and cooperation between deaf students and their hearing peers, which hinders academic success and social interaction.

In line with these findings, in developing effective literacy skills for deaf students, the choice of instructional materials and teaching methodologies plays a critical role in facilitating their academic success. Traditional instructional methods often fail to accommodate the unique communication needs of deaf learners, leading to barriers in their writing development. For instance, Tedla, T., and Negassa, D. (2019) emphasize the challenges faced by deaf students, highlighting communication barriers and inappropriate teaching strategies that hinder their academic progress. To address these challenges, incorporating collaborative learning activities can greatly improve reading and writing skills by taking advantage of peer support and

participation. Furthermore, using customized resources like visual aids and sign language interpreters can establish a more inclusive setting that encourages better understanding and expression in writing assignments.

One prominent instructional method is visual and written support, which has been shown to enhance comprehension among deaf students significantly. Highlight that teachers adapt their teaching strategies by incorporating visual aids tailored to the specific challenges faced by deaf learners, thereby facilitating their understanding of the language (Yunisari *et al.*, 2021). According to Herring and Woolsey (2020), active learning techniques like peer tutoring have been recommended to enhance engagement and participation among deaf students. Argue that these methods not only promote active involvement but also improve academic outcomes for deaf learners. Furthermore, guided reading approaches, which allow for tailored instruction based on individual student needs, are particularly effective in developing literacy skills among deaf students (Schirmer and Schaffer, 2010).

Special needs teachers noted that teaching materials, such as visual aids, are not adapted or utilized effectively to support deaf students' learning needs, leading to further marginalization. Communication barriers also pose a significant challenge, as language teachers often lack experience using sign language, opting for total communication methods that restrict deaf students' expression and participation. Moreover, special needs education teachers face shortages and inadequate training, including instruction in sign language, which compromises the quality of instruction and support provided to deaf students. These findings are consistent with the results of the quantitative analysis, which highlighted the moderating role of teaching expertise on the relationship between writing skills and academic achievement among deaf students.

The importance of culturally relevant materials cannot be overlooked. Siswono, (2023) highlighted integrating local cultural contexts into instructional materials can significantly enhance the relevance and relatability of the content for deaf students, thereby improving engagement and understanding. This approach is supported by the findings of, those who emphasize the need for inclusive learning media that address the unique challenges faced by students with disabilities. Aljedaani *et al.*, (2022) mentioned that the need for accessible

learning materials and technologies became paramount, as deaf students require visual aids and clear communication methods to facilitate their learning.

According to Hendry *et al.*, (2020) one of the primary communication challenges for deaf students is their reliance on sign language, which may not be understood by their hearing peers or teachers. Effective communication is strongly linked to student engagement and academic success; when deaf students struggle to communicate, they often feel isolated and disengaged from the learning process. This isolation can be exacerbated in environments where teachers are not trained in sign language or do not employ inclusive teaching strategies that accommodate deaf learners. The lack of sign language proficiency among teachers can lead to misunderstandings and a sense of isolation for deaf learners, as they may struggle to engage with the curriculum and participate in classroom discussions (Hendry *et al.*, 2020). Similarly, it highlights that teachers often resort to verbal communication, which is not accessible to students with moderate to severe levels of deafness, necessitating the use of nonverbal communication methods (Yusuf *et al.*, 2022).

4.3.4. Challenges Faced by Deaf Students in Acquiring Reading and Writing Literacy

The educational challenges deaf students face extend beyond language teachers' teaching expertise. The qualitative findings revealed that deaf students face significant challenges in reading and writing, primarily due to comprehension and language use difficulties. Amharic language teachers noted that these students often struggle to understand main ideas, interpret vocabulary, and retain information from texts. In writing, common issues included poor spelling, fragmented sentence structure, lack of punctuation, and disorganized ideas reflecting broader gaps in language development.

Additionally, the study highlighted the critical role of teaching expertise in literacy outcomes. Many teachers lacked sign language skills, specialized training, and access to adapted materials, making it difficult to meet the needs of deaf students in inclusive classrooms. These challenges point to both student-level skill gaps and systemic instructional limitations, emphasizing the need for targeted support and teacher capacity-building. Analysis reveals that deaf individuals encounter medium to high levels of educational challenges, with a significant number indicating the necessity of sign language interpreters to comprehend scientific material effectively (Ziadat

and Rahmneh, 2020). As noted by Hammad and Awed (2023), this highlights the critical role of trained professionals in supporting deaf students' academic success.

Overall the findings emphasize the need for educators to adapt their instructional methods and provide equal access to learning opportunities for deaf students. This includes tailoring teaching methods to the unique needs of deaf students, promoting collaborative learning and peer interaction, utilizing visual aids and adapting teaching materials, and providing adequate training and support. Teachers need to be aware of and implement strategies that specifically address the needs of deaf learners, and utilize cooperative learning strategies that facilitate deaf students' participation and social interaction with their classmates. Furthermore, schools and educational administrators need to provide special needs education teachers with sufficient training and support, including instruction in sign language, to provide effective instruction and accommodations for deaf students.

The implications of these findings are far-reaching and highlight the need for systemic changes to support the educational needs of deaf students. Teacher education and professional development programs need to be revised to address the unique needs of deaf students, and schools and educational administrators need to provide ongoing support and training for teachers. Additionally, policymakers need to work to address the shortages in special needs education teachers and provide adequate training and support. By addressing these challenges and limitations, educators can work to promote academic success and social interaction among deaf students and provide them with equal access to learning opportunities.

5. SUMMARY, CONCLUSION AND IMPLICATIONS

This chapter covers the summary, conclusion, and recommendations. The first part provides a summary of the study and outlines the major findings. The conclusion of the findings is then drawn, followed by some possible recommendations based on the findings.

5.1. Summary

The main purpose of this study was to examine the reading and writing literacy of deaf students and its effect on their academic achievement. To achieve this purpose, basic research questions were raised, the general and specific objectives were identified and the significance of the study, the scope of the study, the population involved in the research, and the methods of data analyses used in this study were identified. The study aimed to address the following basic research questions:

1. What is the current status of reading, writing, and academic achievement among sixth-grade deaf students in selected primary schools?
2. To what extent do reading and writing skills influence the academic achievement of deaf students?
3. To what extent do language teachers' teaching expertise interact with the influence of reading and writing skills on the academic achievement of deaf students?
4. What challenges do deaf students encounter in acquiring reading and writing skills in inclusive classrooms?

Descriptive and inferential statistics were employed to conduct this study. The participants were 48 deaf students from grade six, 48 (Amharic, English, Afan Oromo, and Af-Somali) teachers, four Amharic language teachers, and three special needs education teachers. The key informants were selected from four primary schools in the town of Dire Dawa administration. The data was gathered through tests, questionnaires, and interviews. Data collected from assessment tests and questionnaires were analyzed using frequency, percentage, mean, multiple regression, and Hayes Process Macro Model 1 software. The data obtained from the interview was qualitatively analyzed. Based on the analyzed data, the following finding was obtained.

The analysis of reading comprehension tasks for deaf students revealed significant challenges in understanding the main idea and comprehending vocabulary. The results indicated that a substantial majority of students struggled to identify the main idea of passages, with only 27.6% to 44.8% of respondents answering correctly across five items, while 55.2% to 75.9% provided incorrect responses. Similarly, the analysis of reading vocabulary comprehension revealed that students faced notable difficulties in responding correctly to the questions presented, with only 24.1% to 44.8% of respondents answering correctly across five items. These findings were further substantiated by interview results, which highlighted that deaf students often face challenges with reading comprehension, specifically in understanding and remembering vocabulary from reading passages, as well as grasping the main idea of the text. Additionally, deaf students struggled to articulate the main message of the passage, underscoring a gap in their reading and writing skills.

Regarding the analysis of writing skills tasks revealed significant challenges across all areas, including spelling and punctuation, vocabulary writing, and essay composition. The results indicated that students struggled with basic writing mechanics, such as spelling and punctuation, with 37.9% to 51.7% of respondents scoring "very poor" in these areas. In vocabulary writing, students showed varied levels of proficiency, with 17.2% to 41.4% scoring "very poor" and 31.0% to 37.9% scoring "good" in different tasks. However, the overall performance was categorized as "average" to "poor". Essay composition tasks revealed significant challenges, with 24.1% to 44.8% of respondents scoring "very poor" and 31.0% to 55.2% scoring "poor". These findings highlight a pressing need for enhanced instructional strategies to improve essay composition skills among deaf students. Interview results corroborated these findings, suggesting that deaf students consistently make errors in writing skills areas, including punctuation, spelling, and vocabulary. Additionally, they struggle with organizing thoughts and using language conventions, which may be underdeveloped due to limited practice.

These challenges emphasize the necessity for targeted instructional strategies to enhance these challenges and emphasize the importance of adapted literacy support to improve deaf students' reading and writing abilities, ultimately influencing their academic achievement in Amharic subjects.

The regional exam results for 48 deaf grade 6 students revealed a mean score of 39.14 and a standard deviation of 11.38, with the majority of students (68.96%) scoring between 30 and 40. The distribution of scores was approximately normal, but slightly skewed to the right, indicating more students scored lower on the exam. The results showed that, on average, the students scored slightly below the midpoint of the exam scale, suggesting that deaf students face challenges in meeting expected standards in academic achievement. Moreover, it was found that a total of 34 students scored below the passing mark of 40, while 14 students achieved scores of 40 or above. This distribution indicates that a significant majority of the participants did not meet the passing criteria established by the Dire Dawa administration education bureau. The results reveal a concerning trend in academic performance, suggesting that interventions may be necessary to support students in improving their understanding and performance in future assessments. These findings highlight the need for further analysis and potential educational strategies to enhance student achievement in the Dire Dawa administration.

Regarding the effect of reading and writing skills, the multiple regression analysis revealed a strong positive relationship between writing skills, reading comprehension, and academic achievement among grade 6 deaf students. The model explained approximately 98.1% of the variance in academic achievement, indicating that the combination of writing skills and reading comprehension is a robust predictor of academic achievement. The results showed that writing skills had a statistically significant and positive relationship with academic achievement ($\beta = .389, p < .05$). Reading comprehension also had a significant and positive relationship with academic achievement ($\beta = .606, p < .05$). Overall, the findings suggest that deaf students' academic achievement can be significantly predicted by their writing skills and reading comprehension, highlighting the importance of these skills in supporting their academic success.

The moderated regression analysis revealed that the interaction between reading comprehension and teaching expertise significantly predicted academic achievement among sixth-grade deaf students, accounting for 8.34% of the variance in academic achievement $\Delta R^2 = .0834, F(1, 44) = 24.81, p < .05$. Notably, the effect of reading comprehension was significant at low ($t = 12.5, p < .05$) and moderate teaching expertise levels ($t = 14.4, p < .05$), indicating a positive contribution to academic achievement. Furthermore, at high teaching expertise levels, the

relationship approached significance ($t = 11.8, p < .05$). Overall, the findings suggest that teaching expertise is an important moderator in the relationship between reading comprehension and academic performance, with moderate expertise enhancing this relationship.

The results also found that the interaction between writing skills and teaching expertise significantly predicted academic achievement among sixth-grade deaf students, explaining 3.3% of the variance in academic achievement $\Delta R^2 = .0330, F(1, 44) = 6.82, p < .05$. The impact of writing skills on academic success varied with the level of teaching expertise. At low levels of teaching expertise ($-.5309$ SD), writing skills significantly contributed to academic achievement ($t = 9.29, p < .05$). This positive relationship continued at moderate levels of expertise (0.0000 SD, $t = 11.46, p < .05$). At high levels of expertise ($.5309$ SD), the effect approached significance ($t = 9.32, p < .05$), indicating that writing skills also positively influenced academic achievement. Overall, the findings suggest that teaching expertise is an important moderator in the relationship between writing skills and academic performance, with moderate expertise enhancing this relationship.

The interview results with special needs teachers supported these findings, highlighting the importance of teaching expertise in promoting academic achievement among deaf students. They emphasized that regular teachers often neglect the unique learning needs of deaf students, using traditional teaching methods that do not cater to their specific requirements. Additionally, teachers lack awareness of effective instructional methods for deaf students, leading to a lack of engagement and cooperation between teachers and deaf students. The interview results also highlighted communication barriers, teaching materials, and qualified teachers as significant factors contributing to the academic failure of deaf students. Teachers' inability to use sign language, inadequate training and professional development, and insufficient support from special needs education teachers were identified as major limitations impacting literacy development and academic achievement among deaf students.

5.2. Conclusion

This study examined the reading and writing literacy of deaf students and its effect on their academic achievement. The results of the study revealed significant challenges in both reading comprehension and writing skills among deaf students. Specifically, the findings highlighted difficulties in identifying the main idea of passages, vocabulary comprehension, and articulating

the main message of the text. Additionally, significant challenges were found in writing skills, including spelling, punctuation, vocabulary writing, and essay composition.

The results of the study demonstrate that the academic achievement of deaf students is significantly influenced by their reading comprehension and writing skills. The multiple regression analysis revealed a strong positive relationship between writing skills, reading comprehension, and academic achievement, with the combination of writing skills and reading comprehension accounting for approximately 98.1% of the variance in academic achievement.

Furthermore, the study found that teaching expertise plays a significant role in moderating the relationship between reading comprehension, writing skills, and academic achievement. The results showed that teaching expertise had a significant impact on the relationship between reading comprehension and academic achievement, with lower to moderate levels of teaching expertise strengthening this relationship.

The interview results with special needs teachers corroborated these findings, highlighting the importance of teaching expertise, awareness of effective instructional methods, and sufficient support for literacy development among deaf students. The teachers also emphasized the need for increased awareness of the unique learning needs of deaf students, use of sign language in instruction, and adequate training and professional development for special needs education teachers.

Overall, this study suggests that the academic achievement of deaf students can be significantly improved by addressing the challenges they face in reading comprehension and writing skills. The findings emphasize the need for targeted instructional strategies that cater to the unique learning needs of deaf students, and for providing teachers with the necessary training and support to effectively address these needs.

The study has important implications for policymakers, educators, and researchers involved in special needs education. The findings highlight the need for adapted literacy support for deaf students and for developing teacher expertise to cater to their unique learning needs. Additionally, the study underscores the importance of continuous professional development for special needs education teachers and the need for ongoing research to identify effective instructional strategies for improving the academic achievement of deaf students.

In conclusion, this study demonstrates that deaf students' academic achievement is significantly influenced by their reading comprehension and writing skills and that teaching expertise plays a crucial role in moderating this relationship. The findings highlight the need for targeted instructional strategies, teacher training, and support, and adapted literacy support for deaf students to improve their academic achievement.

5.3. Implications

Deaf students' academic achievement is significantly influenced by their reading comprehension and writing skills, with teaching expertise playing a crucial role.

To address these challenges, Teachers must continuously develop professional development to cater to the unique learning needs of deaf students, ensuring they receive adequate support for literacy development. This includes utilizing sign language in instruction, providing sufficient training for language teachers, and enhancing academic achievement.

The findings of this study have important implications for primary school language teachers, policymakers, educators, and researchers involved in special needs education. Policymakers can use these findings to inform the development of policies that promote inclusive education and equal access to education for the literacy of deaf students. Educators can use these findings to develop targeted instructional strategies that cater to the unique learning needs of deaf students and to provide teachers with the necessary training and support to effectively address these needs. Researchers can use these findings to inform future research on effective instructional strategies for improving the reading and writing literacy of deaf students.

More specifically, supporting deaf students in educational settings is multifaceted, targeting teachers, schools, and the Ministry of Education. For instance, language teachers should implement targeted literacy programs specifically designed to strengthen reading comprehension and writing skills among deaf students. These programs should concentrate on critical areas such as identifying main ideas, expanding vocabulary, and perfecting spelling and essay composition skills. Additionally, developing individualized educational plans that incorporate tailored instructional strategies will be essential in addressing the distinct learning needs of deaf students.

It is essential to provide comprehensive sign language training for teachers including language teachers who teach deaf students. This will facilitate effective communication and help create a more inclusive learning environment. Strengthening support systems within schools is also crucial; special needs education teachers should facilitate ongoing training and resources to enhance their effectiveness in promoting literacy development. Furthermore, teaching materials must be accessible in all resource centers and appropriate for deaf students, which includes offering visual aids, sign language resources, and technology-integrated materials. Schools are encouraged to cultivate a culture of inclusivity by providing professional development workshops that raise awareness of the unique challenges faced by deaf students, thereby fostering collaboration among teachers, administrators, and support staff.

At the policy level, the Ministry of Education should advocate for policy improvement that require the integration of best practices in deaf education into teacher training programs and ongoing professional development. Additionally, there should be a commitment to allocate funding for literacy initiatives and resources specifically for deaf students in schools. Implementing these recommendations will greatly enhance the educational experiences and academic outcomes for deaf students.

In conclusion, Addressing reading and writing challenges for deaf students can improve academic achievement through teacher expertise, adapted literacy support, and targeted instructional strategies, promoting inclusive education and equal access.

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APPENDIX – A

የተስተካከለ መደበኛ የመመርመሪያ ንባብ እና መጻፍ ፈተና ለ6ኛ ክፍል መስማት ለተሳናቸው ተማሪዎች።

ሀራማያ ዩኒቨርሲቲ

የድህረ-ምረቃ ፕሮግራም ዳይሬክቶሬት የትምህርት እና የስነ-ባህሪ ሳይንስ ኮሌጅ የልዩ ፍላጎቶች እና አካታች ትምህርት ክፍል

ውድ ተሳታፊ

የዚህ ምዘና ፈተና ዋና ዓላማ " መስማት የተሳናቸው ተማሪዎች ማንበብና መጻፍ እና በአካዳሚክ ውጤታቸው ላይ ያለው ተጽእኖ በድሬዳዋ ከተማ አስተዳደር በተመረጡ አንደኛ ደረጃ ትምህርት ቤቶች" በሚል ርዕስ የቀረበውን ጥናት በተመለከተ ተገቢውን መረጃ መሰብሰብ ነው። የንባብ የመረዳት ፈተና ባለብዙ ምርጫ ጥያቄዎችን የሚከተል የንባብ ምንባብ እና እንዲሁም ለጽሑፍ ፈተና በቀረበው መረጃ ላይ ተመስርተው መልስ የሚሹ ጥያቄዎችን መጻፍ ያካትታል።

ተመራማሪው እርስዎ የሚሰጡት መረጃ በሚስጥር እንደሚጠበቅ እና ለአካዳሚክ ዓላማዎች ብቻ እንደሚውል ሊያረጋግጥልዎ ይፈልጋል። ተመራማሪው ስለ ትብብርዎ እና ደግነትዎ አስቀድመው ለማመስገን ፍላጎት አላቸው።

አጠቃላይ አቅጣጫ፡-

- ስምህን መጻፍ አይጠበቅብህም።
- መግለጫዎችን በጥንቃቄ ያንብቡ።

መመሪያ አንድ፡ ስለ ተሳታፊዎች አጠቃላይ ዳራ መረጃ ነው። እባክዎን ለሚከተለው 1-3 መረጃ የቀረበውን ቦታ ይሙሉ። ከዚያም ለተቀሩት አጠቃላይ ዳራ ጥያቄዎች፣ እባክዎ ከመረጡት በተቃራኒ ባይ ቦታ ላይ “√” ምልክት በማድረግ ምላሽ ይስጡ።

1. የትምህርት ቤቱ ስም፡- _____
2. ጾታ፡ _____ ዕድሜ፡ _____
3. የክፍል ደረጃ፡ _____
4. የመስማት ሁኔታ፡ መስማት የተሳናቸው _____ በከፊል መስማት የተሳናቸው _____ መስማት የተሳናቸው ዓይነት ስውሮች _____ ሌሎች _____
5. የቤተሰብ ዳራ፡- መስማት ከተሳናቸው ቤተሰብ _____ ከሚሰማ ቤተሰብ _____

ክፍል አንድ፡ የንባብ ግንዛቤ ፈተና

አቅጣጫዎች፡- በአንቀጹ ውስጥ በተሰጠው መረጃ ላይ በመመስረት የሚከተሉትን ባለብዙ ምርጫ ጥያቄዎች መልሱ (1-10) ።

ታዋቂው ገጣሚ ጸጋዬ ገብረመድህን አምቦ አካባቢ ቦዳ በምትባል መንደር ውስጥ ተወለደ። በጄኔራል ዊንጌት ትምህርት ቤት ቆይታው “ንጉስ ዳዮኒሰስ እና ሁለቱ ወንድሞች” የሚል ተውኔት ፅፏል። እ.ኤ.አ. በ 1959 የመጀመሪያ ደረጃ ትምህርቱን ካጠናቀቀ በኋላ በቺካጎ የጥቁር ድንጋይ የሕግ ትምህርት ቤት ተምሯል። ፀጋዬ ወደ ኢትዮጵያ እንደተመለሰ የኢትዮጵያ ብሔራዊ ቴአትርን ይመራ ነበር። በኢትዮጵያ ስነ-ጽሁፍ እና ጥበብ ላይ ላበረከቱት አስተዋፅኦ ተከብሯል። የፈጠራ ትሩፋትን ትቶ በየካቲት 2006 ከዚህ አለም በሞት ተለየ።

(ምንጭ: የ6ኛ ክፍል የአማርኛ መጽሐፍ)

1. ሎሬት ፀጋዬ ገብረመድህን የከፍተኛ ትምህርታቸውን የተከታተሉት በ_____ ነበር።

ሀ) ጄኔራል ዊንጌት ት/ቤት ለ) ጥቁር ድንጋይ ት/ቤት ሐ) አምቦ ከተማ መ/በቦዳ

2. በአንቀጽ 1 መስመር 4 ላይ "እሱ" የሚለው ተውላጠ ስም _____ ይጠቅሳል።

ሀ/ የኢትዮጵያ ብሔራዊ ቴአትር ለ/ ቺካጎ ሐ/ ሎሬት ፀጋዬ ገብረመድህን መ/ ጄኔራል ዊንጌት

3. ሎሬት ፀጋዬ በ _____ ይታወቅ ነበር።

ሀ/ ተጨዋች ለ/ ገጣሚ ሐ/ ዶክተር መ/ ንጉስ

4. በመጨረሻው መስመር ላይ ባለው አንቀጽ ላይ በሞት ተለየ የሚለው ቃል _____

ሀ/ አጋጠመ ለ/ ኖረ ሐ/ አወጣ መ/ አረፈ

5. በዚህ አንቀጽ ‘ሁለቱ ወንድሞች’ የሚለው ሐረግ የሚያመለክተው።

ሀ/ ወንድሞቹ ለ/ የተውኔት ስም የጻፈው ሐ/ የሎሬት ጸጋዬ ወንድሞች መ/ ምንም

6. ፀጋዬ ጄኔራል ዊንጌት ትምህርት ቤት ሲማር ምን ተውኔት ፈጠረ?

ሀ/ ሮሚዮ እና ጁሌት ለ/ ንጉስ ዳዮኒሰስ እና ሁለቱ ወንድማማቾች ሐ/ ሃምሌት መ/ ማክቤት

7. ፀጋዬ ወደ ኢትዮጵያ ከተመለሰ በኋላ ጊዜውን ለምን አሳለፈ?

ሀ/ በዩኒቨርሲቲ ማስተማር ለ/ ሆስፒታል ማስተዳደር ሐ/ የኢትዮጵያ ብሔራዊ ቴአትርን መቆጣጠር መ/ ንግድ ሥራ መጀመር

8. ፀጋዬ ገብረመድህን ትቶት የሄደው ውርስ ምንድን ነው?

ሀ/ የአመራር ውርስ ለ/ የፈጠራ እና የባህል ማበልፀጊያ ትሩፋት ሐ/ የሀብት ትሩፋት መ/ የቴክኖሎጂ ትሩፋት

9. በአንቀጹ አውድ ውስጥ "የታወቀ" ማለት ምን ማለት ነው?

ሀ/ ያልታወቀ ለ/ ታዋቂው ሐ/ አይናፋር መ/ ጸጥታ

10. በአንቀጹ አውድ ውስጥ “አስተዋፅኦ” ማለት ምን ማለት ነው?

ሀ/ መቀነስ ለ/ ልገሳ ሐ/ ማቆየት መ/ ችላ ማለት

ክፍል ሁለት: የፅሁፍ ፈተና

አቅጣጫዎች: በተሰጠው መረጃ መሰረት የሚከተሉትን ጥያቄዎች መልሱ።

Language construction and Mastery of mechanics

ሀ. የሚከተሉትን የተዘበራረቁ ቃላትን እንደገና አስተካክል እና ትክክለኛ ዓረፍተ ነገሮችን በተገቢው የስርዓተ-ነጥብ ምልክቶች ይጻፉ።

1. ሰራተኛ / ሴና / ነች / ውስጥ / ባንክ / የፀሐፊ

2. የጥርስ ሐኪም / የኔ / ናት / እህት

3. መሆን / እኔ / እፈልጋለሁ / ሳድግ / መሃንድስ

4. የጠገን / ነው / ሰው / መኪናዎችን / ሜካኒክ

5. ሐኪሙን / አገኘኸው / መቼ

Content knowledge, and effective use of vocabulary

ለ. ከዚህ በታች ያለውን ጽሑፍ ለማጠናቀቅ ትክክለኛ የፊደል አጻጻፍ ያላቸውን ቃላት ይምረጡ።

አንዳንድ እንስሳት ሰውነታቸውን በ_____ (1) (ሩቅ፣ ሱፍ) ተሸፍነዋል። ሌሎች እንስሳት ሰውነታቸውን በ _____ (2) (ለባዎች፣ ባህሪያት) ተሸፍነዋል። ሌሎች ደግሞ ሚዛኖች ወይም _____ (3) (ቅርፊት፣ ሼል) አላቸው። በእነዚህ ምክንያቶች እንስሳት _____ (4) (ብዙ፣ ገንዘብ) የሸፋን ዓይነቶች እና ቅርጾች አሏቸው።

Organization of the ideas

ሐ. በቅንፍ ውስጥ ያሉትን ቃላት በመጠቀም የሚከተሉትን ዓረፍተ ነገሮች ያጠምሩ። ከላይ ያሉትን ዓረፍተ ነገሮች ወደ ሁለት የተለያዩ አንቀጾች አዳብራቸው።

I. ተመሳሳይነቶች

- 1. ማር ጣፋጭ ነው። ስኳር ጣፋጭ ነው። (ሁለቱም)
- 2. ማር ከሻይ ጋር መጠቀም ይቻላል። ስኳር ከሻይ ጋር መጠቀም ይቻላል። (በተመሳሳይ ሁኔታ)
- 3. ማር የአገር ውስጥ ሜዳን ለመሥራት ሊያገለግል ይችላል። ጠንካራ ሜዳ ለማዘጋጀት ስኳር ይደባለቃል። (በተመሳሳይ መንገድ)
- 4. ማር ኬክ ለመሥራት ያገለግላል። ስኳር ዱቄት ኬክ ለመሥራት ያገለግላል። (ብቻ ሳይሆን)

II. ልዩነቶች

- 1. ማር የሚሠራው ከአበቦች ነው። ስኳር ከሸንኮራ አገዳ ይሠራል። (ምንም እንኳን)
- 2. ማር በማር ንቦች ይሠራል። በፋብሪካዎች ውስጥ ስኳር ይመረቃል። (በተቃራኒው)

3. ማር በፈሰሽ መልክ ነው። ስኳር አብዛኛውን ጊዜ በጠንካራ መልክ ነው። (ነገር ፬፻፺)

አንቀጽ 1

ማር እና ስኳር አንዳንድ ተመሳሳይነት አላቸው። ማር እና ስኳር ሁለቱም ጣፋጭ ናቸው።

አንቀጽ 2

ማር እና ስኳር አንዳንድ ልዩነቶች አሏቸው። ማር የሚሠራው ከአበቦች የአበባ ዱቄት ሲሆን ስኳር ደግሞ ከሽንኩራ አገዳ ይሠራል።

APPENDIX – B

ለቋንቋ መምህራን መጠይቅ

ሀራማያ ዩኒቨርሲቲ

የድህረ-ምረቃ ፕሮግራም ዳይሬክቶሬት

የትምህርት እና የስነ-ባህሪ ሳይንስ ኮሌጅ

የልዩ ፍላጎቶች እና አካታች ትምህርት ክፍል

ውድ ተሳታፊ

የዚህ መጠይቅ ዋና ዓላማ " መስማት የተሳናቸው ተማሪዎች ማንበብና መጻፍ እና በአካዳሚክ ውጤታቸው ላይ ያለው ተጽእኖ በድሬዳዎ ከተማ አስተዳደር በተመረጡ አንደኛ ደረጃ ትምህርት ቤቶች" በሚል ርዕስ የቀረበውን ጥናት በተመለከተ ተገቢውን መረጃ መሰብሰብ ነው። ተመራማሪው እርስዎ የሚሰጡት መረጃ በሚስጥር እንደሚጠበቅ እና ለአካዳሚክ ዓላማዎች ብቻ እንደሚውል ሊያረጋግጥልዎ ይፈልጋል። ተመራማሪው ስለ ትብብርዎ እና ደግነትዎ አስቀድመው ለማመስገን ይፈልጋል።

አጠቃላይ አቅጣጫ:-

- ስምህን መጻፍ አይጠበቅብህም።
- መግለጫዎችን በጥንቃቄ ያንብቡ።

መመሪያ አንድ: ይህ ስለ ተሳታፊዎች አጠቃላይ ዳራ መረጃ ነው። እባክዎን በተጠቀሰው ቦታ የትምህርት ቤቱን ስም ይሙሉ። ከዚያም፣ ለቀሩት የአጠቃላይ ዳራ ጥያቄዎች፣ እባክዎ ከመረጡት በተቃራኒ ባዶ ቦታ ላይ “√” ምልክት በማድረግ ምላሽ ይስጡ።

አጠቃላይ ዳራ መረጃ

- 1. የትምህርት ቤቱ ስም:** _____
- 2. ጾታ:** ወንድ ሴት
- 3. ዕድሜ:** 19 ዓመት እና ከዚያ በታች 20-25 26-30
31-35 36 ዓመት እና ከዚያ በላይ
- 4. የትምህርት ደረጃ:**
ስርተፊኬት ዲፕሎማ ዲግሪ እና ከዚያ በላይ
- 5. የስራ ልምድ:**
ከ 2 ዓመት በታች 2-4 ዓመት

5-7 ዓመት 8 ዓመት እና ከዚያ በላይ

መመሪያ ሁለት: - ማንበብና መጻፍ ቁልፍ ፈተናዎችን የሚወክሉ ተከታታይ መግለጫዎች አሉ። እያንዳንዱን መግለጫ በጥንቃቄ ያንብቡ እና በትምህርት ቤትዎ ውስጥ ስላሉት ቁልፍ ተግዳሮቶች አስተያየትዎን ከአማራጮች በአንዱ ላይ “✓” ምልክት ያድርጉ።

1 = በጣም አልስማማም 2 = አልስማማም 3 = ገለልተኛ 4 = እስማማለሁ 5 = በጣም እስማማለሁ

ተ.ቁ	ዋና ተግዳሮቶች	ደረጃ (ምላሽ)				
	የማስተማሪያ ዘዴዎች እና የማስተማሪያ / የመማሪያ ቁሳቁሶች					
1	መምህራን መስማት የተሳናቸውን ተማሪዎች የተለያዩ ፍላጎቶችን የሚያሟሉ ውጤታማ የማስተማር ዘዴዎችን ይጠቀማሉ።					
2	መስማት የተሳናቸው ተማሪዎች ማንበብና መጻፍ እንዲችሉ ለማገዝ መምህራኑ በሰዎሰው ህጎች ላይ ልዩ የማስተማሪያ ዘዴዎችን አቅርቦታል።					
3	መምህራን መስማት የተሳናቸው ተማሪዎችን ለማገናዘብ በክፍል ውስጥ የአቻ ድጋፍ እና ትብብርን ይጠቀማሉ።					
4	መስማት የተሳናቸው ተማሪዎች ማንበብ እና መጻፍን ለመርዳት መምህራን በማንበብ እና በመጻፍ ስህተቶቻቸው ላይ ጠቃሚ ግብረመልስ ይሰጣሉ።					
5	መምህራን የተማሪዎችን የተለያዩ ፍላጎቶች ለማሟላት ትምህርቶችን እንደማለመድ ያሉ የተለያዩ ትምህርቶችን ይለማመዳሉ።					
6	መምህሩ በድምጻች ብቻ ከመተማመን ይልቅ የእይታ ንድፎችን ከትርጉም እና ከድምጻች ጋር ያገናኛል።					
	የግንኙነት እንቅፋቶች (communication barriers)					
7	በክፍል ውስጥ አስተማሪዎቹ በሚያስተምሩበት ወቅት ንግግሮችን፣ የከንፈር ቃላትን እና የጣት ፊደላትን ይጠቀሙ ነበር።					

8	መስማት የተሰናቸው ተማሪዎች በቋንቋ የበለፀገ አካባቢ ምንም አይነት ተጋላጭነት እንደሌላቸው ይሰማኛል።					
9	መስማት የተሰናቸው ተማሪዎች ማንበብና መጻፍ በሚችሉ እንቅስቃሴዎች ውስጥ እንዲሳተፉ የሚያስችል የምልክት ቋንቋ ተርጓሚዎች እና የበለጸገ የቃላት አጠቃቀም አለ።					
	ብቁ መምህራን እጥረት (lack of qualified teachers)					
10	መስማት የተሰናቸው ተማሪዎችን ለማስተማር በመምህራን መካከል በቂ እውቀትና ክህሎት እጥረት አለ።					
11	ትምህርት ቤቱ የልዩ ፍላጎት መምህራን እጥረት አለበት።					
12	መስማት ለተሰናቸው ተማሪዎች ማንበብና መጻፍ ክህሎትን በማስተማር ላይ የተለየ ስልጠና አላገኘሁም።					

APPENDIX – C

መስማት የተሳናቸው ተማሪዎች መጠይቅ

ሀራማያ ዩኒቨርሲቲ

የድህረ-ምረቃ ፕሮግራም ዳይሬክቶሬት

የትምህርት እና የስነ-ባህሪ ሳይንስ ኮሌጅ

የልዩ ፍላጎቶች እና አካታች ትምህርት ክፍል

ውድ ተሳታፊ

የዚህ መጠይቅ ዋና ዓላማ "መስማት የተሳናቸው ተማሪዎች ማንበብና መጻፍ እና በአካዳሚክ ውጤታቸው ላይ ያለው ተጽእኖ በድሬዳዎ ከተማ አስተዳደር በተመረጡ አንደኛ ደረጃ ትምህርት ቤቶች" በሚል ርዕስ የቀረበውን ጥናት በተመለከተ ተገቢውን መረጃ መሰብሰብ ነው። ተመራማሪው እርስዎ የሚሰጡት መረጃ በሚስጥር እንደሚጠበቅ እና ለአካዳሚክ ዓላማዎች ብቻ እንደሚውል ሊያረጋግጥልዎ ይፈልጋል። ተመራማሪው ስለ ትብብርዎ እና ደግነትዎ አስቀድመው ለማመስገን ይፈልጋል።

አጠቃላይ አቅጣጫ:-

- ስምህን መጻፍ አይጠበቅብህም።
- መግለጫዎቹን በጥንቃቄ ያንብቡ።

መመሪያ አንድ: ይህ ስለ ተሳታፊዎች አጠቃላይ ዳራ መረጃ ነው። እባክዎን በተጠቀሰው ቦታ የትምህርት ቤቱን ስም ይሙሉ። ከዚያም፣ ለቀሩት የአጠቃላይ ዳራ ጥያቄዎች፣ እባክዎ ከመረጡት በተቃራኒ ባዶ ቦታ ላይ “√” ምልክት በማድረግ ምላሽ ይስጡ።

አጠቃላይ ዳራ መረጃ

1. የትምህርት ቤቱ ስም: _____
2. ጾታ: ወንድ ሴት

መመሪያ ሁለት: - ማንበብና መጻፍ ቁልፍ ፈተናዎችን የሚወክሉ ተከታታይ መግለጫዎች አሉ። እያንዳንዱን መግለጫ በጥንቃቄ ያንብቡ እና በትምህርት ቤትዎ ውስጥ ስላሉት ቁልፍ ተግዳሮቶች አስተያየትዎን ከአማራጮች በአንዱ ላይ “√” ምልክት ያድርጉ።

1 = በጣም አልስማማም 2 = አልስማማም 3 = ገለልተኛ 4 = እስማማለሁ 5 = በጣም እስማማለሁ

ተ.ቁ	ዋና ተግዳሮቶች	ደረጃ (ምላሽ)				
	የንባብ ግንዛቤ					
1	ብዙውን ጊዜ በክፍል ደረጃ የመረዳት ችሎታን አሳይቻለሁ					
2	የንባብ ቁሳቁሶችን ይዘት በቀላሉ መረዳት እችላለሁ					
3	በቂ የክፍል ደረጃ የቃላት እውቀት አለኝ					
4	በጽሑፍ ውስጥ ያለውን ሐሳብ በቀላሉ ማገናኘት እችላለሁ					
	የመጻፍ ችሎታ					
5	ብዙ ጊዜ ሥርዓተ-ነጥቦች እና የፊደል አጻጻፍ ስርዓቶች ላይ በቂ ችሎታ አሳያለሁ					
6	ሃሳቦችን በጽሁፍ ማደራጀት እችላለሁ					
7	በቂ የአጻጻፍ ቅንብር አለኝ					
8	ተገቢውን የጽሑፍ ቅንጅቶች ለመተግበር በቂ ችሎታ አለኝ					
	የአካዳሚክ ስኬት					
9	ደከም ያለ የአጻጻፍ ችሎታ የአካዳሚክ ስኬትን ያደናቅፋል					
10	የንባብ ግንዛቤ ውጤቶች በአካዳሚክ አፈፃፀም ላይ ተጽዕኖ ያሳድራሉ					
11	በትምህርት ዓይነቶች የእኔ የፈተና ውጤቶች ከአማካይ በታች ናቸው።					
12	የማንበብ እና የመጻፍ ችሎታን ማዳበር የአካዳሚክ ስኬትን ሊተነብይ ይችላል					
13	በማንበብ፣ በመጻፍ እና በትምህርት ርዕሰ ጉዳይ ስኬት መካከል ጠንካራ ግንኙነት እንዳለ ይሰማኛል።					

APPENDIX – D

የልዩ ፍላጎት እና አማርኛ ቋንቋ መምህራን የቃለ መጠይቅ ጥያቄዎች

ሀራማያ ዩኒቨርሲቲ

የድህረ-ምረቃ ፕሮግራም ዳይሬክቶሬት

የትምህርት እና የስነ-ባህሪ ሳይንስ ኮሌጅ

የልዩ ፍላጎቶች እና አካታች ትምህርት ክፍል

ውድ ተሳታፊ

የዚህ ቃለ መጠይቅ ዋና አላማ "መስማት የተሳናቸው ተማሪዎች ማንበብና መጻፍ እና በአካዳሚክ ውጤታቸው ላይ ያለው ተጽእኖ በድሬዳዎ ከተማ አስተዳደር በተመረጡ አንደኛ ደረጃ ትምህርት ቤቶች"

በሚል ርዕስ ያለውን ጥናት በተመለከተ ጠቃሚ መረጃዎችን መሰብሰብ ነው።

ተመራማሪው የሚሰጡት መረጃ በሚስጥር እንደሚጠበቅ እና ለአካዳሚክ ዓላማዎች ብቻ እንደሚውል ሊያረጋግጥልዎ ይፈልጋል። ተመራማሪው ስለ ትብብርዎ እና ደግነትዎ አስቀድመው ለማመስገን ይፈልጋል።

የልዩ ፍላጎት ትምህርት አስተማሪዎች የቃለ መጠይቅ ጥያቄዎች፡-

ዳራ መረጃ

- 1. የትምህርት ቤቱ ስም፡- _____
- 2. የስራ መደብ፡ _____
- 3. ጾታ፡ _____
- 4. ዕድሜ፡ _____
- 5. የትምህርት ደረጃ፡ _____
- 6. የስራ ልምድ፡ _____

መስማት የተሳናቸው ተማሪዎች የማንበብ እና የመጻፍ ችሎታን ለማግኘት ከሚያጋጥሟቸው ቁልፍ ተግዳሮቶች ጋር የተያያዙ የቃለ መጠይቅ ጥያቄዎች፡-

- 1. በ6ኛ ክፍልህ ውስጥ ያሉትን መስማት የተሳናቸውን ተማሪዎች አጠቃላይ የማንበብ እና የመጻፍ ችሎታቸው እንዴት ያብራራሉ?

2. መስማት ለተሳናቸው ተማሪዎች ማንበብና መጻፍን በማስተማር ረገድ ውጤታማ የሆኑት የትኞቹን የማስተማሪያ ዘዴዎች ናቸው? አስተማሪዎች በሚያስተምሩበት ጊዜ እንደዚህ ዓይነት የማስተማር ዘዴዎችን ይጠቀማሉ ብለው ያስባሉ?
3. የቋንቋ መምህራን መስማት የተሳናቸውን ተማሪዎች ማንበብና መጻፍ ለማዳበር የማስተማሪያ ቁሳቁሶች እና ግብአቶች ይጠቀማሉ? ምን ዓይነት የማስተማሪያ ቁሳቁሶች እና ግብአቶች ይጠቀማሉ?
4. የቋንቋ መምህራን በማስተማር ወቅት መስማት ከተሳናቸው ተማሪዎች ጋር ውጤታማ ግንኙነትን (effective communication) የሚያደርጉት እንዴት ነው? በተለይም ግብረ መልስ እና ማበረታቻን በተመለከተ?
5. በተሞክሮቹ ብቁ የሆኑ መምህራን እጥረት መስማት የተሳናቸው ተማሪዎች ማንበብና መጻፍ እንዴት ይጎዳል? ምን ክፍተቶችን ተመልክተዋል?

**ለአማርኛ ቋንቋ መምህራን የቃለ መጠይቅ ጥያቄዎች
ዳራ መረጃ**

- 1. የትምህርት ቤቱ ስም:- _____
- 2. የስራ መደብ: _____
- 3. ጾታ: _____
- 4. ዕድሜ: _____
- 5. የትምህርት ደረጃ: _____
- 6. የስራ ልምድ: _____

መስማት የተሳናቸው ተማሪዎች የማንበብ እና የመጻፍ ቁልፍ ተግዳሮቶች ጋር የተያያዙ 4 ተከታታይ የቃለ መጠይቅ ጥያቄዎች ከዚህ በታች አሉ።

- 1. የአማርኛ ፅሁፎችን በሚያነጡበት ጊዜ ዋናውን ሃሳብ በመለየት አስመልክቶ ከስድስተኛ ክፍል መስማት የተሳናቸው ተማሪዎች ጋር ያጋጠመህን ምልክታ እና ልምድ ማስረዳት ትችላለህ?
- 2. መስማት የተሳናቸው ተማሪዎች የአማርኛ ፅሁፎችን የቃላት ግንዛቤ እንዴት ይችገራሉ? የቃላት ግንዛቤያቸውን ለማሻሻል ምን አይነት ስልቶችን መጠቀም ትችላላችሁ?
- 3. የስድስተኛ ክፍል መስማት የተሳናቸው ተማሪዎች በአማርኛ ድርሰቶችን በማዘጋጀት የሚያጋጥሟቸውን ፈተናዎች ቢገልጹልኝ?
- 4. መስማት የተሳናቸው ተማሪዎች በአማርኛ ሲጽፉ በሥርዓተ-ነጥብ እና በሆኔያት ላይ የሚያጋጥሟቸውን ፈተናዎች እንዴት ያዩታል?