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ASSESSMENT OF AWARENESS ABOUT SPECIFIC LEARNING DISABILITY AMONG PUBLIC PRIMARY SCHOOL TEACHERS IN BOLE SUB CITY, ADDIS ABABA

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DECLARATION

I the undersigned, hereby declare that the thesis entitled "An ***Assessment of Awareness about Specific Learning Disability among Public Primary School Teachers in Bole Sub City, Addis Ababa City Administration"*** is my original work and all sources of materials used for this thesis have been duly acknowledged.

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ACRONYMS

ADHD	Attention Defecate and High per-activity Disorder
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorder
IDEA	Individuals with Disabilities Education Act
IEP	Individual Educational plan
LD	Learning difficulty
LDAC	Learning Disabilities Association of Canada
MD	Mathematical difficulty
RD	Reading Difficulty
SLD	Specific Learning Difficulty
UNESCO	United Nations Educational, Scientific and Cultural Organization
WD	Writing Difficulty
WHO	World Health Organization

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ABSTRACT

The purpose of the study was to investigate awareness of specific learning disability among public primary school teachers in Bole sub city, Addis Ababa. In doing so, qualitative and quantitative cross-sectional research design was employed. Data were gathered from a total of 283 respondents in eighteen public primary schools. Questionnaire and key informant interview were employed as a data gathering tools. At the end, data was analyzed using quantitative and qualitative approaches. Descriptive statistical tools like frequency, percentage, and inferential statistical tools like Independent sample T-test and one way ANOVA were used to analyze quantitative data and qualitative data were analyzed thematically using narrative mode. The results revealed that majority of sample respondents were aware about the concepts, causes and instructional strategies of LDs; were not aware about identifications of symptoms in students with reading, writing and math difficulties. There is significant difference on teachers' awareness about LDs in terms of education level. The issue of LD should also involve the governmental and non-governmental organizations, professional in the fields of special need and schools should be equipped with the necessary awareness and facilities to help improve academic qualifications of students with LD.

Key words*: Specific Learning Difficulties, Education Level,*

CHAPTER ONE
INTRODUCTION

1.1. Background of the study

Defining what disabilities are remains problematic as there are many different groups of disabilities, and within these groups there are vast individual differences. Therefore, attempting to define disabilities is complex and often quite controversial. Many people with impairments do not define themselves as having a disability. Some people with hearing impairment who use a sign language as their main form of communication, will not define themselves as having a disability, but as a member of a language minority (sign languages), suffering the same form of discrimination as many other language minority groups. Others prefer the term "difabled" or "differently abled" (Farrell, 2008).

Disability is an impairment that may be cognitive, developmental, intellectual, mental, physical, sensory, or some combination of these. Disability can be physical impairment which can often be easily-noticeable; or it could be cognitive, intellectual or mental impairment which often may not be easily-noticeable (Grigorenko, 2008)

Under the Individuals with Disabilities Education Act of 2004 (IDEA), the federal law that protects students with disabilities, learning disability is defined as

> The term means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage. (pp. 300)

In general, learning disabilities refers to a neurobiological disorder related to differences in how one's brain works and is structured. Further, learning disability is a general term that describes specific kinds of learning problems. A learning disability can cause a person to have trouble learning and using certain skills (Lerner, 2002). The skills most often affected are reading, writing, listening, speaking, reasoning, and doing math (Heward, 2005; National Dissemination Center for Children with Disabilities, 2004; Pierangelo & Giuliani, 2006).

Learning disabilities vary from person to person and encompass a heterogeneous group of disorders. One person with LD may not have the same kind of learning problems as another person with LD. Someone with LD may have problems with understanding math. Another person may have trouble understanding what people are saying. Therefore, no single profile of an individual with LD can be accurate because of the inter-individual differences in the disorder (Friend, 2005).

There is some debate about what 'conditions' are considered to be learning difficulties. The present study will focus on the three most common forms of SLD reading difficulty, writing difficulty and dyscalculia. Reading difficulty is a disorder manifested by difficulty in learning to read despite conventional instructional, adequate intelligence and socio-cultural opportunity; it is dependent upon fundamental cognitive disabilities which are frequently of constitutional origin. Writing difficulty is acquired loss of previous ability to write resulting from brain injury or brain disease. It is usually difficulty in learning to write which is out of harmony with the other intellectual accomplishments and manual skills of the individual. While Math difficulty is a structural disorder of mathematics which has its origins at a genetic or constitutional disorder without simultaneous disorder of general mental functions (Sletmo, 2004).

Learning disabilities tend to be diagnosed when children reach school age. This is because school focuses on the very things that may be difficult for the child: reading, writing, math, listening, speaking, and reasoning. Teachers and parents notice that the child is not learning as expected. The school may ask to evaluate the child to see what is causing the problem. Parents can also ask for their child to be evaluated. With hard work and the proper help, children with LD can learn more easily and successfully. For school-aged children (including preschoolers), special education and related services are important sources of help. School staff members work with the child's parents to develop an individualized education program, or IEP.

Children with learning disabilities face both environmental and individual barriers. Combined they create a set of barriers that need to be reduced, and if possible removed by schools, homes and communities in order for the children concerned to be able to reach their full academic, social, emotional, and physical potential. The environmental barriers include: Limited or no access to early intervention programmes; Discrimination by Teachers, school administrators and school inspectors against children who are perceived to be different from the majority of their peers; Teaching approaches and teaching/learning material that are not

learning-friendly; Assessment and evaluation that exclusively or primarily assess the academic level of children according to the general standards, rather than individual progress; and School and classroom environments which are not inclusive, learning-friendly. While the individual factors may include, but not limited to: Poor Communication and motivation; Insecurity, low self-esteem and lack of self-confidence (Wapling, 2016).

There are a number of studies conducted on various dimensions of learning Disabilities based on the experiences of different countries for instance: A research conducted by Bloch, 1986; Perrin & Gerrity, 1984 confirms that students who have learning disabilities may underachieve in the school setting when their unique needs are not met. Another study conducted by (Diane Pedrotty Bryant, 2000) revealed that students with Learning disabilities are at risk for being underachievers when their impairment results in limitations on physical and cognitive abilities, or results in limited school attendance and decreased opportunity for school success.

Globally it still remains as "one of the least understood and most debated conditions that affect children. To serve the needs of the children with learning disability most effectively, all preserves teachers should have a thorough knowledge on learning disability and various instrument techniques to assist such children in general education classrooms.

In Ethiopian context, Children with Specific learning difficulties (SLD) have 'significant intellectual or cognitive impairments'. This has a major effect on their ability to participate in the school curriculum without support. They may also have difficulties in mobility and co-ordination, communication and perception and the acquisition of self-help skills. Pupils with severe learning difficulties will need support in all areas of the curriculum. They may also require teaching of self-help, independence and social skills. Paucity of statistical data determining the extent and spread of learning disabilities among Ethiopian population led to marginalization of these groups and the failure of providing them with the necessary education needed from a young age.

Generally speaking, there often appears to be gap between the individual's potential and actual achievement. We all know that every child is unique and different. They have different abilities; learn in different ways, and at different paces. Most primary schools' teachers, however, do not have enough knowledge about learning disorders and do not know how to realize appropriate mediations to overcome those difficulties, possibly resulting into unsatisfactory alterations concerning the learning process of some children. Hence the present

study assessed primary school teachers' awareness about learning disabilities in Bole Sub-City Public schools, Addis Ababa, Ethiopia.

1.2. Statement of the problem

According WHO and the World Bank Group (2008), as cited in UNESCO report on disability (2009), it is estimated that more than a billion people or more than 15% of the world's population are living with disabilities.

Learning Disabilities are very common around the world. In the United States, a learning disability category now accounts for 52% of all students with disabilities served in special education. In fact, one-third of all children who receive special education have a learning disability (*Twenty-Ninth Annual Report to Congress,* U.S. Department of Education, 2010).

Statistics shows that in developed countries of the western hemisphere, approximately 5% of all students in the public schools have a LD among which Reading Disability (also known as Reading difficulty) is the most common learning disability accounting for at least 80% of all LDs and it affects about 10 percent of a given population regardless of ethnic background, suggesting that it is a common type of learning difficulty. In addition, 2.8 million children (ages 6 through 21) have some form of a learning disability and are currently receiving special education services for learning disabilities in the United States.

In Ethiopia, an East African country with a population size of nearly 100 million, it is estimated that there are more than 7.3 million persons with disabilities (WHO, 2008). Not surprisingly, the most affected groups among the disabled are those who are in rural areas in general and women and children in particular.

A learning disability can cause a person to have trouble in learning and using certain skills. The skills most often affected are: reading skills, writing, auditory processing, spoken and written language skills, abstract reasoning, visual processing and visual spatial skills and doing mathematics (Mather & Goldstein, 2001).Learning disabilities (LD) however, vary from person to person. One person with learning disabilities may not have the same kind of learning problems as another person with learning disabilities. One person may have trouble with reading and writing. Another person with learning disabilities may have problems with understanding Mathematics. Still another person may have trouble in each of these areas, as well as with understanding what people are saying.

While the academic apprehension of these learning and reading difficulties increased, the standards and quality of professional practice and intervention are unclear (Kirby, Davues, &

Bryan, 2005). According to various research studies done in UK and USA, there is a lack of awareness and clear misconception among teachers relating the specific learning difficulty (Roper, 2010; Reid, 2005; Wadlington & Wadlington, 2005). This lack of awareness among teachers might obstruct understanding of the children's needs and lead to frustration and anxiety (Reid, 2005).

Even though there is no well-thought-out study conducted in Ethiopia on the prevalence of reading difficulty, a pilot study (Sintayehu, 2014) carried out in 9 primary schools, 5 in Addis Ababa and 4 in Southern Nations, Nationalities and Peoples' region, has shown that a significant number of children (i.e., at least four in a classroom) have some degree of reading difficulty. The study has also indicated that, in almost all cases, neither the children with reading difficulty nor their teachers seemed to know that the children are struggling in school because of this hidden learning disability. All the teachers did not even know that there is such a thing as reading difficulty. Due to lack of awareness among students, parents and their teachers of the nature of LD, often, these children are labeled as lazy, stupid, retarded and disruptive and have an unhappy time at school, when in fact they may be highly intelligent and trying incredibly hard. It is not uncommon in Ethiopia, to hear stories of neglect of dyslexic children in school.

It is an established fact that for children with LD, conventional learning is quite difficult. A child who struggles with the acquisition of basic literacy skills (such as reading, spelling, expressing thoughts on paper and acquiring adequate use of grammar) can also suffer a lot of anguish and trauma when they may feel mentally abused by their peers within the school environment. Much can be done to alleviate this by integrating the child into the class environment, where he/she can feel comfortable and develop confidence and self-esteem. Class teachers may be confused by the student whose consistent underachievement seems due to what may look like carelessness or lack of effort.

The knowledgeable elementary school teachers are very important. Weak classroom instruction and low literacy levels of elementary school students are often associated with teachers who lack a basic understanding of the literacy constructs related to language. Screening millions of students and identifying children with specific learning disabilities by educational system is a major logistics difficulty. Therefore, awareness and knowledge about learning disorders among school teachers may play a major role in early identification and management of children with these disorders.

It was, thus, against this background that the researcher sought toinvestigate teachers' awareness about learning disabilities among public primary schools in Bole sub-city, Addis Ababa.

1.3. Research Questions

The following were the major research questions answered in this study.

1. What is the level of awareness about learning difficulty among public primary school teachers?
2. Does level of awareness about learning difficulties in Public primary schools differ as a function of teachers' education level and grade level of teaching?

1.4. Objectives of the study

1.4.1. General objective

The general objective of the study will be to assess the awareness of learning difficulties among public primary school teachers in Bole sub city, Addis Ababa.

1.4.2. Specific objectives

For this study the specific objective were to:

1. Determine awareness about the learning difficulty among Public primary school teachers in Bole sub city.
2. See if level of awareness about learning difficulties differs as a function of teacher's education level and grade level of teaching.

1.5. Variables of the Study

1.5.1. Criterion variable

Awareness about learning disability among public primary school teachers in Bole sub-city, Addis Ababa

1.5.2. Classificatory variable

Education level

Grade level of teaching

1.6. Significance of the Study

SLD can be identified as early as 3 to 4 years of age when children enter preschool and teachers need to be sensitized on how to screen or at least be able to differentiate SLD from other problems of learning. In this regard, this study provided a tool to study how much these teachers know about SLD and also served to plan for teacher education programs, workshops, etc., to improve the existing situation of school teachers so that they will be able to effectively make early identification of SLD which is one of the management strategies in treating SLD. Listed below were the most significant imperatives that the present study offered:

- Assessing the current knowledge level of elementary school teachers regarding specific learning disabilities that will serve as useful empirical data to the current or future studies
- Help teachers identify and give service to those students who are with specific learning disabilities.
- Pinpointing training needs for teachers as well as special need professional at least, on a primary school levels.
- Forwarding findings that bring an attitudinal change among school teachers towards students with specific learning disability.
- Suggesting issues that support schools adopt policies for students with learning difficulties so they won't be misjudged, stigmatized and discriminated

1.7. Scope of the study

To make the study manageable from time and budget perspectives, conduct detailed analysis and suggest fruitful recommendation, it was delimited to Addis Ababa City Administration. The study was conducted to assess the awareness of specific learning disability among eighteen public primary school teachers in Bole sub city and it included only teachers teaching from grade one to eight. In addition, in this study only the awareness of three most common forms of specific learning difficulties (Reading difficulty, writing difficulty and Math difficulty) were considered.

1.8. Definitions of key terms

- ***Awareness***-in the present study, referred to the primary school teachers' knowledge about various aspects of specific learning difficulties such as dyslexia, dysgraphia, dyscalculia.

- ***Primary School Teachers***: was used in the present study to refer to those teachers teaching from grade one to eight at governmental and community schools.
- ***Specific learning disabilities*** - In the present study, includes dyslexia (Reading difficulty), dysgraphia (Writing difficulty), and dyscalculia (Mathematics difficulty). It is an imperfect ability to read, write, speak, spell, co-ordinate or to do mathematical calculation. The term Specific Learning Difficulty (SLD), in the present study, has been used interchangeably with the word Learning Difficulty (LD).

1.9. Organization of the study

This study was organized in to five main chapters. The first chapter discussed the Background of the study, Statement of the problem, Research questions, Objectives of the study, Significance of the study, Scope of the study, and Operational Definitions of key terms. The second chapter dealt with review of related literature. The third chapter was about the methodology of the study which included, Research design, Description of study area, Target population, Sample and sampling techniques, Data source and type of data, Method of data collection and its instrumentation, Pilot study, Data collection procedures, Data analysis and interpretation, and Ethical consideration. Results of the study and discussions of major findings were presented in chapter four. Within this chapter, an assessment of the level awareness about learning difficulties among public primary school teachers and discussion of major findings obtained from the research study was presented. Chapter five summarized and concluded on the findings of the study and stated recommendation based on the findings.

Chapter Two
Literature Review

2.1. Introduction

This chapter provided an insight to readers about the concepts and theoretical view of the topics under study. In line with the objectives of the study, the chapter covered topics related to the meanings, causes, and effects of three most common types of learning difficulties (reading difficulty, writing difficulty and math difficulty), and awareness among teachers about these difficulties. Furthermore, the conceptual framework of the study was presented at the end of this chapter.

2.2. Overview of learning disability

2.2.1. Defining learning disability

Interestingly, there is no clear and widely accepted definition of learning disabilities. Because of the multidisciplinary nature of the field, there is on-going debate on the issue of definition. According to the Learning Disabilities Association of Canada (LDAC), as cited in Wapling, (2016) learning disabilities refer to a number of disorders, which may affect the acquisition, organization, retention, understanding, or use of verbal or non-verbal information including:

- oral language (e.g., listening, speaking, understanding);
- reading (e.g., decoding, phonetic knowledge, word recognition, comprehension);
- written language (e.g., spelling and written expression);
- mathematics (e.g., computation, problem solving);
- social skills (e.g., social perception, social interaction, perspective taking);

Under the Individuals with Disabilities Education Act of 2004 (IDEA), the federal law that protects students with disabilities, learning disability is defined as:

> The term means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, reading difficulty, and developmental aphasia. The term does not include learning problems that are primarily the result of visual, hearing, or motor disabilities,

of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage. (pp., 300)

2.2.2. Cause of specific learning disability

The causes for learning disabilities are not well understood, and sometimes there is no apparent cause for a learning disability. Despite intense research activity over the years, pinpointing the precise cause or causes of learning disabilities has remained an elusive goal (Deutsch-Smith, 2004; Turnbull, Turnbull, Shank, & Smith, 2004).

Today, research indicates that the causes are more diverse and complex (Pierangelo & Giuliani, 2006). New evidence seems to show that most learning disabilities do not stem from a single, specific area of the brain but from difficulties in bringing together information from various brain regions (Lerner, 2002; University of Maryland Medical Center, 2004).

Research has suggested various possible causes for specific learning disabilities.

a. Genetic factors

Over the years, evidence has accumulated that learning disabilities can be inherited (Hallahan & Kauffman, 2006). The fact that learning disabilities tend to run in families indicates a possible genetic link (Winkler, 2006). Researchers have found that about 35 to 45 percent of first-degree relatives, that is, the immediate birth family (parents and siblings) of persons with reading disabilities have reading disabilities. Some experts are beginning to suggest that an interactive relationship among several genes establishes the risk factors for reading disabilities (Wood & Grigorenko, 2001). Similar findings are also observed in twins with peach and language disorders (Wapling, 2016).

b. Tobacco, Alcohol, and Other Drug Use During Pregnancy

Research shows that a mother's use of cigarettes, alcohol, or other drugs during pregnancy may have damaging effects on the unborn child (Centers for Disease Control and Prevention, 2001; Roy, 1994; Wakschlag, Lahey, &Loeber, 1997).

Scientists have found that mothers who smoke during pregnancy may be more likely to bear smaller babies. This is a concern because small new-borns, usually those weighing less than five pounds, tend to be at risk for a variety of problems, including learning disorders (Centres for Disease Control and Prevention, 2001; Roy, 1994).

Alcohol also may be dangerous to the foetus' developing brain (Coles et al., 1991; Dumas, 1994; Hanson, 1992; Kennedy & Mukerji, 1986; Lucchi & Covelli, 1984; Mattson et al.,

1994; Mayo Clinic Staff, 2007b; Rawat, 1977; Shaywitz & Cohen 1980; Streissguth, Barr, & Sampson, 1986; Sulik, Johnston, & Webb, 1981). It appears that alcohol may distort the developing neurons. Any alcohol use during pregnancy may influence the child's development and lead to problems with learning, attention, memory, or problem solving.

The extensive use of drugs like marijuana and cocaine has been associated with increases in symptoms links with learning disabilities. Because children with certain learning disabilities have difficulty understanding speech sounds or letters, some researchers believe that learning disabilities, as well as ADHD, may be related to faulty receptors. Current research points to drug abuse as a possible cause of receptor damage (Fried & Smith, 2001; Richards, 2001).

c. Complications During Pregnancy

Other possible causes of learning disabilities involve complications during pregnancy (University of Maryland Medical Centre, 2004). In some cases, the mother's immune system reacts to the foetus and attacks it as if it were an infection. This type of disruption seems to cause newly formed brain cells to settle in the wrong part of the brain. Or during delivery, the umbilical cord may become twisted and temporarily cut off oxygen to the foetus. This, too, can impair brain functions and lead to LD (Richards, 2001).

d. Poor Nutrition

There seems to be a link between nutritional deprivation and poor biochemical functioning in the brain. A poor diet and severe malnutrition can reduce the child's ability to learn by damaging inter-sensory abilities and delaying development. Studies over the past ten years and clinical trials (conducted at Purdue University in the United States and Surrey and Oxford in the United Kingdom) indicate that some learning disabilities may have a nutritional basis. Other studies indicate that some learning disabilities might be caused by allergies to certain foods, food additives, and environmental allergies (Pierangelo & Giuliani, 2006).

Learning disabilities affect the cognitive processes related to learning and are thought to be due to variations in brain structure and function. Students with learning disabilities experience difficulty as a result of impairments in one or more processes related to perceiving, thinking, remembering, and Learning. Although the following factors may further complicate the challenges faced by individuals with learning disabilities, such disabilities are not due primarily to hearing and/or vision problems; socio-economic factors; cultural or linguistic differences; Lack of motivation; and Ineffective teaching (Miller, Sanchez, & Hynd, 2003).

2.2.3. Effects of learning disability

A learning disability, also referred to as a learning disorder, affects the way an individual processes information including receiving, manipulating, organizing, sorting, managing, and expressing information (American Psychiatric Association, 2000). Although a learning disability's impact is primarily in academic areas important for education including college, it can also affect other elements of an individual's life such as self-esteem and social engagement (Gregg, 2006).

2.2.3.1.Impact of Learning Disability on academic functioning

LDs are a life-long condition that affects people differently depending on the situation. LDs can affect academic functioning, daily life and social life. For example, LDs can interfere with sight reading, reading comprehension, math, and writing. They can also interfere with organization, managing time, following multi-step instructions or interpreting graphs, charts and maps, for example. Some people with LDs have trouble interpreting facial expressions, understanding body language, understanding tones of voice or taking turns in conversations. Children with some disabilities are even more exposed to various physical and emotional abuses as well as to neglect (Lewis & Bagree, 2013).

Children and youth with LDs typically experience repeated failure. In school, they may work incredibly hard but the outcome may not reflect the effort. Over time, it can be more difficult for a child to keep trying and often, we see behaviours that are identified as 'non-compliant' or 'oppositional' yet which may reflect an understandable coping strategy of avoidance or hopelessness. This may lead to a lower sense of mastery and fewer opportunities to feel competent at something or to achieve success. Children and youth with LDs may feel like they're not meeting others' expectations, that they're letting down their parents and teachers, and not working hard enough when they're trying so hard. This can all lead to the experience of negative feelings, including worry, anger, frustration, and sadness (Gregg, 2006).

2.2.3.2. Social, emotional & behavioral challenges for students with LD.

Rejection, isolation, and peer pressure: Children who are less chosen by peers at school, have fewer opportunities to interact and build friendships and tend to experience frequent states of loneliness, Showing poor pro-social behaviour and emotional distress (Bryan, 1974a; 1974b; 1976, Magali t& Al-Yagon; 2002; Ochoa & Olivarez, 1995; Swanson &

Malone, 1992; Tur-Kaspa, 1999) Mugnaini, Lassi, La Malfa &Wentzel, Barry, & Caldwell, 2004).

Other studies pointed out that, although some students with LD may be able to easily join social groups, these groups are more frequently characterized by behavioural problems and lower levels of pro-social behaviour. Furthermore, adolescents with LD tend to show more willingness to conform to negative peer pressure to engage in risk-behaviours (e.g., substance and alcohol abuse, unprotected sexual activity, delinquency and gambling) to avoid social isolation and to support friends' requests and wishes. These behaviours are considered as an effective way to be accepted by peer's isolation, conflict, and difficulties in creating and maintaining social relationships can lead students to build friendships with those who are rejected by peers such as students with behavioural problems, with similar learning difficulties or younger children. This may represent an additional obstacle to the development of social competence, turning away children with LD from the mainstream peer group (Bryan, Werner, & Pearl, 1982; Bryan, Pearl, & Fallon, 1989, McNamara, Vervaeke, & Willoughby, 2008, Bakker, Denessen, Bosman, Krijgert, & Bouts, 2007; Valås, 1999; Yu, Zhang, & Yan, 2005, Wiener, 2002; Wiener & Schneider, 2002).

Low Self-efficacy and self-esteem: Research has indicated that the self-efficacy and self-esteem of children with LD may be negatively influenced by classroom isolation, by the difficulties of dealing with school demands and by repeated experiences of school failure Children with LD tend to compare their performance with that of their peers and consider themselves different, less valued and less skilled. Feelings of discomfort, anxiety, and frustration are often associated with failure experiences in school demands such as reading aloud in front of the classmates or in situations when traditional teaching methodologies based purely on writing-reading skills. Such situations negatively impact the learning motivation and engagement of students with LD, with students avoiding to engage in activities that require any sort of academic effort or skills (Zeleke, 2004, Gadeyne, Ghesquière, & Onghena, 2004; Humphrey & Mullins; 2002).

Social, emotional and behavioural difficulties: Students with LD seem to be less accurate in recognizing expressions of emotions such as anger, fear, joy, and embarrassment showing more difficulties in correctly interpreting social situations and in predicting the behavioural consequences of specific actions. Furthermore, they show fewer and less sophisticated strategies to manage conflict resolution compared with peers without LD, especially in tasks that require the ability to understand social situations, such as exhibiting a tendency to

wrongly attribute negative intents to others‟ behaviour and the emotional states of others (Wiig & Harris, 1974, Bruno, 1981; Saloner & Gettinger, 1985, Mattys, Cuperus, & Van Engeland, 1999; Pina, Marino, Spadaro, & Sorrentini, 2013).

Students with LD are also prone to manifest a higher level of behaviour problems, such as difficulty in maintaining and sustaining positive social interactions and verbal and non-verbal aggressive behaviours toward peers. The impact of these problems increases with the growing difficulties in reading during the first years of primary school, and may exacerbate across time if they are not recognized and understood in the light of the specific learning disability. Likewise, frustration and lack of motivation may be experienced when the correct diagnosis is missing, with further negative consequences such as withdrawal from school. About 10% of children with LD may also show somatic symptoms such as migraine and stomach pain while depressive symptoms and anxiety become more evident in adolescence (Cullinan, 2002; Gresham & McMillan, 1997, Fuchs & Fuchs, 2006, Mugnaini, Lassi, La Malfa, & Albertini, 2009, Bender, Rosenkrans, & Crane, 1999; Margari, et al., 2013).

2.3. Reading Difficulty

2.3.1. Definitions

Reading difficulty is the learning disability associated with reading (Pierangelo & Giuliani, 2006). According to the National Center for Learning Disabilities (2008),

> Reading difficulty is a life-long language processing disorder that hinders the development of oral and written language skills. Children and adults with reading difficulty can be highly intelligent; however they have a neurological disorder that causes the brain to process and interpret information differently.

Reading difficulty is a learning difficulty that mainly affects a person's fluency or comprehension accuracy in being able to read. This condition can manifest itself as a difficulty with (a) *phonological awareness* (i.e., the ability to identify how words are made up of smaller units of sound), (b) *phonological decoding* (i.e., the process of relating a word's written representation to its verbal representation), (c) *orthographic coding* (i.e., the ability to both store in memory and retrieve from memory letters and word patterns), (d) *auditory short-term memory* (i.e., the ability to remember auditory information over a brief period of time),or (e) *verbal processing speed naming* (i.e., the time it takes to process and recognize familiar verbal information, such as letters and digits). Hence, reading difficulty is specific learning difficulty that mainly affects the skills involved in the reading and spelling of words.

Although there are several causes of reading difficulty, it is generally agreed by researchers that reading difficulty is caused primarily by impairment in the brains ability to translate image received from the eyes or ears into understandable language. It does not result from vision or hearing problems. Reading difficulty is not due to mental retardation, brain damage or lack of intelligence. Other cause of reading difficulty according to researchers is as a result of slowness or failure of language to lateralize to the left hemisphere. The failure may be due to physiological abnormality, or to the child's assumption that he or she will fail or lack motivation. There is also the possibility of neural immaturity; the brain is lateralized, but as a result of slowness in development in the language area of the left hemisphere, the child has difficulty in learning to read. (e.g. McCandliss et al and Nobel 2003, Czepita et al 2006, Martins et al 2010, Kinsborne and Hiscook in Osa-Afina 2003).

The exact causes of reading difficulty are still not completely clear, but anatomical and brain imagery studies show differences in the way the brain of a person with reading difficulty develops and functions. Moreover, most people with reading difficulty have been found to have problems with identifying the separate speech sounds within a word and/or learning how letters represent those sounds, a key factor in their reading difficulties. Reading difficulty is not due to either lack of intelligence or desire to learn; with appropriate teaching methods, students with reading difficulty can learn successfully (International Reading difficulty Association, 2007).

2.3.2. Signs and Symptoms

According to the International Reading difficulty Association (2007), diagnostic symptoms of reading difficulty vary based on the age and grade level of the child. Listed below are the possible diagnostic symptoms of reading difficulty for pre-schoolers to adults (Hallahan & Kauffman, 2006; International Reading difficulty Association; Lerner, 2002; Pierangelo & Giuliani, 2006; Spafford & Grosser, 2005):

- Has trouble learning the alphabet, rhyming words, or connecting letters to their sounds and makes many mistakes when reading aloud and repeats and pauses often
- He does not understand what is read and has exceptional difficulty with spelling
- Learns language late and has a limited vocabulary and shows trouble remembering the sounds that letters make or hearing slight differences between words.
- Has trouble understanding jokes, comic strips, and sarcasm and exibhits trouble following directions such as: Mispronounces words or uses a wrong word that sounds

similar and straggles organizing what he or she wants to say or cannot think of the word needed for writing or conversation and struggl to understand the social rules of conversation, such as taking turns, and may stand too close to the listener.

- Confuses math symbols and misreads numbers and cannot retell a story in order (what happened first, second, third) and difficulty where to begin a task or how to go on from there

Reading difficulty or (Dyslexia) is a brain-based type of learning disability that specifically impairs a person's ability to read (Pierangelo & Giuliani, 2006). These individuals typically read at levels significantly lower than expected, despite having normal intelligence. Although the disorder varies from person to person, common characteristics among people with reading difficulty are difficulties with phonological processing (the manipulation of sounds) and/or rapid visual-verbal responding (National Institute of Neurological Disorders and Strokes, 2007).

2.3.3. Strategies for Helping students with Reading difficulty

Some of the strategies used to helping children with reading difficulties include: providing a quiet area for activities like reading, answering comprehension questions; using books on tape; using books with large print and big spaces between lines; provide a copy of lecture notes; not counting spelling on history, science or other similar tests; allowing alternative forms for book reports and the use of a laptop or other computer for in-class essays; using multi-sensory teaching methods; and teaching students to use logic rather than rote memory (Spafford & Grosser, 2005)

2.4. Writing Difficulty

2.4.1. Definitions

Dysgraphia is a neurological disorder characterized by writing disabilities (Pierangelo & Giuliani, 2006). Specifically, the disorder causes a person's writing to be distorted or incorrect. In children, the disorder generally emerges when they are introduced to writing. They make inappropriately sized and spaced letters or write wrong or misspelled words, despite thorough instruction (National Institute of Neurological Disorders and Strokes, 2006).

A few people with dysgraphia lack only the fine motor coordination to produce legible handwriting, but some may have a physical tremor that interferes with writing. In most cases, however, several brain systems interact to produce dysgraphia. Some experts believe that

dysgraphia involves a dysfunction in the interaction between the two main brain systems that allows a person to translate mental into written language (phoneme-to-grapheme translation, i.e., sound to symbol, and lexicon-to grapheme translation, i.e., mental to written word). Other studies have shown that split attention, memory load, and familiarity of graphic material affect writing ability. Typically, a person with illegible handwriting has a combination of fine motor difficulty, inability to re-visualize letters, and inability to remember the motor patterns of letter forms.

Students' handwriting problems can arise from their lack of fine-motor coordination, failure to attend to task, inability to perceive and/or remember visual images accurately, or inadequate handwriting instruction in the classroom (Friend & Bursuck, 2002, cited in Turnbull et al., 2004).

2.4.2. Signs and Symptoms

Diagnostic symptoms of dysgraphia include the following (International Dyslexia Association, 2000):

- Generally illegible writing (despite appropriate time and attention given the task)
- Inconsistencies: mixtures of print and cursive or upper- and lowercase letters or irregular sizes, shapes, or slants of letters and unfinished words or letters; omitted words
- Inconsistent position on page with respect to lines and margins and Inconsistent spaces between words and letters
- Cramped or unusual grip, especially the following:
  - ✓ Talking to self while writing or carefully watching the hand that is writing
  - ✓ Slow or labored copying or writing, even if the result is neat and legible
  - ✓ Content that does not reflect the student's other language skills
  - ✓ Combination of fine-motor difficulty, inability to re-visualize letters, and inability to remember the motor patterns involved with writing

Many students struggle to produce neat, expressive written work, whether or not they have accompanying physical or cognitive difficulties. They may learn much less from an assignment because they must focus on writing mechanics instead of content. After spending more time on an assignment than their peers, these students understand the material less. Not surprisingly, belief in their ability to learn suffers. When the writing task is the primary

barrier to learning, or demonstrating knowledge, then accommodations, modifications, and remediation for these problems may be in order (Jones, 1999; Library of Congress, 2000).

2.4.3. Strategies for Helping students with Dysgraphia

Learning Disabilities Association, (2005) strongly recommends some of the strategies to be used to helping children with writing difficulties including: avoiding chastising student for sloppy, careless work; using oral exams; allowing use of tape recorder for lectures and a note taker; providing notes or outlines to reduce the amount of writing required; reducing copying aspects of work (pre-printed math problems); suggesting use of pencil grips and /or specially designed writing aids; and providing alternatives to written assignments (video-taped reports, audio-taped reports).

2.5. Dyscalculia (Difficulty in Math)

2.5.1. Definitions

MDs are learning disabilities that affect the development of skills in mathematics, such as understanding quantitative concepts, translating language-based problems into mathematical symbols, and following sequences of steps." Students diagnosed with a disability in mathematics may also have difficulty recalling and understanding basic mathematics facts and often cannot remember the multiplication tables despite spending hours trying to memorize them. Students with MDs may have difficulty reading mathematical signs and copying numbers or figures correctly, as well as difficulty with direction and orientation, working memory, long-term memory, processing speed, and visual-spatial ability (American Psychiatric Association, DSM-IV-TR, 2000; Payne and Turner, 1999).

2.5.2. Signs and Symptoms

Diagnostic symptoms of math difficulty include difficulties with the following tasks (Learning Disabilities Association, 2005; Newman, 1998):

- Remembering dance step sequences or rules for playing sport and abstract concepts of time and direction
- Organizing problems on the page, keeping numbers lined up, following through on long division problems and Putting language to math processes and understanding and doing word problems
- Grasping and remembering math concepts rules, formulas, and sequences (order of operations) and basic addition, subtraction, multiplication, and division facts

- Maintaining a sense of direction and understanding money and cash transactions
- Athletic coordination (e.g., keeping up with rapidly changing physical directions as in aerobic, dance, and exercise classes)
- Recalling schedules and sequences of past or future events and strategic planning for games such as chess and being on time and mentally figuring change due back or the amounts to pay for tips, taxes, etc.
- Recalling dates or addresses, visualizing or picturing the location of the numbers on the face of a clock or the geographical locations of states, countries, oceans, streets, etc.
- Long-term memory (retention and retrieval) of concepts (e.g., being able to perform math operations one day but drawing a blank the next) and retaining a memory of the "layout" of things (e.g., getting lost or disoriented easily)

Difficulties in mathematics are often major obstacles in the academic paths of students with learning disabilities, as they frequently continue to cause problems throughout high school. Mastery of fundamental quantitative concepts is vital to learning more abstract and complex mathematics, a requirement for students who seek to complete high school and attend colleges or universities (Cirino, Morris, & Morris, 2002, cited in Hardman et al., 2005). Further research on difficulties with mathematics and on effective instruction for students who encounter such problems grows more important as such young people seek to achieve more challenging educational goals (Hardman et al., p. 178).

2.5.3. Strategies for Helping students with Math difficulty

According to Pierangelo & Giuliani, (2006), teachers should use the following strategies to help children who have difficulty in Math, including: providing peer assistance and Work with manipulative; suggesting use of colored pencils to differentiate problems; using mnemonic devices to learn steps of a math concept as well as rhythm and music to teach math facts and to set steps to a beat; scheduling computer time for the student for drill and practice and using diagrams and draw math concepts.

2.6. Teacher's Awareness regarding Learning disabilities

Teacher's knowledge has not been a widespread interest for researchers. Most studies in the field have investigated knowledge regarding LD and most studies revealed that teachers have a limited knowledge of LD (Brook, Watemberg & Geva, 2000; Scuito, Terjesen & Frank,

2000; Snider, Busch & Arrowood 2003). Overview of prevalent misconceptions about LD follows.

Different studies reveal the prevalence of teachers' misconceptions that a learning disability is a consequence of parental spoiling and that LD pupils are just lazy (Brook, Watemberg & Geva, 2000). Teacher's lack of knowledge has been brought also regarding the prognosis of LD. In Brook, Watemberg & Geva's study, 60 % of the teachers believed that LD disappears with age. Culatta & Tompkins (1999) write that teachers are often faced with confusion over the definition of LD; they do not understand the difference between slow learners and children with LD. Some abovementioned points are also confirmed by Turkington & Harris (2003) who claim that in their experience teachers often need to be explained that LD are not the same as mental retardation, autism, deafness, blindness or behavioural disorders. Nor does poverty, environmental factors or cultural differences cause learning disabilities.

A study conducted to assess the awareness and sensitivity among parents, teachers, school management and counsellors regarding learning disability in 35 schools of Mumbai found that 69% of the schools do not conduct learning disability training programmes for teachers. When asked about the specific academic difficulties the child faces, 37% teachers were not aware, 49% had minimal awareness and 14% had adequate awareness. 69% of schools do not have a counsellor 83% do not have the facility of a resource room. 83% do not have a remedial educator. Only 11 schools of the 35 interviewed send children to the hospital for certification and the remaining schools refer to any other source.

A study done in Israel in 2001 among 46 school teachers regarding attitude and knowledge of attention deficit hyperactivity disorder and learning disabilities among high school teachers found out that 74% teachers have relatively low knowledge (Scoz, 2014).

A study conducted by Raquel Caroline Ferreira Lopes, (2013) among 25 teachers who teaches in the Public Elementary School in Sao Paulo, reveals that teachers do not present funded knowledge about learning disorders, and do not know which procedures should be taken, when facing those problems. The results evidenced that their knowledge about learning disorders is superficial and biased, because during their academic education, they did not have any courses about the theme. The result also states that teachers do not know about learning disorders and have difficulties in classifying their causes, or naming the problem which they are facing; and do not know how to realize the appropriate intervention so that the student can overcome the difficulties.

Another study conducted to explore Classroom Teachers' Awareness of Pupils with Learning Disabilities by Focas M. Kafonogo, (2013) among 100 teachers in Tanzania states that it was difficult to detect reading difficulty by teachers, due to its different manifestation forms (68%). However, teachers know that dyslexic children make more efforts to read than other children (72%). Silver (2012) and Wu (2013) state that it is necessary to check the altered characteristics concerning abilities, as identification or decoding the word, reading comprehension, calculus, mathematic rationality, spelling and written expression, which may have academic areas which comprise, broadly, the oral expression and hearing comprehension.

According to Scoz (2014), learning problems are not restricted to physical or psychological causes, neither to the analyses of the social conjunctures, it is necessary to understand them, from a multidimensional focus comprising organic, cognitive, affective, social and pedagogical factors, observed within the social articulations. Similar to the answers of this study, in which 80% of the teachers answered that the environment of the students is crucial for their scholastic performance and they arise from the socio cultural deficit of their families (68%), a total of 92% reinforces that the school should help the child to overcome the cultural deficit, promoting access to written culture, in order to guarantee their development.

In Ethiopia, an East African country with a population size of nearly 100 million, it is estimated that there are more than 7.3 million persons with disabilities (WHO). In the country, disability is widely associated with superstition (spiritual evil) and, often, societies do not let disabled persons to go out in public. This leads to families hiding disabled family members, which leads to inaccurate information and statistics on disabilities.

Based on the World Report on Disability jointly issued by the World Bank and World Health Organisation, there are an estimated 15 million children, adults and elderly persons with disabilities in Ethiopia, representing 17.6 per cent of the population. A vast majority of people with disabilities live in rural areas where access to basic services is limited. In Ethiopia, 95 per cent of all persons with disabilities are estimated to live in poverty. Many depend on family support and begging for their livelihoods. A study in Oromia region, for instance, found that 55 per cent of the surveyed persons with disabilities depend on family, neighbours and friends for their living, while the rest generate meagre income through self-employment, begging and providing house maid services (Sintayehu, 2014).

One in seven Ethiopians has a disability. In Ethiopia, disability is generally considered to be a curse, so families as well as communities discriminate against people with disabilities. In the past, only 0.7 present of disabled people in Ethiopia have had access to an education. This situation has been changing as education for the disabled in Ethiopia is becoming more and more inclusive (Zeleke, 2004, Gadeyne, Ghesquière, & Onghena, 2004).

Despite some encouraging efforts in recent years, there is little noticeable adjustment in the school system that would help to accommodate the need of persons with disabilities. Currently, the major disability related problems attested in Ethiopia include:

- Lack of public understanding/awareness;
- Lack of information on the number and status of disabilities;
- Shortage of basic needs, such as vocational training placement, health facilities,
- Inaccessibility to assistive devices (Zeleke, 2004 et., al)

Due to these and other challenges, Ethiopia has not yet lived up to its expectations in handling the issues relating to disability. This is very apparent more in the education system than in other domains. Many children leave school because they have either visible or invisible disabilities and not enough is being done to help these children remain in school and live a happy and productive life. Even school teachers who are believed to be 'better educated', are generally not well aware of the causes and symptoms of various disabilities (Zeleke, 2004 et. al)

Even though there is no well-thought-out study conducted in Ethiopia on the prevalence of reading difficulty, a pilot study (Sintayehu, 2014) carried out in 9 primary schools, 5 in Addis Ababa and 4 in Southern Nations, Nationalities and Peoples' region, has shown that a significant number of children (i.e., at least four in a classroom) have some degree of dyslexia. The study has also indicated that, in almost all cases, neither the children with dyslexia nor their teachers seemed to know that the children are struggling in school because of this hidden learning disability. All the teachers did not even know that there is such a thing as dyslexia. Due to lack of awareness among students, parents and their teachers of the nature of dyslexia, often, dyslexic children are labeled lazy, stupid, retarded and disruptive and have an unhappy time at school, when in fact they may be highly intelligent and trying incredibly hard. It is not uncommon in Ethiopia, to hear stories of neglect of dyslexic children in school.

2.6.1. Demographic variables and Teachers' Awareness on learning disabilities

Teachers' knowledge can be influenced by several factors, such as experience, quality of teachers' education, special training, interests, child's gender etc. teachers' experience is one of the most frequently mentioned factors influencing their knowledge but some studies also revealed different results. Scuito, Terjesen & Frank, (2000) found that overall knowledge of LD was related to the teachers' past experience with LD children. Teachers who reported having taught a child diagnosed with LD scored significantly higher than teachers who had no prior teaching experience with a child with LD. At the same time Brook, Watemberg & Geva, (2000) found that the length of teachers' experience did not influence their level of knowledge on LD.

When the children are limited, learning process ends up causing some disorders and negative behaviours, such as: fear, anxiety and feeling of guilty. Lack of stimuli and rejection create a non-satisfactory environment for their school performance, presenting children with learning disorders, who are noted in classrooms, by the teachers. However, a study conducted by Raquel Caroline Ferreira Lopes, (2013) concluded that teachers attribute causes of this problem: intrinsic factors, family environment and socio economic status.

The results presented by Osti (2005), in his study, inform that the teachers attribute the learning disorder, to emotional problems as consequence of family troubles. Consequently, the problematic is directed to the familiar environment and exclusive to the student, as lack of interest and desire in taking part of the proposed activities. Similarly, to the actual study, 88% of the teachers informed that learning disorders are noticed at school, due to several factors, mainly to lack of assistance and follow-up of the family concerning homework, researches and 52% attribute to lack of interest and lack of efforts of the students.

For Silva (2010), however, teaching is not only to acknowledge specific teaching methodologies or opting for either one; it becomes necessary to know the students, the characteristics of their personalities, the steps of development in which the motor, social, emotional or social aspects are comprised, and the way they learn. The students who are not able to learn, do not behave like that for their own volition; but many times, due to interaction problems concerning the students and the whole educational context. However, the family and economic condition of the children are not determinants for the success or scholastic failure, because there are children who succeed despite their socio economic condition, in

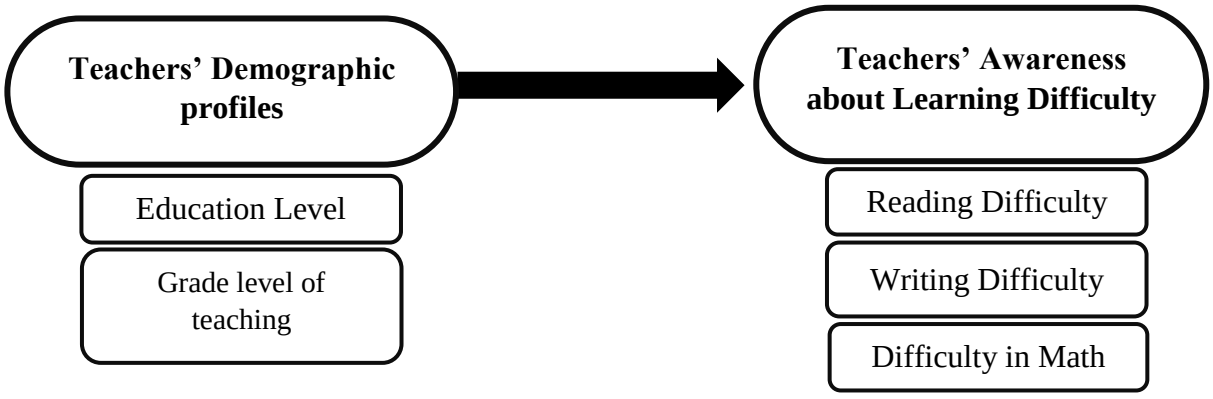
opposition to the affirmations of the teachers, who have related failure towards their conditions. The teachers, indeed, cannot realize effectively, a significant intervention in order to guarantee appropriate learning to those children, because they do not have enough knowledge about learning disorders and do not know how to realize appropriate mediations to overcome those difficulties, possibly resulting into unsatisfactory alterations concerning the learning process of some children.

Another study conducted by SarvaSiksha Abhiyan, Tamilnadu regarding remedial programs for children with learning difficulties in 2005, suggested orientation programmes regarding learning disability must be arranged for the teachers.

2.7. Conceptual Frame work

Having made a critical review of various related literatures, the conceptual framework of this study was depicted on Figure 1.

Figure 1: Research Conceptual Framework (source: Researcher's own design)



CHAPTER THREE
RESEARCH METHODOLOGY

3.1.Introduction

Research methodology is a systematic method way of solving the research problem and a research design is the conceptual structure with in which research is conducted (Kothari, 2009). This chapter presented a detail discussion about the type of research design and research approach employed in the study. Moreover, topics related to description of the study area, target population, sample size and sampling techniques, source and types of data, methods of data collection, data collection procedures, methods of data analysis and interpretation was included. Explanation about ethical issues and pilot study were also part of this chapter

3.2. Research Design

The research design used in this study was cross sectional survey since it is more reliable and objective, cost effective, easily quantified and analysed statistically, and most importantly it helps to study vast population. Since the research objective concerned itself with assessing the awareness of Specific Learning Disability among public primary school teachers in Bole Sub-city, Addis Ababa city administration, the study employed descriptive research. Moreover, Moreover, both qualitative and quantitative research approach (Mixed approach) was employed to obtain valid and reliable data required for the study. To this end, the data required for this study was collected in cross-sectional way.

3.3. Description of study area

This study was conducted in Public primary schools in Bole Sub-city, Addis Ababa city administration, Ethiopia. According to Addis Ababa Education Bureau's Education Statistics Annual Abstract, 2018 G.C**.**, there are a total of twenty-six public primary schools in Bole Sub-city, Addis Ababa city administration. These schools were selected for their convenience due to proximity. However, it should be noted that, taking account of the generally similar nature of all the Public primary schools across other nine sub cities, representativeness of the sample schools for the entire city is largely maintained.

3.4. Target population

The population of this research study consisted of public primary schools' teachers in Bole Sub-city, Addis Ababa city administration. Elliot and Halls (2005) stated that it is at young-

at-risk group of children between 4-6 years of age as who are more likely to manifest Specific learning disabilities are largely identified early at school by teachers or at home by parents. Particularly, public primary schools are less familiar with the concept, causes, teaching method, guidance and counselling of specific learning disabilities. Since, issues of specific learning disabilities are ignored, unnoticed and unanswered relatively in public primary schools; such children's needs are not met in regular class rooms or special education within those schools. The total target population of the study in those eighteen schools were 2246 teachers out of which 1116 (49 %) were male and the rest 1130 (51 %) were female. Table 3.1 below showed names of eighteen governmental (public) primary schools in Bole Sub-city and their respective total number of target population distributed by male and female teachers.

Table 3.1-: Sex-wise distribution of the target population in eighteen Public Primary Schools in Bole Sub-cities, Addis Ababa City Administration

S/N	Name of Teachers	Number of Teachers		Total
		Male	Female	
1	Ayer Amba	79	73	152
2	Alpha Special Schools for the Deaf	12	15	27
3	BrehanZare	44	51	95
4	Misrakdil	77	93	170
5	Addis Raey	110	116	226
6	MisrakBer No.1	64	55	119
7	MisrakBer No.2	62	51	113
8	Goro	61	67	128
9	Bole Addis	54	59	113
10	Meri	32	35	67
11	Chefe	61	66	127
12	Yeka Bole	63	61	124
13	Bole Weregenu	77	104	181
14	BulbulaRaey	74	64	138
15	Bole Grji	78	58	136
16	Bole Community	74	75	149
17	Hidase	22	29	51
18	8-Mar	72	58	130
	Total	1116 (49 %)	1130 (51 %)	2246 (100 %)

Source: Addis Ababa Education Bureau, (2018 G.C.)

3.5. Sample and Sampling techniques

The study employed a type of probability sampling technique called Stratified sampling to select a sample of 328 respondents from 2246 total number of population. A list of teachers (sampling frame) was obtained from Human Resource Office in each schools.

The number of respondents for this study was determined by using Kothari's (2004) sampling design formula:

$$n = \frac{Z^2 \times P \times q \times N}{e^2(N-1) + Z^2 P \times q}$$

Where:

n = the required sample size

N = the total population size (2246)

z =the value of the standard variant at 95% confidence interval and worked out using the table showing area under normal curve (1.96)

p = probability of sample proportion (0.5) (50%)

q = 1-p = 0.5

e = significant level of precision or acceptable error (0.05) (5%)

Thus, the sample size was calculated as follows:

$$n = \frac{1.96^2 \times 0.5 \times 0.5 \times 2246}{0.05^2(2246-1) + 1.96^2 \times 0.5 \times 0.5}$$

$$n = \mathbf{328}$$

The present study employed a type of stratified sampling technique called proportionate sampling to avoid the issue of misrepresentation or overrepresentation of respondents that might result mainly due to the fact that the total number of male and female employees varies in each of the eighteen schools. The selected sampling technique also allowed the researcher to obtain most characteristics of the population in the sample. Accordingly, from the total of 328 sample teachers, 22 of them were selected from Ayer Amba, 4 from Alpha Special Schools for the Deaf, 14 from Brehanzare, 25 from Misrakdil, 33 from Addis Raey, 17 from MisrakBer No.1, 16 from MisrakBer No.2, 19 from Goro, 16 from Bole Addis, 10 from Meri,

19 from Chefe, 18 from Yeka Bole, 26 from Bole Weregenu, 20 each from Bulbula Raey and Bole Grji, 22 from Bole Community, 7 from Hidase, and 19 from 8-Mar.

3.6. Data source and Type of Data

In this study multiple sources of data (both primary and secondary) were used to study different dimensions of the research objectives. Primary data included first-hand information of respondents which was collected using questionnaire and Key informant Interview, while secondary data were collected from various vital sources such as up to date books, journals, articles, electronic media, relevant references such as reports and policy documents from governmental as well as non-governmental agencies that deal with the relationship between knowledge of concept, causes, teaching method, guidance and counselling of specific learning disabilities.

3.7. Data Collection Instruments

In this study, the data collection tool was self-reported questionnaire and key informant interview. The usage of different data approach was privileged over purely qualitative and quantitative approach in assessing certain problem from varying angles and come up with comprehensive solutions. To this end, both qualitative and quantitative data gathering tool was employed.

3.7.1. Questionnaire

At the first part of the questionnaire, respondents were asked to provide information regarding demographic variables including their gender, age, highest education completed, working experience, and teaching grade level. The demographic questionnaire was prepared by the researcher. The major categories of instrument used to collect the research data consisted of a total of 71-items in 5dimensions to measure teachers' awareness about Specific learning disabilities. The five domains included questions related to awareness about, concept of LD, characteristics of students with LD, causes of LD, identification of LD (Dyslexia, Writing difficulty and Math difficulty) and instructional strategies for students with LD. The research instrument followed a scale with choices of responses presented as Yes (2), No (1), and Don’t know (0). These items were formulated based on a review of relevant literature (Bender, 2003; Mather & Goldstein, 2001; Lerner, 1999).

3.7.2. Key Informant Interview

Key informant Interview was the second data collection instrument for this study that was used to gather qualitative data. KIs for this study were those having ample experience and knowledge on the topic under study. The selection of the key informants was done by collecting information about key informants. Thus, 5 principals from five schools, 3 special needs teachers from three schools and 4 unit leaders from four schools were selected purposively as key informants of the study. While conducting the interview, the researcher used tape recorder as well as take notes when it is important.

3.8. Pilot Study

To check the validity and reliability of the instruments, pilot test was conducted before administering to the final instrument. The pilot test was conducted on proportionally selected 30 participants.

Questionnaire content and face validity was evaluated early by different individuals (respondents, PhD candidates, distinguished advisors and University lecturers under the same field of study). They responded that the contents included in the questionnaire were good and easy to understand implying that the instrument fulfills content validity besides they forwarded constructive suggestions for improvement.

Reliability was measured using Cronbach alpha. The Cronbach's alpha value ranges from *0(Observed items are not consistent) to 1 (Completely correlate and highly reliable).* This means that internal consistency will be acceptable if Cronbach's alpha is high the reliability (accuracy, stability and robustness) of the instrument being used that higher value for reliability test, or the more items that are used to measure a factor, the more reliable it could be reported that Cronbach's alpha ought to be equal to or above 0.70 or 0.60 for valid investigation. The overall reliability of the questionnaire was 0.795 which is reliable and acceptable.

3.9.Data Collection procedures

The procedure for administering the above tools of data collection was systematically managed by the researcher. First, to solve ambiguity (clarity, language and structure problems), to check validity, reliability and feasibility of the instrument, a pilot survey was organized. The pilot survey served as a prerequisite to optimizing the administration of the questionnaire and key informant Interview and to maximizing the response rate. Then, the questionnaire along with key informant interview was administered directly with the respondents. The preliminary tested field data was entered in to computer. Data then was

processed by using SPSS software version 22. In the process of data collection, the study employed two data enumerators to save time. Having fulfilled the requirements, enumerators with a minimum qualification of college diploma, their skill and knowledge, ability to speaking, reading and writing of both Amharic and English language, was hired for the purpose of data collection. When data collection was conducted, both through researcher and enumerators, the researcher made follow-up and observations up to the end.

3.10. Data Analysis and Interpretation

Available data of this research were analysed through different ways. The demographic data were analysed using the descriptive statistics (frequency, percentage, mean, median, and standard deviation). Percentage analysis was to compute the level of awareness on learning disabilities among public primary school teachers. To determine if Public primary school teachers' awareness of Specific Learning difficulties differs as a function of their education level, One-way Analysis of Variance (ANOVA) was used. Test of significance of difference between two means (Independent sample t-test) was done to find out if Public primary school teachers' awareness of Specific Learning difficulties differs as a function of grade level at which teachers teach. Data that was gathered through interview was analysed qualitatively.

3.11. Ethical consideration

Before the data collection started at the site of the study, the researcher took a letter from department of Special Needs Education. While conducting this research, asking questions and recording as well as taking notes followed the formal and underlined ethical considerations. In the process of data collection, all informants of this research were informed about the purposes of the research and issues of confidentiality and anonymity were insured and maintained to participation. Moreover, concern for protection and welfare of the subjects were communicated before the process of the data collection proceeded.

CHAPTER FOUR
RESULTS

4.1. Introduction

In this chapter, the analysis of five quantitative and a qualitative sub sections were presented. The first section dealt with socio-demographic characteristics of the respondents. The second section was concerned with awareness of specific learning disability among public primary school teachers in Bole sub city. Difference between awareness of specific learning disability among teachers and their education level was the concern of third section. In the fourth section, difference between awareness of specific learning disability among male and female teachers was examined. In between the sections, the results of key informant interview were presented.

4.2. Rate of Response

A total of 328 questionnaires were distributed and out which 283questionnaires were returned which make a total 86.3% of the response rate.

4.3. Demographic characteristics of respondents

In this sub section socio-demographic characteristic of sample respondents including, gender, age, highest education completed, working experience, and teaching grade level has been described using frequencies and percentages.

Table 1: Summary of socio-demographic characteristics of respondents

Variables	Responses	Frequency	%
Gender	Male	192	67.8
	Female	91	32.2
Age	20 years old and below	31	11.0
	21- 35 Years	152	53.7
	36-50 years	61	21.6
	51 years old and above	39	13.8
Highest education completed	High School Graduate	2	.5
	Certificate	2	.5
	TVET/Diploma	75	26.5
	Under Graduate (BA/BSc)	160	56.9
	Graduate (MA/MSc)	39	13.8
	Post graduate (PHD)	5	1.8

Working experience	Less than 5 years	98	34.6
	6-10 years	114	40.3
	11-20 years	51	18
	More than 20 years	20	7.1
Teaching grade level	(1^{st}) (1^{st} to 6^{th} grade)	134	47.3
	(2^{nd}) (7^{th} through 8^{th} Grade)	149	52.7

Source: Field survey (2019)

As shown in Table 1 above, out of a total of 283 respondents, 192 teachers (67.8 %) were male and the remaining 91 teachers (32.2 %) were female. Table 1 also depicted that large number of the respondents (53.7%) were in the age group between 21- 35 Years followed by the age group between 36-50 years which accounted 21.6%. The lowest percentage is observed in the age group above 51 years and below 20 years which constituted to 13.8% and 11% of the respondents, respectively. Concerning educational status of respondents, table 1 showed that, majority of them 161 (56.9%) were under graduate, 39 (13.8%) were graduate and 5 (1.8 %) had doctoral degree. A significant proportion of respondents, that is 75 (26.5 %) had TVET/Diploma, 2(0.7%) had certificate, and 1(0.4%) were High School Graduate. Regarding the Working experience of sampled respondents, of the total respondents included in the study, most of them 114(40.3%) has worked between 6-10 years followed by 98(34.6%) who has worked less than 5 years, 51(18%) has worked between 11-20 years while parents. only 20 (7. 1%) of the respondents has worked for more than 20 years. Grade level at which respondents teach was another major variable described in the above table. Accordingly, majority of the respondents 149 (52.7%) taught from 7^{th} through 8^{th} grade, whereas 134 (47.3%) taught from 1^{st} to 6^{th} grade.

4.4. The awareness about Specific Learning difficulty among elementary school teachers

In this sub section awareness about different dimensions of Specific Learning difficulty among elementary school teachers including, concept of LD, characteristics of students with LD, causes of LD, identification of LD (Reading, Writing and Math difficulties) and instructional strategies for students with LD, has been described using frequency and percentages.

4.4.1. Awareness about Concept of Learning Difficulties

Table 2: Awareness about Concept of Learning Difficulties

Items	Yes		Don't know		No	
Learning Difficulty is a disorder in language, speech, reading, and writing and associated communication skills.	207	73.1	6	2.1	70	24.7
Learning Difficulty does not include students who have learning problem due to visual, hearing or motor handicaps.	110	38.7	9	3.2	164	58.0
Learning Difficulty is not only concerned with a mental deficiency but also concerned with social and emotional factors.	235	83.0	10	3.5	38	13.4
Students with Learning Difficulties lack positive social behavior and are poorly accepted by peers.	201	71.0	13	4.6	69	24.4
Students with severe Learning Difficulties have discrepancy between academic achievement and intellectual ability	193	68.2	24	8.5	66	23.3
Students with specific Learning Difficulties do have special abilities even though they exhibit difficulties in learning.	202	71.4	8	2.8	73	25.8

Source: Field survey (2019)

As indicated in table 2, out of a total of 283 respondents, majority (73.1%) of them were aware that LD is a disorder in language, speech, reading, and writing and associated communication skills while the remaining (24.4 %) were unaware. Majority of the respondents (83 %) were aware that LD is not only concerned with a mental deficiency but also concerned with social and emotional factor while the rest (17 %) were unaware. Still majorities (71 %) of the respondents were aware that Students with LD lack positive social behavior and are poorly accepted by peers whereas (29 %) were unaware. Respondents were also asked to indicate their awareness regarding the claim that Students with severe Learning Difficulties have discrepancy between academic achievement and intellectual ability. Accordingly, approximately two third (68.2%) were aware and 31.8 % were unaware. Students with specific Learning Difficulties do have special abilities even though they exhibit difficulties in learning, to which majority of the respondents (71.4 %) were aware and the remaining 28.6% were unaware. To the statement whether LD does not include students who have learning problem due to visual, hearing or motor handicaps, however, majority of the respondents (61.2 %) were unaware and 38.7 % were aware.

Thus, principals from school A and School B confirmed that:

> *"We almost have no information or training or adequate awareness about the concept of learning difficulties. Nevertheless, we have only one collage graduate special need education personal and one trained care giver who is assigned as assistance to deal with some students with intellectual disabilities."*

4.4.2. Awareness about Characteristics of Students with Learning Difficulties

Table 3: Awareness about Characteristics of Students with LDs

Items	Yes		Don't know		No	
Students with Learning Difficulties have low self confidence and self-esteem than that of normally achieving students.	223	78.8	6	2.1	54	19.1
Students with Learning Difficulties exhibit motivational problems and complex behaviors.	213	75.3	5	1.8	65	23.0
Students with Learning Difficulties can be easily distractible and possess short attention span.	181	64.0	16	5.7	86	30.4
Students with Learning Difficulties find it difficult to adjust with the new surroundings.	199	70.3	20	7.1	64	22.6
Students with Learning Difficulties find inability to follow simple oral directions, special relationship and difficult to understand classroom discussion.	212	74.9	8	2.8	63	22.3
Students with Learning Difficulties are unable to organize the ideas into a clear concise pattern of words.	85	30.0	6	2.1	192	67.8
Students with Learning Difficulties encounter problems both in breaking words into their components and in blending individual sounds to make words in English.	75	26.5	17	6.0	191	67.5

Source: Field survey (2019)

Table 3 indicated teachers' level of awareness about Characteristics of Students with LDs using nine items. Accordingly, nearly 8 teachers out of ten (78.8%) were aware that students with LDs have low self confidence and self-esteem than that of normally achieving students. Three fourth (75.3%) of the respondents knew that students with LDs exhibit motivational problems and complex behaviors. Majority of the respondents (64%) were aware that students with LDs can be easily distractible and possess short attention span while the remaining (36%) were unaware. To the claim that students with LDs find it difficult to adjust with the new surroundings, large number of respondents (70.3%) were aware. Shown in table 3 was also that significant number

of respondents (74.9%) were aware that students with LDs find inability to follow simple oral directions, special relationship and difficult to understand classroom discussion.

However, the result in table 3 indicated, most of the respondents (69.9%) were unaware that students with LDs are unable to organize ideas into a clear concise pattern of words. Still majority of the respondents (73.5%) were not aware that students with LDs encounter problems both in breaking words into their components and in blending individual sounds to make words in English.

Thus, special needs teachers from School B, C and D confirmed that:

> *"Of course, informally we have been observing the case of some students who are struggling with the task of reading, writing and math related concepts. However, basically, we cannot answer exactly whether the above listed students are suffering due to a learning disability just because we didn't have an expert who can address on their problem and of course, the proper assessment findings regarding their learning issues."*

4.4.3. Awareness about causes of Learning Difficulties

Table 4: Awareness about causes of Learning Difficulties

Items	Yes		Don't know		No	
Unhealthy home environment brings Learning Difficulties in student	221	78.1	11	5.4	47	16.6
Genetic factor plays vital role in students with LD.	60	21.2	39	13.8	184	65.0
Poor teaching environment leads to LDs in students.	195	68.9	16	5.7	72	25.4

Source: Field survey (2019)

Table 4 depicted that significantly large number of respondents (78.1%) had knowledge that unhealthy home environment brings Learning Difficulties in student. As to whether poor teaching environment leads to Learning Difficulties in students, most of the respondents (68.9 %) were aware. However, more than third fourth of the respondents (78.8 %) were unaware that genetic factor plays vital role in students with Learning Difficulties.

Thus, a unit leader from school C confirmed that:

"I always have thought that DNA has nothing to do with failing repeatedly in classes. Even though I believe that no good teacher call their students 'stupid', I have always assumed students with learning difficulties is as lazy."

4.4.4. Awareness about identification of Reading difficulty

Table 5: The level of awareness about identification of Reading difficulty

Items	Yes		Don't know		No	
Fails to demonstrate word attack skills (e.g., phonics, context clues, picture clues, etc.)?	75	26.5	8	10	198	70.0
Fails to recognize words on grade level?	222	78.4	2	.7	59	20.8
Fails to correctly answer comprehension questions from reading activities?	202	71.4	15	5.3	66	23.3
Loses place when reading (e.g., leaves out words, lines, or sentences when reading)?	200	70.7	77	27.2	6	2.1
Has difficulty with sound-symbol relationships (e.g., does not know that the letter "d" makes the /d/ sound)?	91	32.2	32	11.3	160	56.5
Has difficulty with phonics skills when reading (i.e., fails to sound out words correctly or blend sounds into words)?	67	23.7	17	6.0	199	70.3
Omits, ads, substitutes, or reverses letters, when reading?	210	74.2	22	7.8	51	18.0
Fails to demonstrate word comprehension (i.e., does not know the meaning of words read)?	197	69.6	18	6.4	68	24.0
Reads words correctly in one context but not in another (e.g., does read a word from a flash card)?	97	34.3	29	10.2	157	55.5
Does not read independently (i.e., does not choose reading as an independent activity, avoids reading, etc.)?	186	65.7	22	7.8	75	26.5
Does not discriminate between similar letters and words (e.g., "m" and "n," "cat" and "cap," etc.)?	166	58.7	13	4.6	104	36.7
Does not know all the letters of the alphabet?	123	43.4	22	7.8	138	48.8
Understands what is read to him/her but not what he/she reads silently?	115	40.6	24	8.5	144	50.9
Fails to finish assignments because of reading difficulties (i.e., reads too slowly to finish on time)?	205	72.4	16	5.7	21.9	21.9

Source: Field survey (2019)

Teachers' level of awareness about identification of students with reading difficulty was depicted in table 5. As a result, nearly eight out of ten respondents (78.4%) were aware that students with reading difficulty fails to recognize words on grade level and large number of the respondents (71.4%) were aware that students with reading difficulty fails to correctly answer comprehension questions from reading activities. Still most of the respondents (70.7%) had awareness of the fact that students having reading difficulty lose place when reading (e.g., leaves out words, lines, or sentences when reading). As per most of the respondents (74.2%), students with reading

difficulty omits, ads, substitutes, or reverses letters, words, or sounds when reading. To the claim that students with reading difficulty fails to demonstrate word comprehension (i.e., does not know the meaning of words read nor does they discriminate between similar letters and words (e.g., "m" and "n," "cat" and "cap," etc.), large number of respondents (69.6%) and (58.7%), respectively, were aware.

Nevertheless, a significant number of the respondents (80%) were unaware that a student with reading difficulty fails to demonstrate word attack skills (e.g., phonics, context clues, picture clues, etc.). slightly more than two thirds of the respondents did not know that dyslexic students have difficulty with sound-symbol relationships (e.g., does not know that the letter "d" makes the /d/ sound). With regard to the statement that students with reading disorder has difficulty with phonics skills when reading (i.e., fails to sound out words correctly or blend sounds into words), most of the respondents (76.3%) were unaware. Furthermore, 65.7 % of the respondents were not aware that a student with dyslexia reads words correctly in one context but not in another (e.g., does read a word from a flash card). The result in table 5 also depicted that 56.6 % and 59.4 % of the respondents, respectively, had no idea that students having dyslexia understands what is read to him/her but not what he/she reads silently as well as reads too slowly to finish on time.

Thus, a principal from school A, and a special needs teachers from school B confirmed that:

> *"Well, it will inevitably be some disturbance in the class room when students with learning disabilities get included in a mainstream class. To mention some of the challenges when handling an inclusive class are: teachers in the class room jumps to treat students whenever they think they're lazy when the truth is that students is genuinely straggling with reading or writing or math assignments. The rest of the class will be disturbed every time the classroom teachers treating these students unfairly. The other challenge seen when considering an inclusive is that: students get away from school when they are preserved not competent because their poor performance academically. Some of them will be marginalized due to their lake of self-esteem and self-confidence. Deep down they are suffering a lot for they started to consider themselves as valueless and unworthy. This kind of negative self-conclusive attitude towards themselves will lead their future in a total mess. This is largely because I have never known that dyslexia (reading difficult) comes with a set of complex symptoms"*

4.4.5. Awareness about identification of Writing difficulty

Table 6: Awareness about identification of writing difficulty

Items	Yes		Don't know		No	
Fails to copy letters, words, sentences, and numbers from a model at a close proximity (e.g., does not copy from a textbook)?	135	65.9	5	1.8	91	32.2
Fails to copy letters, words, sentences, and numbers from a model at a distance (e.g., does not copy from the chalkboard)	161	56.9	12	4.2	110	38.9
Fails to use capitalization correctly when writing?	177	62.5	12	4.2	94	33.2
Uses inappropriate spacing between words or sentences when writing?	84	29.7	10	3.5	189	66.8
Reverses letters and numbers when writing?	173	61.1	14	4.9	96	33.9
Fails to write within a given space (e.g., writes off the page, does not write on a line, etc.)?	193	68.2	28	9.9	62	21.9
Fails to punctuate correctly when writing?	205	72.4	11	3.9	67	23.7
Does not use appropriate subject-verb agreement when writing?	55	19.4	20	7.1	208	73.5
Does not compose complete sentences or express complete thoughts when writing?	215	76.0	15	5.3	53	18.7
Omits, ads, or substitutes words when writing?	224	79.2	15	5.3	44	15.5
Fails to form letters correctly when printing or writing (e.g., a's do not look like a's, b's do not look like b's, does not connect letters, etc.?	84	29.7	27	9.5	172	60.8
Fails to use verb tenses correctly when writing (e.g., past, present, future)?	218	77.0	8	2.8	57	20.1
Uses inappropriate letter size when writing (i.e., too large or too small)?	217	76.7	7	2.5	59	20.8

Source: Field survey (2019)

Table 6 indicated teachers' level of awareness about identification of students with Writing Difficulty. Accordingly, two third of the respondents (65.9%) were aware that students with reading difficulty does not copy from a textbook and majority of the respondents (56.9%) were aware that students with writing difficulty does not copy from the chalkboard. Still most of the respondents (62.5%) knew that students with reading difficulty a fail to use capitalization correctly when writing. Majority of the respondents (61.1%) were aware that students with reading difficulty reverse letters and numbers when writing. To the claim that students with reading difficulty fails to write within a given space (e.g., writes off the page, does not write on a line, etc.) nor does they punctuate correctly when writing, large number of respondents (68.2%) and (72.4%), respectively, were aware. Shown in table 6 was also that significant number of

respondents (76.0%) were aware that students with writing difficulty does not compose complete sentences or express complete thoughts when writing. Furthermore, (79.2%), (77.0%), and (79.2%), of the respondents respectively, were aware that students with reading difficulty omits, ads, or substitutes words when writing, fails to use verb tenses correctly when writing (e.g., past, present, future and uses inappropriate letter size when writing (i.e., too large or too small).

However, most of the respondents (71.3%) were unaware that students with reading difficulty uses inappropriate spacing between words or sentences when writing, nor does significant number of the respondents (80.1%) were aware that students with writing difficulty does not use appropriate subject-verb agreement when writing. With regard to the statement that students with reading difficulty fails to form letters correctly when printing or writing (e.g., a's do not look like a's, b's do not look like b's, does not connect letters, etc), most of the respondents (71.3%) were unaware.

4.4.6. Awareness about identification of Mathematics difficulty

Table 7: The level of awareness about identification of Mathematics difficulty

Items	Yes		Don't know		No	
Has difficulty solving math word problems?	201	71.0	28	9.9	54	19.1
Fails to change from one math operation to another (e.g., starts with addition and does not change to subtraction)?	186	65.7	37	13.1	60	21.2
Does not understand abstract math concepts without concrete examples	209	73.9	35	12.4	39	13.8
Fails to correctly solve math problems requiring regrouping	185	65.4	40	14.1	58	20.5
Works math problems from left to right instead of right to left?	89	31.4	46	16.3	148	52.3
Fails to follow necessary steps in math problems (e.g., does steps in the wrong order, omits a step, etc.)?	184	65.0	35	12.4	64	22.6
Fails to correctly solve math problems involving fractions or decimals (e.g., understanding parts of the whole, recognizing fractional values, performing operations, etc.)?	186	65.7	44	15.5	53	18.7
Fails to demonstrate knowledge of place value?	84	29.7	51	18.0	148	52.3
Confuses operational signs when working math problems (e.g., +, -, ÷, ×)?	80	28.3	36	12.7	167	59.0
Has difficulty understanding abstract concepts (e.g., dimensionality, size, space, shape, etc.)?	195	68.9	41	14.5	47	16.6

Fails to correctly solve problems involving money (e.g., coin recognition and value, counting money, making change, etc.)?	60	21.2	49	17.3	174	61.5
Fails to correctly solve problems using measurement (e.g., length, volume, weight, etc.)?	176	62.2	41	14.5	66	23.3
Fails to correctly solve math problems requiring division.	176	62.2	44	15.5	63	22.3
Does not understand the concept of time	152	53.7	42	14.8	89	31.4
Fails to correctly solve math problems requiring addition?	157	55.5	40	14.1	86	30.4
Fails to correctly solve math problems requiring subtraction?	135	47.7	41	14.5	107	37.8
Fails to correctly solve math problems requiring multiplication?	65	23.0	41	14.5	177	62.5
Does not remember math facts?	159	56.2	47	16.6	77	27.2
Does not make use of columns when working math problems (e.g., puts numbers in wrong columns)?	178	62.9	48	17.0	57	20.1

Source: Field survey (2019)

Table 7 indicated teachers' level of awareness about identification of students with mathematics difficulty. Accordingly, two third of the respondents (71%) were aware that students with mathematics difficulty has difficulty solving math word problems and most of the respondents (65.7%) were aware that students with mathematics difficulty fails to change from one math operation to another (e.g., starts with addition and does not change to subtraction. Table 7 also indicated that significant numbers of the respondents (73.9%) knew that students with mathematics difficulty do not understand abstract math concepts without concrete examples. Still large proportion of the respondents were aware that students with mathematics difficulty fails to correctly solve math problems requiring regrouping. Majority of the respondents (61.1%) were aware that students with mathematics difficulty fails to correctly solve math problems involving fractions or decimals (e.g., understanding parts of the whole, recognizing fractional values, performing operations, etc.).

To the statement that students with math difficulty has difficulty understanding abstract concepts nor does they fail to correctly solve problems using measurement, large number of respondents (68.9%) and (62.2%), respectively, were aware. Shown in table 7 was also that significant number of respondents (65.0%) were aware that students with math difficulty fails to follow necessary steps in math problems (e.g., does steps in the wrong order, omits a step, etc.), 65.7% were aware that students with math problem fails to correctly solve math problems involving

fractions or decimals. Most of the respondents (68.9%), (62.2%) and (53.7%) of the respondents, respectively, were aware that students with mathematics difficulty have difficulty understanding abstract concepts, fails to correctly solve problems using measurement and do not understand the concept of time. The result also depicted that (55.5%), (56.2%) and (62.9%) of the respondents, respectively, were aware that students having math difficulty fails to correctly solve math problems requiring addition, do not remember math facts and do not make use of columns when working math problems.

In the contrary table 7 revealed that, most of the respondents (78.6%) were unaware that students with mathematics difficulty Works math problems from left to right instead of right to left, nor does significant number of the respondents (80.3%) were aware that students with math difficulty fails to demonstrate knowledge of place value. With regard to the claim that students with mathematics difficulty fails to demonstrate knowledge of place value, most of the respondents (81.7%) were unaware. In addition, nearly eight respondents out of ten were unaware that students with mathematics difficulty fail to correctly solve problems involving money (e.g., coin recognition and value, counting money, making change, etc.). Majority of the respondents did not know that students having math difficulty fails to correctly solve math problems requiring subtraction (52.3%) and multiplication (77%).

Thus, principals from school B, C, D, and E asserted that:

> *"Well, to mention some of the disabilities we a have been experiencing in our school are: There are these students who struggle with reading, writing and math; and some with physical, visual, hearing impairments as well as, students with intellectual disabilities such as, Autisms and down syndrome."*

Unit leaders and special needs teachers from school A and B also confirmed that:

> *"Frankly speaking we have no professional and the knowhow on the field of learning difficulty. We also have a very limited resource and with a very limited knowledge of experts as to how this condition is happening and its warning signs and symptom. Therefore, it seems almost impossible for us to properly identify those pupils with reading, writing and math issues/students with learning difficulty."*

4.4.7. Awareness about Instructional Strategies for Students with Learning Difficulties

Table 8: Awareness about Instructional Strategies for Students with LD

Items	Yes		Don't know		No	
Students with LDs may be taught, most frequently misspelled words, and use of spelling dictionary.	206	72.8	15	5.3	62	21.9
Story reading introduces students to new words, new sentences, new places and new ideas	134	65.4	15	5.3	80	28.3
Listening to words and passages through tape recorder, VCD will strengthen comprehension Abilities	199	70.3	25	8.8	59	20.8
Reading aloud and paraphrasing often are very helpful in the arts subjects like History, Political Science etc.	198	70.0	24	8.5	61	21.6
Peer tutoring, group learning and multi-sensory approaches facilitate learning in students with LD.	201	71.0	8	2.8	74	26.1
Problem solving training leads to increased social interaction and decreased behavioral problems	227	80.2	11	3.9	45	15.9
Students with Learning Difficulties may be facilitated to use the teaching learning materials available in the resource room or center for special educational needs.	202	71.4	13	4.6	68	24.0
Selecting appropriate teaching methods to meet the specific needs of the students is good l to overcome LDs.	223	78.8	8	2.8	52	18.4
VAKT (multi-sensory approach) provides simultaneous information through eyes, ears, fingers and muscles.	55	19.4	17	6.0	211	74.6

Source: Field survey (2019)

As depicted table 8, (72.8%) of the respondents were aware that students with LDs may be taught, most frequently misspelled words, and use of spelling dictionary; 65.4% were aware that story reading introduces students to new words, new sentences, new places and new ideas; 70.3% knew Listening to words and passages through tape recorder, VCD will strengthen comprehension Abilities; 70.0% of the respondents were aware that reading aloud and paraphrasing often are very helpful in the arts subjects like History, Political Science etc.; 71.0 had knowledge that peer tutoring, group learning and multi-sensory approaches facilitate learning in students with LD; 80.2% of them were aware that problem solving training leads to increased social interaction and decreased behavioral problems; 71.4% knew that students with Learning difficulties may be facilitated to use the teaching learning materials available in the

resource room or center for special educational needs; 78.8% had awareness that selecting appropriate teaching methods to meet the specific needs of the students is good l to overcome LDs. However, the result in table 8 indicated that `

Thus, special needs teachers from all the three schools confirmed that:

> *"Since we have no skilled professional on the area plus a standardized assessment tool to entertain the case of pupils with learning disability, it's entirely difficult to discuss about a meaningful support and intervention plan in helping students who are with learning disability. Some of the students in our school are still being misunderstood and misperceived because of there is no special need experts to treat, understand them and make a proper follow up both with their strength and weakness.."*

4.5. The awareness of Specific Learning difficulties and teachers' education level

Different studies reveal that there is a difference between awareness of Specific Learning difficulties and education level. Thus, to check whether there was a difference between awareness of Specific Learning difficulties and teachers' education level in the study area, one-way ANOVA was computed. Accordingly, the result is presented as follows:

Table 9: Awareness of Specific Learning difficulties and teachers' education level

Dependent Variable	Education level	Descriptive Statistics			DF		F	Sig
		N	Mean	S. D	B/n.G	W/n.G		
Awareness of Learning difficulties	High School Graduate	2	128.50	4.949	7953.8	132153.9	3.334	.006
	Certificate	2	94.000	36.76				
	TVET/Diploma	75	118.01	21.90				
	Under Graduate	160	115.50	21.67				
	Graduate	39	108.46	21.00				
	Post Graduate	5	144.80	30.85				
	Total	**283**	**115.7**	**1.324**				

P<0.05, two-tailed

Source: - Field survey (2019)

As it is indicated in table 9 above, there is a difference with regard to awareness of Specific Learning difficulties and teachers' education level. That means, the mean for Post Graduate (*M* =144.80) is greater than the mean of High School Graduate (*M* = 128.50), the mean of TVET/Diploma (*M* = 118.01), the mean of Under Graduate (*M* = 115.50), the mean of Graduate

(*M* = 108.46) and also the mean of Certificate teachers (*M* = 94.000). Cognizant of this fact, the F-ratio between the education level difference is significant: [F (**283**) = 3.334, P< .05]. In other words, teachers' education level matters regarding awareness of specific learning difficulties. Similarly, the mean of Post Graduate is significantly different from the mean of the mean of TVET/Diploma , the mean of Under Graduate, the mean of Graduate and also the mean of Certificate teachers (sig. = 0.006). So, it implies that Post Graduate teachers are aware of specific learning difficulties.

Furthermore, HSD post hoc test revealed that the p-value for between t Post Graduate and Graduate (MA/MSc) is 0.007, between Graduate (MA/MSc) and Under Graduate is 0. 464, between Under Graduate and TVET/Diploma is 0.964, between TVET/Diploma and Certificate is 0.642, between Certificate and High School Graduate is 0. 613. This means that, the average mean of all respondent's education level was significant. Similarly, homogeneous subsets table labeled that the teachers level of education are arranged in the increasing order by the mean value and Certificate holding teachers had the smallest mean value of awareness about specific learning difficulties.

Thus, principals, and special needs teachers from School A, B, and C that:

> *"There was significant difference on awareness level about LDs and teachers' education level as education level increase their involvement in training and advancement programs about special need, as well as redesigning the existing curriculum to tackle the existing challenge of learning difficulties also increases.*

4.6. The awareness of Specific Learning difficulties and Grade level at which teachers teach

An independent sample t-test was performed to compare awareness about specific learning difficultiesand grade level at which teachers teach and has been discussed here under:

Table 10: Independent sample t-test comparing awareness about specific learning difficulties and grade level at which teachers teach

Variable	Group	N	Mean	SD	*T*	*P*	Effect size (eta squared)
Grade level of teaching	1st to 6th	134	16.47	2.75	*t* (283) = .025	.802	.0009
	7th to 8th	149	16.57	3.53			
	Total	**283**	16.52	3.18			

Source: - Field survey (2019)

Grade level at which teachers teach is one variable having low mean difference ($t(283) = .025$, $p=.802$, 2-tailed) that was found among those who teach from grade one up to six (M= 16.47, SD=2.75) and those who teach from grade seven up to eight (M=16.57, SD=.3.53). The magnitude of the differences in the means (mean difference= .10, 95% CL) was very weak (eta squared= 0.0009). Thus, there is no significant difference between awareness about specific learning difficulties among teachers and grade level at which they teach.

Inconsistent with the finding of the study, key informants from school A, B, and D agreed that; -

> *"There was significant difference on awareness about learning difficulty among teachers who teach from grade one to six and those who teach from grade seven to eight. It was teachers who teach from grade seven to eight that were more likely to have long standing experience through access to various trainings and capacity building programs regarding learning and literacy issues".*

CHAPTER FIVE
DSCUSSION

5.1. Introduction

The overall objective of the study was to assessing the awareness of Specific Learning Disability among public primary school teachers in Bole Sub-city, Addis Ababa city administration. The discussion regarding this central issue is presented in three sub sections. It begins with discussion of awareness about different dimensions of Specific Learning difficulty among elementary school teachers including, concept of LD, characteristics of students with LD, causes of LD, identification of LD (Reading, Writing and Math difficulties) and instructional strategies for students with LD followed by discussion of differences on teachers' awareness about Specific Learning difficulty among High School Graduate, Certificate, TVET/Diploma, Under Graduate, Graduate and post graduate teachers in section two. Finally, discussion of differences on teachers' awareness of Specific Learning difficulties and grade level at which they teach.

5.2. Awareness about Specific Learning difficulty

The results of this study showed that, most of sampled respondents were aware that LD is a disorder in language, speech, reading, and writing and associated communication skills; that LD is not only concerned with a mental deficiency but also concerned with social and emotional factor; that Students with LD lack positive social behavior and are poorly accepted by peers; that Students with severe LDs have discrepancy between academic achievement and intellectual ability; that students with LD do have special abilities even though they exhibit difficulties in learning. However, majority of the respondents were unaware that LD does not include students who have learning problem due to visual, hearing or motor handicaps.

Regarding the awareness about Characteristics of Students with LDs, majority of the respondents were aware that students with LDs have low self confidence and self-esteem than that of normally achieving students; that students with LDs exhibit motivational problems and complex behaviors; that students with LDs can be easily distractible and possess short attention span while the remaining; that students with LDs find it difficult to adjust with the new surroundings, large number of respondents. Significant number of respondents were also aware that students with LDs find inability to follow simple oral directions, special relationship and difficult to

understand classroom discussion. However, most of the respondents were unaware that students with LDs are unable to organize ideas into a clear concise pattern of words; that students with LDs encounter problems both in breaking words into their components and in blending sounds to make words.

In support to the current study, most studies revealed that teachers have a limited knowledge of LD (Brook, Watemberg & Geva, 2000; Scuito, Terjesen & Frank, 2000; Snider, Busch & Arrowood 2003). Different studies also reveal the prevalence of teachers' misconceptions that a learning disability is a consequence of parental spoiling and that LD pupils are just lazy (Brook, Watemberg & Geva, 2000).

Concerning the level of awareness about causes of LD, the result depicted that significantly large number of respondents had knowledge that unhealthy home environment brings Learning Difficulties in student. As to whether poor teaching environment leads to LDs in students, most of the respondents were aware. However, more than third fourth of the respondents were unaware that genetic factor plays vital role in students with LDs.

In Brook, Watemberg & Geva's study, 60 % of the teachers believed that LD disappears with age. Culatta & Tompkins (1999) write that teachers are often faced with confusion over the definition of LD; they do not understand the difference between slow learners and children with LD. Some abovementioned points are also confirmed by Turkington & Harris (2003) who claim that in their experience teachers often need to be explained that LD are not the same as mental retardation, autism, deafness, blindness or behavioural disorders. Nor does poverty, environmental factors or cultural differences cause learning disabilities.

According to Scoz (2014), learning problems are not restricted to physical or psychological causes, neither to the analyses of the social conjunctures, it is necessary to understand them, from a multidimensional focus comprising organic, cognitive, affective, social and pedagogical factors, observed within the social articulations. Similar to the answers of this study, in which 80% of the teachers answered that the environment of the students is crucial for their scholastic performance and they arise from the socio cultural deficit of their families (68%), a total of 92% reinforces that the school should help the child to overcome the cultural deficit, promoting access to written culture, in order to guarantee their development.

The study also revealed results regarding teachers' level of awareness about identification of students with Reading Difficulty, Writing Difficulty and Difficulty in Math. With regard to identification of symptoms of Writing Difficulty, the study depicted that most of the respondents were aware that students with reading difficulty: fail to recognize words on grade level, fails to correctly answer comprehension questions from reading activities, lose place when reading, omits, ads, substitutes, or reverses letters, words, or sounds when reading, fails to demonstrate word comprehension nor does they discriminate between similar letters and words. Nevertheless, a significant number of the respondents were unaware that a student with Writing Difficulty: fails to demonstrate word attack skills, have difficulty with sound-symbol relationships and with phonics skills when reading, reads words correctly in one context but not in another, understands what is read to him/her but not what he/she reads silently as well as reads too slowly to finish on time.

Even though there is no well-thought-out study conducted in Ethiopia on the prevalence of dyslexia, a pilot study (Sintayehu, 2014) carried out in 9 primary schools, 5 in Addis Ababa and 4 in Southern Nations, Nationalities and Peoples' region, has shown that a significant number of children (i.e., at least four in a classroom) have some degree of dyslexia. The study has also indicated that, in almost all cases, neither the children with dyslexia nor their teachers seemed to know that the children are struggling in school because of this hidden learning disability. All the teachers did not even know that there is such a thing as dyslexia. Due to lack of awareness among students, parents and their teachers of the nature of dyslexia, often, dyslexic children are labeled lazy, stupid, retarded and disruptive and have an unhappy time at school, when in fact they may be highly intelligent and trying incredibly hard. It is not uncommon in Ethiopia, to hear stories of neglect of dyslexic children in school.

In relation to the level of teachers' awareness about identifying symptoms of writing difficulties, the study indicated that significant numbers of the respondents were aware students with writing difficulty: do not copy from a textbook or from the chalkboard, fail to use capitalization correctly, reverse letters and numbers, do not punctuate correctly, do not compose complete sentences or express complete thoughts when writing, fails to write within a given space and uses inappropriate letter size when writing (i.e., too large or too small). However, most of the respondents were unaware that students with writing difficulties uses inappropriate spacing

between words or sentences when writing, do not use appropriate subject-verb agreement when writing, and fails to form letters correctly when printing or writing.

Pertaining to the level of awareness about identifying symptoms of math difficulty, the study indicated that considerable numbers of the respondents were aware students with math difficulty: has difficulty solving math word problems, fails to change from one math operation to another, do not understand abstract math concepts without concrete examples, fails to correctly solve math problems requiring regrouping, addition, as well as involving fractions or decimals, has difficulty understanding abstract concepts, fail to correctly solve problems using measurement, do not understand the concept of time, do not remember math facts and do not make use of columns when working math problems. In the contrary, most of the respondents were unaware that students with math difficulty works math problems from left to right instead of right to left, fails to demonstrate knowledge of place value, fail to correctly solve problems involving money, fails to correctly solve math problems requiring subtraction and multiplication.

A study done in Israel in 2001 among 46 school teachers regarding attitude and knowledge of attention deficit hyperactivity disorder and learning disabilities among high school teachers found out that 74% teachers have relatively low knowledge (Scoz, 2014).

A study conducted by Raquel Caroline Ferreira Lopes, (2013) among 25 teachers who teaches in the Public Elementary School in Sao Paulo, reveals that teachers do not present funded knowledge about learning disorders, and do not know which procedures should be taken, when facing those problems. The results evidenced that their knowledge about learning disorders is superficial and biased, because during their academic education, they did not have any courses about the theme. The result also states that teachers do not know about learning disorders and have difficulties in classifying their causes, or naming the problem which they are facing; and do not know how to realize the appropriate intervention so that the student can overcome the difficulties.

Another study conducted to explore Classroom Teachers' Awareness of Pupils with Learning Disabilities by Focas M. Kafonogo, (2013) among 100 teachers in Tanzania states that it was difficult to detect dyslexia by teachers, due to its different manifestation forms (68%). However, teachers know that dyslexic children make more efforts to read than other children (72%). Silver (2012) and Wu (2013) state that it is necessary to check the altered characteristics concerning

abilities, as identification or decoding the word, reading comprehension, calculus, mathematic rationality, spelling and written expression, which may have academic areas which comprise, broadly, the oral expression and hearing comprehension.

As depicted in the present study, large numbers of the respondents were aware that students with LDs may be taught, most frequently misspelled words, and use of spelling dictionary; that story reading introduces students to new words, new sentences, new places and new ideas; that listening to words and passages through tape recorder, VCD will strengthen comprehension Abilities; that reading aloud and paraphrasing often are very helpful in the arts subjects like History, Political Science etc.; that peer tutoring, group learning and multi-sensory approaches facilitate learning in students with LD; that problem solving training leads to increased social interaction and decreased behavioral problems; that selecting appropriate teaching methods to meet the specific needs of the students is good to overcome LDs. However, the study indicated that most of the respondents were unaware that VAKT (multi-sensory approach) provides simultaneous information through eyes, ears, fingers and muscles.

A study conducted to assess the awareness and sensitivity among parents, teachers, school management and counsellors regarding learning disability in 35 schools of Mumbai found that 69% of the schools do not conduct learning disability training programmes for teachers. When asked about the specific academic difficulties the child faces, 37% teachers were not aware, 49% had minimal awareness and 14% had adequate awareness. 69% of schools do not have a counsellor 83% do not have the facility of a resource room. 83% do not have a remedial educator. Only 11 schools of the 35 interviewed send children to the hospital for certification and the remaining schools refer to any other source.

5.3. Awareness about Specific Learning difficulty and Education level

One of the goals of this study was to examine difference between level of awareness about Specific Learning difficulty and teachers' education level. Thus, in this study there is significant difference on teachers' level of awareness about Specific Learning difficulty among High School Graduate, Certificate, TVET/Diploma, Under Graduate, Graduate and post graduate teachers.

Findings of this study are consistent with a study conducted by Scuito, Terjesen & Frank, and (2000) who found that overall knowledge of LD was related to the teachers' past experience with LD children. Teachers who reported having taught a child diagnosed with LD scored

significantly higher than teachers who had no prior teaching experience with a child with LD. At the same time Brook, Watemberg & Geva, (2000) found that the length of teachers' experience did not influence their level of knowledge on LD.

5.3. The awareness of Specific Learning difficulties and Grade level at which teachers teach

One of the goals of this study was to examine difference between level of awareness about Specific Learning difficulty and teachers' age group. Thus, in this study there is significant difference on teachers' level of awareness about Specific Learning difficulty among age group below 20 years, 21-35 years, 36-50 years, and above 51 years.

Supporting the current study's result, he results presented by Osti, in his study, inform that the most teachers who teach from grade one to six attribute the learning disorder, to emotional problems as consequence of family troubles. Consequently, the problematic is directed to the familiar environment and exclusive to the student, as lack of interest and desire in taking part of the proposed activities. Similarly, to the actual study, 88% of the teachers informed that learning disorders are noticed at school, due to several factors, mainly to lack of assistance and follow-up of the family concerning homework, researches and 52% attribute to lack of interest and lack of efforts of the students.

CHAPTER SIX

SUMMARY, CONCLUSSION AND RECOMMENDATIONS

6.1. Summary

The general objective of this study was to investigate awareness of specific learning disability among public primary school teachers in Bole sub city, Addis Ababa City Administration. Both quantitative and qualitative methods were employed to answer the stated basic research questions. Semi structured questionnaire was administered and completed by sample respondents in the study area. Moreover, key informant interviews were held with key informants based on interview guide.

To analyze the data from the quantitative survey, percentages, mean, standard deviation, one-way ANOVA and independent two sample t-test were employed. The qualitative data obtained from key informant interview was analyzed using inductive thematic analysis.

The following major findings were found from the analysis of the quantitative and the qualitative data:

- Majority (73.1%) of them were aware that LD is a disorder in language, speech, reading, and writing and associated communication, (83 %) were aware that LD is not only concerned with a mental deficiency but also concerned with social and emotional factor (71 %) of the respondents were aware that Students with LD lack positive social behavior and are poorly accepted by peers. To the statement whether LD does not include students who have learning problem due to visual, hearing or motor handicaps. However, majority of the respondents (61.2 %) were unaware.
- Nearly 8 teachers out of ten (78.8%) were aware that students with LDs have low self confidence and self-esteem than that of normally achieving students, (75.3%) of the respondents knew that students with LDs exhibit motivational problems and complex behaviors. To the claim that students with LDs find it difficult to adjust with the new surroundings, large number of respondents (70.3%) were aware, (74.9%) were aware that students with LDs find inability to follow simple oral directions, special relationship and difficult to understand classroom discussion. However, (69.9%) were unaware that students with LDs are unable to organize ideas into a clear concise pattern of words.

(73.5%) were not aware that students with LDs encounter problems both in breaking words into their components and in blending individual sounds to make words.

- Significantly large number of respondents (78.1%) had knowledge that unhealthy home environment brings Learning Difficulties in student. As to whether poor teaching environment leads to Learning Difficulties in students, most of the respondents (68.9 %) were aware. However, more than third fourth of the respondents (78.8 %) were unaware that genetic factor plays vital role in students with Learning Difficulties.

- A significant number of the respondents (80%) were unaware that a student with reading difficulty fails to demonstrate word attack skills. Slightly more than two thirds of the respondents did not know that dyslexic students have difficulty with sound-symbol relationships. With regard to the statement that students with reading disorder has difficulty with phonics skills when reading (i.e., fails to sound out words correctly or blend sounds into words), most of the respondents (76.3%) were unaware. Furthermore, 65.7 % of the respondents were not aware that a student with reading difficulty reads words correctly in one context but not in another.

- Most of the respondents (71.3%) were unaware that students with writing difficulty uses inappropriate spacing between words or sentences when writing, nor does (80.1%) were aware that students with writing difficulty does not use appropriate subject-verb agreement when writing. With regard to the statement that students with writing difficulty fails to form letters correctly when printing or writing, most of the respondents (71.3%) were unaware.

- Most of the respondents (78.6%) were unaware that students with math difficulty works math problems from left to right instead of right to left, nor does (80.3%) were aware that students with math difficulty fails to demonstrate knowledge of place value. With regard to the claim that students with dyscalculia fails to demonstrate knowledge of place value, most of the respondents (81.7%) were unaware. Nearly eight respondents out of ten were unaware that students with math difficulty fail to correctly solve problems involving money. Majority of the respondents did not know that students having math difficulty fails to correctly solve math problems requiring subtraction (52.3%) and multiplication (77%).

- 80 % of the respondents were unaware that VAKT (multi-sensory approach) provides simultaneous information through eyes, ears, fingers and muscles.
- There is a significant difference between teachers awareness about specific learning difficulty and education level (p=0.006).
- There is no significant difference between awareness about specific learning difficulties among teachers and grade level at which they teach.

6.2. Conclusion

Based on the finding of the study, the following conclusion has been made. The results of this study showed that, most of sampled respondents were aware that LD is a disorder in language, speech, reading, and writing and associated communication skills; that LD is not only concerned with a mental deficiency but also concerned with social and emotional factor; that Students with severe LDs have discrepancy between academic achievement and intellectual ability. However, majority of the respondents were unaware that LD does not include students who have learning problem due to visual, hearing or motor handicaps.

Regarding the level of awareness about Characteristics of Students with LDs, majority of the respondents were aware that students with LDs have low self confidence and self-esteem than that of normally achieving students; that students with LDs exhibit motivational problems and complex behaviors; that students with LDs can be easily distractible and possess short attention span while the remaining; that students with LDs find it difficult to adjust with the new surroundings, large number of respondents. However, most of the respondents were unaware that students with LDs are unable to organize ideas into a clear concise pattern of words; that students with LDs encounter problems both in breaking words into their components and in blending sounds to make words.

Concerning the level of awareness about causes of LD, the result depicted that significantly large number of respondents had knowledge that unhealthy home environment brings Learning Difficulties in student. As to whether poor teaching environment leads to LDs in students, most of the respondents were aware. However, more than third fourth of the respondents were unaware that genetic factor plays vital role in students with LDs.

The study also revealed results regarding teachers' level of awareness about identification of students with Reading Difficulty, Writing Difficulty and Difficulty in Math. With regard to identification of symptoms of Reading Difficulty, the study depicted that a significant number of the respondents were unaware that a student with dyslexia: fails to demonstrate word attack skills, have difficulty with sound-symbol relationships and with phonics skills when reading, reads words correctly in one context but not in another, understands what is read to him/her but not what he/she reads silently as well as reads too slowly to finish on time. In relation to of teachers' awareness about identifying symptoms of Writing Difficulty, most of the respondents were unaware that students with Writing Difficulty uses inappropriate spacing between words or sentences when writing, do not use appropriate subject-verb agreement when writing, and fails to form letters correctly when printing or writing. Pertaining to the awareness about identifying symptoms of Difficulty in Math, the study indicated that considerable numbers of the respondents were unaware that students with dyscalculia works math problems from left to right instead of right to left, fails to demonstrate knowledge of place value, fail to correctly solve problems involving money, fails to correctly solve math problems requiring subtraction and multiplication.

The study also indicated that most of the respondents were unaware that VAKT (multi-sensory approach) provides simultaneous information through eyes, ears, fingers and muscles.

There is a significant difference between teachers' awareness about specific learning difficulty and education level. In contrast, the study concluded that there is no significant difference between awareness about specific learning difficulties among teachers and grade level at which they teach

6.3. Recommendations

Based on the findings and conclusions the researcher suggests the following recommendations:

- The government of India should take measures to sensitize the problems of SpLD students among the teacher educators, teachers and general public. This can be possible through revamping the teacher education curriculum and introducing a paper on special education as a compulsory paper, providing in-service training programs in special education and remedial teaching strategies. Awareness programme about special needs

children should be created through mass media to sensitize the problems of these children among parents.

- The issue of LD should also involve the governmental and non-governmental organization so that they can play a pivotal role in helping the people with LD.
- Providing school teachers the basic concept about special needs education and how to work with students with LD so that they can be understood at earliest possible time and help them cope with their academic shortcomings. Teachers have specific position in e-environment for student with disabilities. They have to apply new teaching elements and roles (active facilitation, coordination, management, tutoring), and new teaching assistive technology and e-learning technology.
- Professional in the fields of special need should be trained to decrease the problem of LD and the government should provide enough budgets for its practical implementation.
- Schools should be equipped with the necessary facilities to help students with LD to help and bring the desired result.
- Future research should explore support mechanisms for instructors to favor the engagement and learning of students with LD in education Because findings from this study may not represent the views of all primary school teachers on barriers experienced with their students with LD; more research studies should be grounded in both the qualitative and quantitative paradigms that are warranted internationally to explore teachers' challenges with these students

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APPENDIX A: ENGLISH VERSION QUESTIONNIARE

ADDIS ABABA UNIVERSITY

COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES
DEPARTMENT OF SPECIAL NEEDS EDUCATION
SPECIAL NEEDS EDUCATION MASTER'S PROGRAM

SURVEY QUESTIONIARE PREPARED FOR PRIMARY SCHOOL TEACHERS

Dear respondent:

The purpose of this questionnaire is to collect information regarding the study entitled: *An Assessment Awareness of specific learning disability among public primary school teachers in Bole sub city, Addis Ababa.*

There are three (2) sections in this questionnaire. I kindly ask you to carefully read the instruction before answering the questions. Please feel free to answer all questions truthfully and to the best of your ability. Your responses will remain anonymous and only group data will be presented. It will not be used as an evaluation of your work or capabilities. Should you have any questions, please feel free to contact using the contact information outlined below.

Contact information of the investigator:

Name: Abiyou Asnake

E-mail:abiyouasnae@gmail.com,

Mobile: +251 926 181 391

P.O. Box: 46025

Addis Ababa, Ethiopia.

Section A: Respondent's Demographic Profile

Instruction: Please place a tick ("√") or fill in the blank for each of the following:

1. Gender:

   ☐ Male ☐ Female

2. Age:

   ☐ 20 years old and below ☐ 21- 35 years old

   ☐ 36-50 years old ☐ 51 years old and above

3. Highest education completed:

   ☐High School Graduate ☐ Under Graduate (BA/BSc or similar)

   ☐ Certificate ☐ Graduate (MA/MSc or similar)

   ☐ TVET/Diploma ☐ Others, Please Specify_____

4. How many years have you worked in teaching?

   _____

5. Apply the grade level at which you are teaching?

   _____

   ☐ (1^{st}) (1^{st} to 6^{th} grade)

   ☐ (2^{nd}) (7^{th} through 8^{th} Grade)

Section B: Questions related to awareness of teachers regarding the various aspects ofLearning Difficulties

Instruction: Please place a tick ("√") to your answer to each item using the quantifiers provided: [(1) = No; (2) = Yes; (3) = Don't Know].

No	Item Description	Yes	No	Don't Know
1.	**Concept of Learning Difficulties**			
1.1.	Learning Difficulty is a disorder in language, speech, reading, writing and associated communication skills.			
1.2.	Learning Difficulty does not include students who have learning problem due to visual, hearing or motor handicaps.			
1.3.	Learning Difficulty is not only concerned with a mental deficiency but also concerned with social and emotional factors.			
1.4.	Students with Learning Difficulties lack positive social behavior and are poorly accepted by peers.			
1.5.	Students with severe Learning Difficulties have discrepancy between academic achievement and intellectual ability			
1.6.	Students with specific Learning Difficulties do have special abilities even though they exhibit difficulties in learning.			
2.	**Characteristics of Students with LearningDifficulties**			
2.1.	Students with Learning Difficulties have low self confidence and self-esteem than that of normally achieving students.			
2.2.	Students with Learning Difficulties exhibit motivational problems and complex behaviors.			
2.3.	Students with Learning Difficulties can be easily distractible and possess short attention span.			
2.4.	Students with Learning Difficulties find difficult to adjust with the new surroundings.			
2.5.	Students with Learning Difficulties find inability to follow simple oral directions, special relationship and difficult to understand classroom discussion.			
2.6.	Students with Learning Difficulties are unable to organize the ideas into a clear concise pattern of words.			
2.7.	Students with Learning Difficulties encounter problems both in breaking words into their components and in blending individual sounds to make words in English.			
3.	**Causes of Learning Difficulties**			
3.1.	Unhealthy home environment brings Learning Difficulties in student			
3.2.	Genetic factor plays vital role in students with Learning Difficulties.			
3.3.	Poor teaching environment leads to Learning Difficulties in students.			
4.	**Identification of Learning Difficulties**			
4.1.	**Dyslexia (Reading disorder)**			

	Among the students you taught are there anyone who:			
4.1.1.	Fails to demonstrate word attack skills (e.g., phonics, context clues, picture clues, etc.)?			
4.1.2.	Fails to recognize words on grade level?			
4.1.3.	Fails to correctly answer comprehension questions from reading activities?			
4.1.4.	Loses place when reading (e.g., leaves out words, lines, or sentences when reading)?			
4.1.5.	Has difficulty with sound-symbol relationships (e.g., does not know that the letter "d" makes the /d/ sound)?			
4.1.6.	Has difficulty with phonics skills when reading (i.e., fails to sound out words correctly or blend sounds into words)?			
4.1.7.	Omits, adds, substitutes, or reverses letters, words, or sounds when reading?			
4.1.8.	Fails to demonstrate word comprehension (i.e., does not know the meaning of words read)?			
4.1.9.	Reads words correctly in one context but not in another (e.g., does read a word from a flash card but not in a sentence)?			
4.1.10.	Does not read independently (i.e., does not choose reading as an independent activity, avoids reading, etc.)?			
4.1.11.	Does not discriminate between similar letters and words (e.g., "m" and "n," "cat" and "cap," etc.)?			
4.1.12.	Does not know all the letters of the alphabet?			
4.1.13.	Understands what is read to him/her but not what he/she reads silently?			
4.1.14.	Fails to finish assignments because of reading difficulties (i.e., reads too slowly to finish on time)?			
4.2.	**Dysgraphia (Writing disorder)**			
	Among the students you taught are there anyone who:			
4.2.1.	Fails to copy letters, words, sentences, and numbers from a model at a close proximity (e.g., does not copy from a textbook)?			
4.2.2.	Fails to copy letters, words, sentences, and numbers from a model at a distance (e.g., does not copy from the chalkboard)			
4.2.3.	Fails to use capitalization correctly when writing?			
4.2.4.	Uses inappropriate spacing between words or sentences when writing?			
4.2.5.	Reverses letters and numbers when writing?			
4.2.6.	Fails to write within a given space (e.g., writes off of the page, does not write on a line, etc.)?			
4.2.7.	Fails to punctuate correctly when writing?			
4.2.8.	Does not use appropriate subject-verb agreement when writing?			
4.2.9.	Does not compose complete sentences or express complete thoughts when writing?			
4.2.10.	Omits, adds, or substitutes words when writing?			

4.2.11.	Fails to form letters correctly when printing or writing (e.g., a's do not look like a's, b's do not look like b's, does not connect letters, etc…?			
4.2.12.	Fails to use verb tenses correctly when writing (e.g., past, present, future)?			
4.2.13.	Uses inappropriate letter size when writing (i.e., too large or too small)?			
4.3.	**(Dyscalculia) Mathematics disorder**			
	Among the students you taught are there anyone who:			
4.3.1.	Has difficulty solving math word problems?			
4.3.2.	Fails to change from one math operation to another (e.g., starts with addition and does not change to subtraction)?			
4.3.3.	Does not understand abstract math concepts without concrete examples (i.e., must have Manipulative in order to work math problems)?			
4.3.4.	Fails to correctly solve math problems requiring regrouping (i.e., borrowing and carrying)?			
4.3.5.	Works math problems from left to right instead of right to left?			
4.3.6.	Fails to follow necessary steps in math problems (e.g., does steps in the wrong order, omits a step, etc.)?			
4.3.7.	Fails to correctly solve math problems involving fractions or decimals (e.g., understanding parts of the whole, recognizing fractional values, performing operations, etc.)?			
4.3.8.	Fails to demonstrate knowledge of place value?			
4.3.9.	Confuses operational signs when working math problems (e.g., +, -, ÷, ×)?			
4.3.10.	Has difficulty understanding abstract concepts (e.g., dimensionality, size, space, shape, etc.)?			
4.3.11.	Fails to correctly solve problems involving money (e.g., coin recognition and value, counting money, making change, etc.)?			
4.3.12.	Fails to correctly solve problems using measurement (e.g., length, volume, weight, etc.)?			
4.3.13.	Fails to correctly solve math problems requiring division.			
4.3.14.	Does not understand the concept of time (e.g., does not know how to tell time, does not use a calendar, does not work problems involving time, etc.)?			
4.3.15.	Fails to correctly solve math problems requiring addition?			
4.3.16.	Fails to correctly solve math problems requiring subtraction?			
4.3.17.	Fails to correctly solve math problems requiring multiplication?			
4.3.18.	Does not remember math facts?			
4.3.19.	Does not make use of columns when working math problems (e.g., puts numbers in wrong columns, adds across columns, etc.)?			

5.	**Instructional Strategies for Students withLearning Difficulties**			
5.1.	Students with Learning Difficulties may be taught, most frequently misspelled words, and use of spelling dictionary.			
5.2.	Story reading introduces students to new words, new sentences, new places and new ideas in the subjects like English			
5.3.	Listening to words and passages through tape recorder, VCD will strengthen comprehension Abilities			
5.4.	Reading aloud and paraphrasing often are very helpful in the arts subjects like History, Political Science etc.			
5.5.	Peer tutoring, group learning and multi-sensory approaches facilitate learning in students with Learning Difficulties.			
5.6.	Problem solving training leads to increased social interaction and decrease behavioral problems and inattention.			
5.7.	Students with Learning Difficulties may be facilitated to use the teaching learning materials available in the resource room or center for special educational needs.			
5.8.	Selecting appropriate teaching methods to meet the specific needs of the students is essential to overcome the Learning Difficulties.			
5.9.	VAKT (multi-sensory approach) provides simultaneous information through eyes, ears, fingers and muscles.			

APPENDIX B: KEY INFORMANT INTERVIEW GUIDELINE

ADDIS ABABA UNIVERSITY

KEY INFORMANT INTERVIEW GUIDELINE

SCHOOL_____

POSITION_____

SEX_____

EDUCATIONAL STATUS_____

CODE_____

1. Do You Have Any Pupils With Learning Disabilities In Your School/Classroom?
2. What Types Of Disabilities Are Found In Your School Or Class?
3. How Do You Identify The Pupils With Learning Disabilities In Your School/Class?
4. How Does The Disability Affect The Pupils' Learning?
5. Do You Have Any Information/ Training Or Awareness About Learning Disabilities?
6. How Do You Help The Pupils With Disabilities?
7. What Challenges/Problems Do You Face When Handling An Inclusive Class?
8. How Do You Solve The Challenges /Problems?

APPENDIX C: DATA ANALYSIS OUTPUTS

I. Independent Samples T-Test result

Group Statistics					
	Awareness of LDs	N	Mean	Std. Deviation	Std. Error Mean
Grade Level of Teaching	Aware	134	16.4723	2.75746	.238
	Unaware	149	16.5676	3.53307	.289

***Source**; Computed from own survey data (2019)*

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean diff	Std. Error diff	95% CI Difference	
									Lower	Upper
Grade Level of Teaching	Equal variances assumed	8.84	.802	.025	281	.862	-.095	.37973	-.8428	.65217
	Equal variances not assumed			.025	275.66	.799	-.095	.37486	-.8333	.64264

***Source**; Computed from own survey data (2019)*

II. One way ANOVA result

Descriptives								
Awareness about LDs								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
High School Graduate	2	128.50	4.94975	3.50000	84.0283	172.9717	125.00	132.00
Certificate	2	94.000	36.76955	26.0000	-236.3613	424.3613	68.00	120.00
TVET/Diploma	75	118.01	21.90242	2.52907	112.9740	123.0526	78.00	182.00
Under Graduate	160	115.50	21.67484	1.71355	112.1220	118.8905	61.00	167.00
Graduate (MA/MSc)	39	108.46	21.00858	3.36406	101.6513	115.2717	58.00	137.00
Post Graduate (Ph.D.)	5	144.80	30.85774	13.8000	106.4851	183.1149	111.00	168.00
Total	283	115.65	22.28982	1.32499	113.0491	118.2654	58.00	182.00

***Source**; Computed from own survey data (2019)*

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ANOVA					
Awareness about LDs					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7953.780	5	1590.756	3.334	.006
Within Groups	132153.973	277	477.090		
Total	140107.753	282			

***Source**; Computed from own survey data (2019)*

Post H`oc Tests

Multiple Comparisons

DependentVariable: Awareness about LDs

Tukey HSD

(I) Education Level (EL)	(J) Education Level	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
High School Graduate	Certificate	34.50000	21.84239	.613	-28.1829	97.1829
	TVET/Diploma	10.48667	15.64948	.985	-34.4239	55.3972
	Under Graduate	12.99375	15.54114	.961	-31.6059	57.5934
	Graduate	20.03846	15.83598	.804	-25.4073	65.4842
	Post Graduate	-16.30000	18.27466	.948	-68.7443	36.1443
Certificate	High School	-34.50000	21.84239	.613	-97.1829	28.1829
	TVET/Diploma	-24.01333	15.64948	.642	-68.9239	20.8972
	Under Graduate	-21.50625	15.54114	.737	-66.1059	23.0934
	Graduate	-14.46154	15.83598	.943	-59.9073	30.9842
	Post Graduate	-50.80000	18.27466	.064	-103.2443	1.6443
TVET/Diploma	High School	-10.48667	15.64948	.985	-55.3972	34.4239
	TVET/Diploma	24.01333	15.64948	.642	-20.8972	68.9239
	Under Graduate	2.50708	3.05663	.964	-6.2648	11.2790
	Graduate	9.55179	4.31211	.234	-2.8230	21.9266
	Post Graduate	-26.78667	10.08857	.088	-55.7386	2.1653
Under Graduate	High School	-12.99375	15.54114	.961	-57.5934	31.6059
	Certificate	21.50625	15.54114	.737	-23.0934	66.1059
	TVET/Diploma	-2.50708	3.05663	.964	-11.2790	6.2648
	Graduate	7.04471	3.90063	.464	-4.1492	18.2387
	Post Graduate	-29.29375*	9.91967	.040	-57.7610	-.8265
`Graduate	High School	-20.03846	15.83598	.804	-65.4842	25.4073
	Certificate	14.46154	15.83598	.943	-30.9842	59.9073
	TVET/Diploma	-9.55179	4.31211	.234	-21.9266	2.8230
	Under Graduate	-7.04471	3.90063	.464	-18.2387	4.1492
	Post Graduate	-36.33846*	10.37551	.007	-66.1139	-6.5630
Post Graduate	High School	16.30000	18.27466	.948	-36.1443	68.7443
	Certificate	50.80000	18.27466	.064	-1.6443	103.2443
	TVET/Diploma	26.78667	10.08857	.088	-2.1653	55.7386
	Under Graduate	29.29375*	9.91967	.040	.8265	57.7610
	Graduate	36.33846*	10.37551	.007	6.5630	66.1139

*. The mean difference is significant at the 0.05 level.

***Source**; Computed from own survey data (2019)*

Homogeneous Subsets

Tukey HSD[a,b]

		Subset for alpha = 0.05	
Highest_educn_completed	N	1	2
Certificate	2	94.0000	
Graduate (MA/MSc	39	108.4615	108.4615
Under Graduate (BA/BSc)	160	115.5063	115.5063
TVET/Diploma	75	118.0133	118.0133
High School Graduate	2	128.5000	128.5000
Post Graduate (Ph.D.)	5		144.8000
Sig.		.143	.105

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 4.818.

b. The group sizes are unequal. The harmonic mean of the group sizes is used.

Type I error levels are not guaranteed.

***Source**; Computed from own survey data (2019)*