



HAWASSA UNIVERSITY

COLLEGE OF EDUCATION AND BEHAVIOURAL SCIENCES

DEPARTMENT OF SPECIAL NEEDS AND INCLUSIVE EDUCATION

**THE RELATIONSHIP BETWEEN SCHOOL SUITABILITY AND
ACADEMIC ACHIEVEMENT OF STUDENTS WITH DISABILITIES IN
SELECTED GOVERNMENT PRIMARY SCHOOLS AT HAWASSA CITY
ADMINISTRATION**

By: YISAK BANCHABA BASSA

Advisor: BREHANU DENDENA (PhD)

MAY, 2024

HAWASSA, ETHIOPIA

HAWASSA UNIVERSITY

COLLEGE OF EDUCATION

DEPARTMENT OF SPECIAL NEEDS AND INCLUSIVE EDUCATION

**The Relationship between School Suitability and Academic Achievement of
Students with Disabilities in Selected Government Primary Schools at Hawassa
city administration**

By: Yisak Bancha Bassa

Advisor: BREHANU DENDENA (PhD)

**A Thesis Submitted to the School of Graduate Studies of College of Education
and Behavioral Sciences Department of Special Needs Inclusive Education in
Partial Fulfillment of the Requirements for the Degree of Master of Arts in
Special Needs Inclusive Education**

Advisor: Brehanu Dendena(PhD)

MAY, 2024

Hawassa, Ethiopia

ACKNOWLEDGEMENTS

First of all I would like to thank the Almighty God and his sanctified virgin mother, for all his mercy and protection in all my steps and for giving me the strength, commitment, and tolerance for accomplishing this thesis.

Next, I would like to express my deepest gratitude and appreciation to my advisor Dr. Brehanu Dendena for his excellent advice conducting the study and spending his precious time for improving the quality of this research.

Also, I would like to express my appreciation to all schools and individuals who contributed directly or indirectly to this thesis work and provided the necessary support for the realization of this thesis. Special thanks are forwarded to school principals, teachers, students with disabilities who sacrificed their precious time in filling the questionnaires.

Lastly, I wish to express my sincere gratitude to my family. I thank you for all your love, support, encouragement, follow-up, and prayers. As a whole thank you to all my friends and special needs and inclusive education department staff that supported, guided and gave me a lot of courage necessary to accomplish this work.

DECLARATION

I declare that this thesis entitled “*The Relationship between School Suitability and Academic Achievement of Students with Disabilities in Selected Government Primary Schools at Hawassa city administration*” is my original work and that all sources of materials used have been duly acknowledged. This thesis has been submitted in partial fulfillment of the requirement for MA Degree to College of Education and Behavioral Sciences, department of Special Needs and Inclusive Education at Hawassa University and is deposited at the library. I seriously declared that this has not been presented to any other university and is not concurrently submitted in candidature for the award of any other degree.

Name of candidate: Yisak Bancha

Signature: - _____

Advisor Approval Sheet

I hereby certify that the thesis entitled "*The Relationship between School Suitability and Academic Achievement of Students with Disabilities in Selected Government Primary Schools at Hawassa city administration,*" was conducted by student Yishak Bancha under my guidance and supervision. He submitted the thesis in partial fulfilment of the requirement for Master of Arts in Special Needs and Inclusive Education.

ADVISOR: Dr. Brehanu Dendena

Signature _____

Date _____

EXAMINERS' APPROVAL SHEET

As a member of the Board of Examiners of the MA Thesis open defense examination, we certify that we read and evaluated the thesis prepared by Yisak Bancha Bassa entitled “*The Relationship Between School Suitability and Academic Achievement of Students With Disabilities in Selected Government Primary Schools at Hawassa city administration*” and examined the candidate. We recommend that the thesis be accepted as fulfilling the thesis requirements for Master of Arts degree in special needs and inclusive education.

	Name	Signature	Date
External Examiner:	_____	_____	_____
Internal Examiner:	_____	_____	_____
Chairperson:	_____	_____	_____
School of Postgraduate studies:	_____	_____	_____

TABLE OF CONTENTS

Contents	Page
ACKNOWLEDGEMENTS	i
DECLARATION.....	ii
LIST OF FIGURE.....	ix
LIST OF ABBREVIATIONS AND ACRONYMS.....	x
ABSTRACT.....	xi
CHAPTER ONE	1
INTRODUCTION	1
1.1Background of the study	1
1.2 Statement of the Problem.....	3
1. 3 Objectives of the Study.....	5
1.3.1 General Objective	5
1.3.2 Specific Objectives	6
1.4 Hypothesis of the study.....	6
1.5 Significance of the Study	6
1.6. Scope of the study	8
1.7 Limitations of the Study.....	8
1.8 Operational Definition of Terms.....	8
1.9 Organization of the Study	9
CHAPTER TWO	10
REVIEW OF RELATED LITERATURE	10
2.1 Definition of Terms.....	10
2.1.1 Disability.....	10
2.1.2 Physical Disability	10
2.1.3 Visual Impairment.....	11
2.1.4 Hearing Impairment	11
2.1.5 Accessibility.....	11
2.1.6 Infrastructure.....	11
2.2 Theories of the Study	12

2.2.1 A Social Theory of Disability	12
2.2.2. Important of School Infrastructures in Education	12
2.2.3. Students' Academic Performance	13
2.2.4 Effects of School Infrastructures on Students' Academic Performance	14
2.2.3 Theory of Infrastructure Development.....	14
2.3 Empirical Theory	15
2.3.1 Studies Conducted Outside the Continent.....	15
2.3.2 Studies Conducted in Africa	15
2.4. Conceptual Framework.....	16
CHAPTER THREE	18
RESEARCH METHODOLOGY	18
3.1 Study Area	18
3.2. Research Approach	18
3.3. Research Design.....	18
3.4. Population, Samples and Sampling Techniques	19
3.4.1. Population	19
3.4.2. Samples, Samples size determination and Sampling technique.....	20
3.7. Source of Data Collection	21
3.8. Data Collection Tools	21
3.8.1 Questionnaire	22
3.9 Method of Data Analysis	23
3.10 Reliability and Validity of Instruments.....	23
3.11. Ethical Consideration of Research.....	24
CHAPTER FOUR.....	26
RESULTS AND DISCUSSIONS	26
4.1 Descriptive Analysis	26
4.1.1 Demographic Information of Respondents	26
4.1.2 Students' Satisfaction on the school software and hardware	31
4.1.3 First Semester Average Score of the Students	33
4.2. Inferential Statistics Analysis.....	35
4.2.1 Correlation and Regression Analysis	35
4.2.2 Regression Analysis.....	37
4.2.3 Assumption Tests of Regression Analysis.....	38

4.2.4 Multiple Linear Regressions	40
4.2.2 Regression Analysis	41
4.2.4 Validating the Proposed Hypotheses	42
4.3 Discussion	43
4.3.1 Resource allocation	43
4.3.2 Technology Accessibility	44
4.3.3. Curriculum Flexibility and Differentiation	44
4.3.4 Poor Instructional Approach	45
4.3.5 Building Inaccessibility	45
CHAPTER FIVE	49
SUMMARY, CONCLUSION AND RECOMMENDATION	49
5.1 Summary	49
5.2. Conclusion	50
5.3 Recommendations	51
5.4 Implication of the Study	53
5.4.1 Policy Implication	53
5.4.2 Practice Implication	54
5.4.3 Future Research Implication	54
REFERENCES	56
APPENDICES	61

LIST OF TABLES

PAGE

Table3 Distribution of Participants.....	20
Table3.2 Representative Sample Distributions of students with disabilities (SWDs).....	22
Table3.3 Reliability of Instruments	25
Table4.1 Sex of students with various disabilities.....	28
Table4. 2 Age of students with disability.....	29
Table 4.3 Grade level of Student.....	29
Table 4.4 Types of Disability across sex.....	30
Table 4.5 Types of Disability across Age	31
Table 4.6 Types of Disability across Grade Level.....	31
Table 4.7 Level of Students' Satisfaction on the school soft and hardware.....	33
Table 4.8 Average score of the whole Students.....	34
Table 4.9 First Semester Average score across Grade level.....	35
Table 4.10 Results of the Pearson correlation test and one tailed T-test.....	37
Table 4.11. Test of auto-correlation	39
Table4.12. Test of Collinearity Diagnostics.....	40
Table 4.13 R-Square Model Summary.....	41
Table 4.14 ANOVA Result.....	41
Table 4.15 Regression Coefficients.....	42
Table 4.16 Result of Proposed hypotheses.....	43

LIST OF FIGURE

page

Figure 3.1 Conceptual Frameworks.....	18
Figure 4.1 Pearson's Correlation between variables.....	36

LIST OF ABBREVIATIONS AND ACRONYMS

ABE	Alternative Basic Education
ADAPT	Americans Disabled for Accessible Public Transit
CCD	Centre for Citizens with Disabilities
HRW	Human Rights Watch
ICIDH	International Classification of Impairments, Disabilities and Handicaps
ICT	Information and Communication Technology
IDEA	Individuals with Disabilities Education Act
IE	Inclusive Education
IEP	Individualized Education Programs
MoE	Ministry of Education
MoSHE	Ministry of Science and Higher Education
PWDO	People's with disabilities Organization
QLE	Quality Learning Environment
SD	Standard Deviation
SNE	Special Needs Education
SWDs	Students with Disabilities
SWODs	Students without Disabilities
UN	United Nations
UNESCO	United Nations Education for Scientific and Cultural Organization
WHO	World Health Organization

ABSTRACT

The purpose of this study was investigating The Relationship between School Suitability and Academic Achievement of students with disabilities in selected government primary schools at Hawassa city administration. It was conducted at Tabor, Haik, & Ethiopia Tikdem primary Schools in 2023. The independent variable was school suitability which comprises hard ware and soft ware of the schools. The hard ware refers to infrastructure suitability & accessibility including building accessibility, Technology, & resource allocation. The software of the school talks about instructional methods used by teachers, Curriculum flexibility & support system designed in the schools. The dependent variable was students' academic achievement. The study employed a cross-sectional survey research design under quantitative method. Hence, 210 samples were selected by systematic random sampling technique to fill out questionnaires. However, only 205 from which 68 (33.2%) were females & 137 (66.8%) males, were correctly filled out & returned. Data were collected by Likert type self-designed questionnaire. Data analysis was done by using the descriptive & inferential statistical applications. The inferential statistics analysis examined the correlation & regression to identify significant relationship between the variables. As a result, Pearson product-moment correlation analysis indicates that there is strong correlation & relationships between independent & dependent variables that shows building accessibility ($R = .702^$), technology accessibility ($R = .716^*$); Resource allocation ($R = .870^{**}$); Curriculum flexibility ($R = .726^*$); & Teaching method ($R = .830^{**}$) relationship with students' academic achievement. Furthermore, the model summary also depicted that the school suitability is a predictor of the academic achievement of students with disability with value of $R = .912^a$; & the R-square for the equation was .832. From this it is possible to infer that the selected schools are not suitable. In other words they have no appropriate infrastructure including inaccessible building, lack of technology, poor resource allocation, curriculum rigidity, & poor instructional method. Due to this the student's academic achievement was poor as observed on the first semester average result. Based on the findings it was recommended that there should be consideration for making the schools suitability learning zones by improving the problems identified on the hardware & software of the schools.*

Key words: Schools suitability, Academic achievement, accessibility, infrastructures, primary schools, students with disability

CHAPTER ONE

INTRODUCTION

This chapter introduces the study's background, statement of the problem, objectives, hypothesis, significance, Scope, limitation, operational definition of terms and organization of the study.

1.1 Background of the study

Education in the world is taken as the root of socio-economic, scientific, and technological advancement (Olufunke, 2012). It is believed that getting quality education requires to have well equipped learning institution with an adequate environment and sufficient facilities for students with and without disabilities. Education is vital for the economic and social development of any given country (Stream& Shannon, 2013). Schools are one of the key sectors to develop people's skills and Knowledge.

The adequate school environment and infrastructures can allow students with diverse types of disabilities to participate in teaching and learning processes effectively. However, they encounter problems to learn in the regular schools because of school physical barriers and lack of infrastructures, such ramps or elevators in multi-level school buildings, heavy doors, inaccessible washrooms, and inaccessible services like transportation, crowded classrooms, laboratory, and libraries facilities etc. Furthermore, lack of trained teachers, lack of school personnel awareness, inadequate instructional methods and lack of Braille and hearing aids have impacts on the education of students with disabilities. Moreover, students at the postsecondary level also have trouble in securing accessible student housing (Tait, 2013).

The United Nations Education for Scientific and cultural organization (UNESCO, 2008) revealed that, education reforms are needed to involve all educational stakeholders to support effective teaching and learning for the students with disabilities, because they need well-equipped laboratories, libraries, and facilities of classrooms and out of the classrooms. As Shannon (2013) describes academic performance of students with disabilities may be reduced by insufficient learning materials and lack of infrastructure.

The learning environment of the school requires well equipped school infrastructure (Karue&Amukowa, 2013; Lanham, 2000) because academic achievement of the students might be affected by inadequate school infrastructure. Hence, those schools which have Conducive infrastructures can achieve better students' academic performance than the schools which do not have adequate infrastructures. Furthermore, furniture, indoor air quality and class size are important infrastructures related variables that impact teaching and learning achievement.

According to the Centre for Citizens with Disabilities report of Nigeria (CCD, 2015) concentrated on assessing 'access to Public Infrastructures for Persons with Disabilities', examined that infrastructure-buildings and other public spaces that are established to provide public services, are low because of lack of people awareness towards students with disabilities, as well as there is awareness gap concerning the policies and conventions of people with disabilities.

In Ethiopian primary schools accommodates 18.7 million children and youth in grades 1-8, irrespective of their age. The Gross Enrolment Ratio reaches 102.7%, as a proportion of the school age population. In Ethiopia, the official primary school age population is between 7 and 14. This indicator includes enrolment in formal primary schools as well as Alternative Basic Education (ABE) Centre's. However, total number of students with special educational needs who are attending their primary education is 71,007 in 2007 E.C (MoE, 2014/15).

On other hand, in the Ethiopia ordinary schools lack specialized teachers, interpreters, sign language experts and school equipment to enable persons with disabilities to master their studies (Uromi&Mazagwa, 2014). Elsewhere, scarcity of classes for students with disabilities have contributed to truancy and low performance, (May 22, 2012), the major challenges for students with mental disability includes inadequate classes, lack of teachers as well as special teaching and learning.

The Ethiopian Building Proclamation No. 624/2009 (Article 36) specifically addresses the accessibility of design and construction for physically impaired persons, as follows: "Any public building shall have a means of access suitable for use by physically impaired persons, including those who are obliged to use wheelchairs and those who are able to walk but unable to negotiate steps (36.1). Where toilet facilities are required in any building, an adequate number of such facilities shall be made suitable for use by physically impaired persons and shall be accessible to

them.” And also, the Education Proclamation No 650/2009 of Ethiopia indicated necessary and feasible academic assistance and guidance to be provided to the students. Support through sign language, amenable facilities, and programs, relocated classes and accessible environments, alternative testing procedures and educational auxiliary aids shall be provided to the physically challenged students. The proclamation is currently under revision So that the National School Health and Nutrition Strategy 2012 by the Ministry of Education state that “Children with disabilities and other special needs have a right to education. Disability and special needs are major impediments for effective learning, social inclusion, and integration. In order to address the challenges of children with disabilities and special needs, systems shall be put in place to provide a conducive, fully accessible and inclusive environment for all children and there shall be no discrimination on children with special needs; appropriate mechanisms shall be put in place for ensuring the safety and security of physically and mentally ill children; and teachers shall receive adequate training and acquire skills in order to give comprehensive care and support to children with special needs.

However, many available studies have explained concerning challenges of infrastructural for persons with disabilities in their learning and social life. The related studies on education have been mostly concentrating in postsecondary and at the university level. Furthermore, many of the reports are mostly on the aspect of inclusion in education mainstream for people with various disabilities. All these lack specific focal points in primary school level, most on infrastructural concern. The appropriate physical environment is needed to reach their potential to improve their academic achievement. Therefore, this study focused on investigating the relationship between school suitability and academic achievement of students with disabilities in Selected Government Primary Schools at Hawassa city administration.

1.2 Statement of the Problem

More than one billion people worldwide are living with disabilities. Among the most common forms of disabilities visual, hearing, and physical impairments observable challenges which require convenient learning environment to walk (WHO, 2015), For example, persons with physical impairment need barrier free physical environment to move place to place using wheelchair or brace (Cheung et al., 2015). However, globally the absence of appropriate infrastructure has been the most common impact in most countries (CCD, 2015). According to Stream (2006), well

equipped school infrastructure is one of the factors that can promote school performance. It was also discovered that a big number of insufficient school infrastructures located in rural and suburban areas leads to low school outcomes and development. The advantages of allocating sufficient school infrastructures which are also equipped can support educational effort (Shannon, 2013).

As Human Right Watch (2015), reported in some developed countries persons with disabilities are segregated from mainstream education system because of lack of adequate learning environment such as, wheelchair, ramps, assistive technology, or teaching aides. Similarly, the research that was conducted in Nigeria by Centre for Citizens with Disabilities (2015) and Persons with Disability Act (2010) realized that access to public infrastructures for persons with disabilities is so difficult and most government buildings and infrastructures do not fulfill school environment requirements.

Numerous studies have been conducted in relation to persons with disabilities both infrastructures and in the context of education, trying to study various challenges which are encountered by persons with various forms of disabilities for example visual, hearing, and physical. Moreover, most of the studies have been whether concentrated on the issue of access to education (inclusion) most commonly in higher educational institution, or some of the studies were concentrated on infrastructural challenges in primary and secondary level. However, there is paucity of literature which investigated the relationship between school suitability and academic achievement of students with disabilities.

Moreover, the recent studies showed that the school environment can have a dramatic effect on academic success and wellbeing. Thus, there are several factors of school environment also have a major role in fostering student achievement and molding behavior (Bhavana & Achchi, 2018). A positive, respectful school environment provides a solid foundation for supporting students' academic achievement and development of positive attitudes and behaviors. In general, it was established in theory that learning requires the environment to be safe and the necessary facilities to be accessible to all schools (Grift, 2014).

Previous studies were carried at international, national level, regional and city level on school environment related issues from different context. Again, several studies carried out regarding the issue of school environment and its relationships, influence on academic performance uses only teachers in their sampling. For example, study conducted by Odeh et al. (2015) on the Influence of

School Environment on Academic Achievement of Students in Secondary Schools in Nigeria, used only teachers in their sampling. Even though, the issue of school environment is affecting not only the teachers but also the students in further.

However, despite all important efforts made to ensure enrollment of children with disabilities in educational institutions yet, there is still a big puzzle on the existence of appropriate and well accessible infrastructures for students with disabilities. Even if the impacts of infrastructure on education of students with disabilities are obvious challenges in primary schools. So, this study sought to fill the gap created on the hardware and software of schools that were not addressed by previous studies. Therefore, this study investigated the current situation and gaps in access to appropriate infrastructures to students with disabilities, instructional suitability and educational facilities of government primary schools that had solely responsible for academic achievement of students with disabilities in Hawassa city administration.

Therefore, the study attempted to answer the following basic research questions.

- i. What types of infrastructures are accessible to students with disabilities in primary schools of Hawassa city administration?
- ii. How the school suitability affected the academic achievement of the students with disabilities in primary schools of Hawassa city administration?
- iii. What is the relationship between school suitability and academic achievement of students with disability in primary schools Hawassa city administration?
- iv. What measure should be taken to facilitate learning environment for students with disabilities in primary schools Hawassa city administration?

1. 3 Objectives of the Study

1.3.1 General Objective

The general objective of the study was to examine the relationship between school suitability and academic achievement of students with disabilities in selected government primary schools at Hawassa city administration.

1.3.2 Specific Objectives

The specific objectives of this study were

- i. To identify the accessible infrastructures for students with disabilities in primary schools of Hawassa town administration
- ii. To assess the school infrastructures accessibility related factors to affect the academic achievement of the students with disabilities in primary schools of Hawassa city administration.
- iii. To describe the relation between school suitability and academic achievement of students with disability.
- iv. To assess the measures should be taken to facilitate the learning environment for students with disabilities in primary schools of Hawassa city administration.

1.4 Hypothesis of the study

This study used alternative hypothesis, it stated as follows;

- Building accessibility has effect on students' academic achievement
- Classroom suitability has effect on students' academic achievement
- Resource allocation has effect on Students' Academic Achievement
- Technology accessibility has effect on students' academic achievement
- Curriculum flexibility has effect on Students' Academic Achievement
- Instructional Approach has effect on Students' Academic Achievement

1.5 Significance of the Study

The study of school suitability has numerous implications in identifying challenges and service provisions for students with disabilities in Ethiopia primary schools education. In addition, it contributes a lot to raise the awareness and insight of primary schools leader and stakeholders about the relation between school suitability and academic achievement in order to address their needs and improve service provisions.

Furthermore, the study specifically indicated the following significances;

- It will identify how the school infrastructures that can affect the students' academic achievement;

- add the existing wealth of knowledge to the current condition of infrastructures accessibility and to academic achievement of students with disabilities;
- enhance awareness for the school principals, teachers and other stakeholders concerning the significance of schools' suitability for the academic achievement of students with disabilities;
- provide the procedure of knowledge to the identification of infrastructural challenges and how to overcome them in order to create accessible learning environment for students with disabilities,
- develop the good outlook of educational planners and infrastructural designers in all levels which create conducive primary schools learning environment for students with disabilities,
- feed developmental plans to address the barriers of infrastructure for students with disabilities,
- help all public educational providers interest to that ensuring quality education for all,
- help the ministry of education to establish adequate infrastructural accessibility of primary school for students with disabilities,
- generate knowledge on the real situation of the students with disabilities in primary schools, learning environment and their major challenges,
- assist in establishing a base for the government and other stakeholders to follow up on how to provide accessible, quality, and equitable primary education to students with various disabilities,
- to help policy makers and education planners review existing educational policies, plans and priorities while improving enrollment, survival, completion and performance rates of this group of students in primary schools, and
- serve as a springboard for other researchers who might be interested in making investigations in a similar area.

1.6. Scope of the study

This research was conducted in Hawassa city administration in Sidama Regional government. The study focused on three selected government primary schools which enrolled students with disabilities such as Ethiopia Tikdem primary School located in Misrak Sub-city , Haik primary school located in Addis Ketema Sub-city and Tabor primary school located in Bahil Adarash Sub-city . Conceptually, it study was delimited to investigate the relationship between school suitability and academic achievement of students with disabilities in selected government primary schools at Hawassa city administration.

1.7 Limitations of the Study

The study involved only few primary schools selected from Hawassa city administration which had students with disabilities. Besides, the schools selection was mainly based on the availability of students with disabilities. So, it is difficult to make conclusion and recommendation to other schools and all students without disabilities. Hence it is advisable future researchers to conduct survey with coverage of as many schools as possible at regional level.

1.8 Operational Definition of Terms

- ❖ **Accessibility:** the right to reach, obtain and use a service. Furthermore, accessibility can be viewed as the "ability to access" and benefit from some system or entity(Warren & Warren, 2016).
- ❖ **Academic achievement:** commonly measured by examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important.
- ❖ **Infrastructure:** the fundamental facilities and the systems serving including roads, water supply, sewage, buildings, internet connectivity, learning facilities, toilet, library, laboratory, playground etc... that needed to support education, construction, economy and organization to be function(Seto et al., 2014).
- ❖ **Government Primary School:** the government funded public schools which provide educations free of charge from grade one up to eight students in order to give knowledge and skills.
- ❖ **Students with Disabilities:** students who are identified with some form of physical or mental impairment that limits them to perform in one or more major life activities.

- ❖ **Physical learning environment:** a combination of social and physical qualities that create the classroom experience. It includes classroom management, procedures, and how the space is organized, furnished and maintained. It includes spaces where learning tends to include more physicality than reading, writing, or conversation.

1.9 Organization of the Study

This paper was organized into five chapters. The first chapter incorporates the introduction, background of the study, statement of the problem, objectives of the study, research hypothesis, Significance of the study, scope of the study, limitation of the study, operational definition of terms and organization of the study. The second chapter presents a literature review that is related to the study and the researcher created conceptual framework on the study area. The third chapter involves research methodology that contains study area, research approach, research design, population, samples and sampling techniques, source of data collection, data collection tools, method of data analysis, reliability and validity of instruments, and ethical consideration of research. The fourth chapter included the descriptive analysis on the demographic information of respondents, students' satisfaction on the school software and hardware, first semester average score of the students. And the inferential statistics analysis for correlation and regression analysis was also addressed in this chapter. Discussion is the other major part on the resource allocation, technology accessibility, curriculum flexibility and differentiation, poor instructional approach and building inaccessibility the presentation, analysis, and discussion of results. Finally, chapter five presents the general summary of the findings, conclusion, recommendation as well as implication of the Study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

A literature review was an evaluative report of information found in literature related to your selected area of study. It was a summary of previous research on a topic. This study presents various literatures related to the study. It aimed at showing what has already been done, identified the gaps in knowledge and need to fill them through this study. The reviewed literature focuses on the conceptual analysis of the study's key concepts, empirical review, theoretical review, research gaps and conceptual framework.

2.1 Definition of Terms

2.1.1 Disability

Disability is defined by the World Health Organization, International Classification of Impairments, Disabilities and Handicaps (ICIDH) as any restriction or lack of ability to perform in a certain manner or within a range considered for a human being. Disability, therefore, more accurately reflects impairments, activity limitation and participation restriction which correlates with the lost work productivity and increased health resources utilization (Leong et al., 2014). Elsewhere, people with disabilities, are those with long term physical, mental, intellectual, or sensory impairments, which in interaction with various barriers may hinder their full and effective participation in the society on an equal basis with others (Titchkosky, 2014).

2.1.2 Physical Disability

Physical disability refers to intrinsic biological or acquired conditions (e.g., cerebral palsy, spinal bifida, traumatic brain injury, spinal cord injury, amputation) causing impairments which result in disability and limited participation in day-to-day activities (Law et al., 2014). The group of physical disabilities includes deficiencies and disabilities to walk, manipulate objects and coordinate movements, for example a severe restriction of the capacity to move from one place to another one and to use the arms and hands. Regularly, these types of disabilities require help of a person or an instrument such as wheelchairs or walkers to perform daily life activities (Aguilar et al., 2015).

2.1.3 Visual Impairment

Visual impairment is defined as the functional limitation of the eye or eyes or the vision system. That visually impaired person's eyesight cannot be corrected to a "normal level." They include, loss of visual acuity and inability of the person to see objects as clearly as a healthy person, loss of visual field meaning inability of an individual to see as wide an area as the average person without moving the eyes or turning the head, photophobia (inability to look at light), diplopia (double vision), visual distortion and visual perceptual difficulties or difficulties of perception (Ananya, 2016).

2.1.4 Hearing Impairment

Hearing impairment is a disability type like the category of deafness, but it is not the same. The official definition by the Individuals with Disabilities Education Act (IDEA) is "an impairment in hearing, whether permanent or fluctuating, is that which adversely affects a child's educational performance but is not included under the definition of 'deafness.'" Thus, knowing the definition of deafness is necessary to understand what sort of disabilities is considered hearing impairments. A hearing loss above 90 decibels is considered deafness, which means that a hearing loss below 90 decibels is classified as a hearing impairment (Justesen et al., 2006). Hearing impairment may be more specifically described according to its degree such as mild, moderate, severe, or profound (Oonk et al., 2016).

2.1.5 Accessibility

Accessibility refers to the right of reaching and obtaining and using a service. Furthermore, accessibility can be viewed as the "ability to access" and benefit from some system or entity (Warren & Warren, 2016). For the purpose of the study accessibility means enabling or allowing a person with disability to have access directly or indirectly to benefits of public social services in all spheres of society and this includes access to information, communication and physical environment such as tactile and sign language, interpretation for deaf and blind persons, audio tapes, Braille, large print, low vision facilities, computerized information and programs and making physical environment in buildings, public transport, roads and streets accessible for persons with disabilities (Uromi & Mazagwa, 2014).

2.1.6 Infrastructure

Infrastructure refers to the fundamental facilities and the systems serving a country, city, or area, including the services and facilities necessary for its economy to function (Seto et al., 2014).

Moreover, infrastructure in relation to students with disabilities is, that will support the services being provided such as school facilities, instruction in Braille/tactile or audio, doors wide enough to accommodate a wheelchair, handrails on both sides of stairs and trained teachers (Dettmer, Ettel, Glang, &McAvoy, 2014).

2.2 Theories of the Study

2.2.1 A Social Theory of Disability

The theory is based on the interpretation of the rights of people with disabilities (rights of movement) by Michael Oliver (1990). Oliver recommended changes in recognition of rights and improvement of infrastructures for people with disabilities. The call various academic disciplines to begin to take both issue of disability and experiences of disabled people seriously. Through the Disability Movement which was on the rise in the 1980s in the United States and the United Kingdom. People with disabilities were organizing accessibility in transport, support for independent living and equal rights. For example, Americans Disabled for Accessible Public Transit (ADAPT), used civil disobedience to halt the public transportation to protest then lack accessible transit. The theory was followed by an improved edition by Michael Oliver and Colin Barnes (2012) as they survey the theories and origin of disablement and how disability is represented in society at large.

The theory is based on interpretation of disability, views (disablement) history. They provide a useful materialist view of how disablement as social “problem” or category came to be. In pre-industrial times, disabled people were not excluded from making economic contributions although they may have been viewed at the “bottom” of the social ladder. With changes in mode of production and social relations that industrial capitalism brought people with certain impairments were not able to work or were not seen as desirable. But in turn the rise of early capitalism was subsequent change in ideology and the way about thinking about people with disabilities, resulting from shift from a religious understanding to a scientific or medical understanding (Abberley, 1987).

2.2.2. Important of School Infrastructures in Education

The school physical infrastructures like classrooms, libraries, laboratories, and staff houses essential enhance learning environment that leads to the provision of technical skills and to develop qualitative and adequacy aspects that are needed in the school setting (Maron&Brooth, 2007). Housing teachers and students according to the school environment, improve student’s performance

where teachers can get opportunity of providing special courses to those students that teach practical subjects through school laboratories (Watson, 2013). Sanitation facilities which comprise waste disposal, drainage, and adequate water for personal hygiene, cleaned toilets and other materials used while making school infrastructures modify the level of cleanliness which attract and motivate students get improved academic performance (Kinder, 2013).

According to Sidhul (2012), the school infrastructures promote the performance of curricular and co-curricular activities provided by school. The shape and size of classrooms and educational materials availability change how students participate in school instruction. Practical courses could not be maintained for science students in school setting that indicate without science laboratories (Sidhu, 2012). Therefore, the availability of school infrastructures should be supported by parents and educational stakeholders that provide their financial capacities (Mgbodile, 2010). The extent to which school administrators perform the organizational goals depends on the combination of various variables which lead to the effective management of school infrastructures (Obi, 2011).

2.2.3. Students' Academic Performance

According to Nyongesa (2011), Academic achievement of students is the results of the school available infrastructure such as classrooms, libraries, sanitation facilities to facilitate the performance of class assignments, homework assignments, tests, examinations, and participations. The pressure of parents and other individuals like teachers and school administrators to improve the academic performance that also help the school to come with the new updated advanced strategies like introduction of effective teaching and learning methods, instructional strategies and rewarding students for good performance so as to encourage the motivating factors in schools which tend to work more and to make improvements (Nyongosa, 2011).

The academic concepts are made to establish the participation of students and teachers in the classroom setting. Therefore, it is vital that classroom environment should be maintained and well organized (Kudari, 2016). The efficiency management of the classroom promotes the lesson delivery, instructional strategies and teaching and learning process to make effective discipline and communication in the classroom and to help the students to learn better and improve their academic performance (Kudari, 2016).

The school resources should be maintained and used so as to promote the academic performance in such way that school textbooks should be always updated, learning materials, hand-outs and technology should be available in the school setting and also well -organized library facilities and laboratory facilities specifically in science subjects in order to develop the school outcomes known as students' academic performance (Maina, 2010). The student will be helped to get the related learning concepts that make them to understand their focus as academic concept where students' dependent upon the library facilities to obtain textbooks and other material needed and well-equipped laboratories (Maina, 2010).

2.2.4 Effects of School Infrastructures on Students' Academic Performance

The school infrastructures like co-curricular infrastructures which include music rooms and theater rooms, help the students to be engaged in the participation of various activities done in the school and develop their social and mental skills as well as being developed physically and emotionally (Nganga, 2003). The availability of effective playground and equipment, help students to search and develop their talent. Therefore, co-curricular facilities must be allocated effectively and efficiently and also structured properly for nurturing students' talents (Khaemba, 2007). Also, modern approaches developed in the education sector should focus on the development of the students' academic performance (Stephens & Schaben, 2002). The effective learning achievement show that co-curricular activities should be organized and supported accordingly by the school management holder to enhance the student's academic outcomes in which curricular co-curricular must be balanced (Brosh, 2012).

2.2.3 Theory of Infrastructure Development

The theory was introduced by Pierre-Richard Agénor in 2006. The theory of long run development is based in public infrastructure as the main engine of growth. The government, in addition to investing in infrastructure, spends on health services, which in turn raises labor productivity and lowers the rate of time preference. Infrastructure affects the production of both commodities and health services. The theory emphasizes that for every positive outcome resulting in development there must be appropriate infrastructural systems.

2.3 Empirical Theory

This part conducts a description of various researches done by the previous researchers concerning infrastructures accessibility for people with disabilities as they were reviewed by the researcher and were used to identify the knowledge gap which this study is going to accomplish.

2.3.1 Studies Conducted Outside the Continent

The key role of the physical environment in enhancing teaching and research, a study conducted at the Institute of Education, London, England in 2002 by Helen Clark. The research study provided an overview of the relationship between school building designs. Looking at the attainment and behavior and describes projects that address ways in which school building can support and encourage participatory learning, moreover, the study examined the implications of opening schools' buildings to the wider community and the role of the physical environment in the inclusion of children with special needs and disabilities (Helen, 2002).

Another study was conducted in China, Barriers to Education for Persons with Disabilities, “as long as they let us stay in class,” by the HRW in 2013, on the challenges facing children with disabilities on inclusion to the mainstream schools and the major infrastructural obstacles faced by the students with disability when enrolled in mainstream schools. The study observed transport challenges, inappropriate special infrastructure. In interviews with HRW, parents talked of carrying their children up and down stairs to classrooms or bathrooms located upstairs several times a day. Students with hearing impairments said they could not follow along because the teachers walk around while teaching and do not provide written notes, and there is no sign language instruction in most schools

2.3.2 Studies Conducted in Africa

In Nigeria, the study on Access to Public Infrastructures for Persons with Disabilities was conducted by Centre for Citizens with Disabilities in the year 2015. The study examined infrastructure-buildings and other public spaces that are established to provide public services. The study came up with the results that there is existence of old and non-standard infrastructure, low level of awareness of special needs, as well as poor implementation of policies and laws on people with disabilities. Another action research, which was conducted by the people with disabilities themselves, People with disabilities Organization (PWDO) in 2013 on access and provision of pre-primary and primary education to children with disabilities in Ethiopia, the study assessed on

number and enrollment trends in pre-primary and primary education. The study explained that there is strong connection between environment/infrastructure factors, institutions, and society's attitude to academic prosperity to students with disabilities. Education to children irrespective of ability is a right. Although there has been slight improvement on enrollment to mainstream schools to children with disabilities, this has not been satisfied as educational facilities are not user friendly to those disabled children who get opportunity to education.

The studies in Ethiopia conducted were emphasis on accessibility issues in that the design and construction of any building, campus physical landscapes, and other infrastructures of institutions have to ensure suitability for persons with disabilities, especially for students with physical and visual disabilities, creating an opportunity in the increment of the numbers of SWDs joining higher education institutions (Tirussew et al., 2014). These students can participate successfully in activities and can learn in higher learning institutions if there is accommodation for the whole environment both inside and outside of the school compound.

These include accessible physical and welcoming social environment that facilitate positive and supportive communication and interactions with teachers, peers, and administrative staff. The study has employed from the major data sources: the higher officials of MoSHE and the Inclusive Education/IE/ or Special Needs Education/SNE/ strategy document (2006), respectively. The study has found out that let alone for higher education system, the strategy has considerable gaps on practicing inclusive education at general education level with full positive attitude of students with disabled though the strategy has its own implicitly stated feasible signals in place for serving students with disabilities. It has been revealed that IE support for university students with various disabilities has not still been strongly mainstreamed by the federal government of Ethiopia as like as general education: preschool, primary and secondary education students.

2.4. Conceptual Framework

The conceptual framework of this study shows the relationship between school suitability and academic achievement of students with disabilities in selected government primary schools at Hawassa city administration. Thus students' with disabilities academic achievement response as dependent variable is related to independent variables such as building accessibility, classroom suitability, technology accessibility, curriculum flexibility, instructional approach, etc... those

includes library facilities, laboratory equipment's, toilet facilities, ramps, side walk, wide doors to accommodate a wheel chair, Crutch, walker stick, hearing aids, instructional sign language, visual aids, instructional Braille, sitting arrangement, skillful trained teachers as well as hand rails on both sides of stairs and appropriate height of boards. However, these consist of appropriate national policy on disability, education policy on disability, proper national building code and design, education management, allocation of government funds on special needs education. Therefore, the impact of inadequate infrastructures for students with disabilities resulted academically to low performance, truancy, high repetition in class, school dropouts, low self-esteem, limited participation in sports and games, lack of communication and lack of ownership (see fig).

Conceptual framework

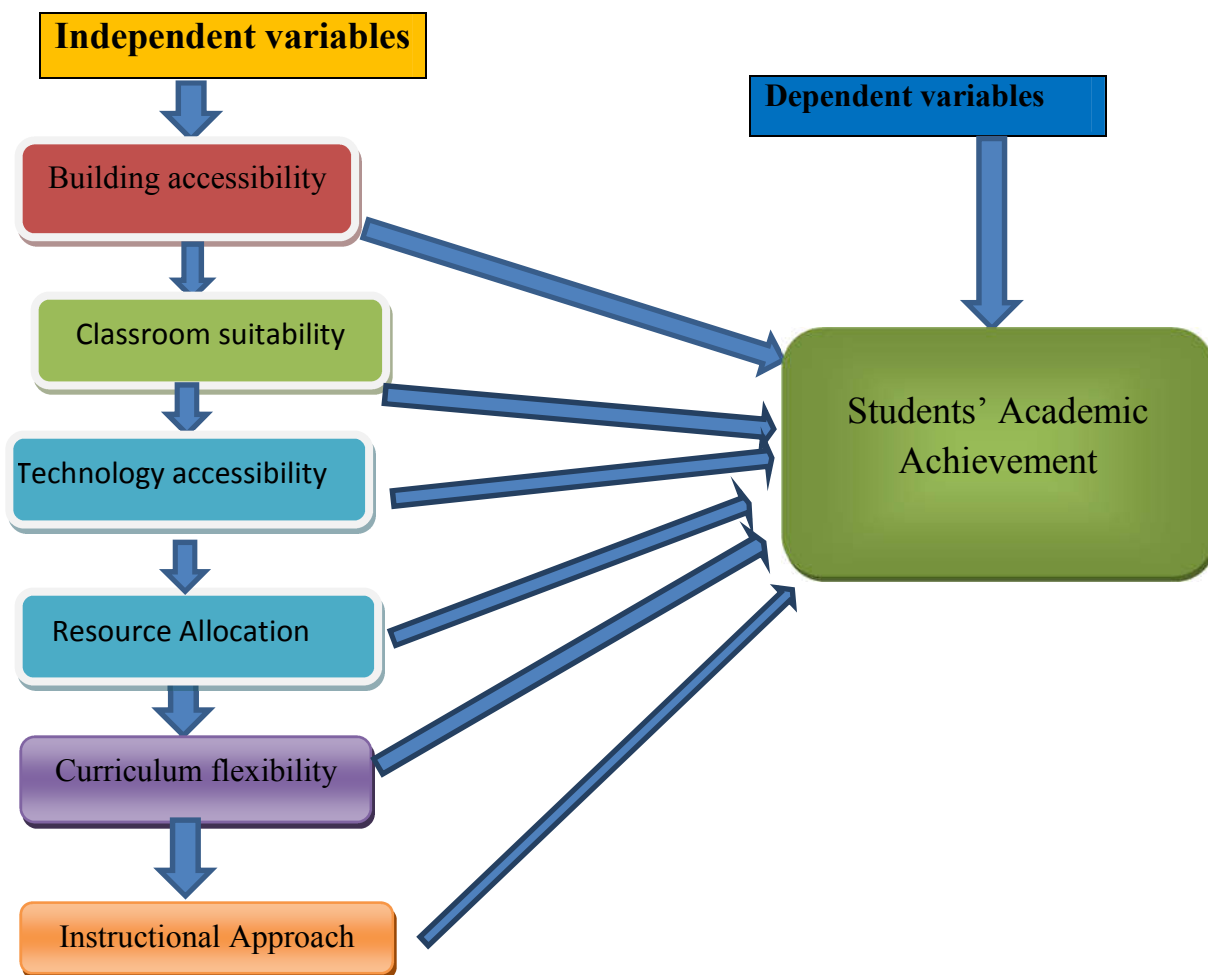


Figure 3.1 conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter presents the research methodology and research approach employed in the study. Accordingly, it describes the study area, research approach, research design, population, samples and sampling techniques, source of data collection, data collection tools, method of data analysis, reliability and validity of instruments, and ethical consideration of research.

3.1 Study Area

The study was conducted in Hawassa city administration at some selected primary schools. Hawassa is a city in Ethiopia, on the shores of Lake Awassa in the Great Rift Valley. It is 273km (170mi) south of Addis Ababa, 130km (81mi) east of Sodo, and 75km (47mi) north of Dilla, Hawassa is the capital city of Sidama Region. In the city there are 22 the government primary schools, from these three primary schools are selected such as Hawassa Haikedar, Tabor, and Ethiopia Tikdem primary schools. The researcher chooses this study location because of specialized in enrolling the students with various forms of disabilities and this enable the researcher in obtaining target participants as well as knowledgeable research assistants. Also, the geographical advantage when it comes to mobility from one place to another within the city administration and the researcher being a resident in the area somehow reduced some costs and time.

3.2. Research Approach

For the purpose of this study researcher applied quantitative survey research approaches in the data collection and analysis. Quantitative approaches' was used to examine the relation between school suitability and academic achievement of students with disabilities in order to better understand of the situation Hawassa town primary schools. It was employed to survey and describe the general trends of primary schools educational activities. Therefore, the researcher used this approach in described statistical results such as frequency, mean, percentage, variances, standard deviation etc.

3.3. Research Design

The research design referred to the overall strategy that the researcher chooses to integrate the different components of the study in a coherent and logical way, thereby ensuring he would effectively address the research problem. It constitutes the blueprint for the collection, measurement, and analysis of data. In the study the researcher applied a research design typically

included how data to be collected, what instruments were employed, how the instruments employed and the intended means for analyzing data collected. Therefore, the researcher employed a cross-sectional survey research design under a quantitative part to examine the relationship between school suitability and academic achievement of students with disabilities in selected government primary schools at Hawassa city administration.

3.4. Population, Samples and Sampling Techniques

3.4.1. Population

The data obtained from Hawassa city administration Education Department (2015 E.C) shows there are 22 government primary schools. From these grade1-8 schools are 19 and grade 1-6 schools are 3. Also, there were 2,365 subject teachers and 69 school principals working in 22 primary schools in Hawassa city administration. The target population of this study in the three selected primary schools includes subject teachers, 254, all students 6,618 from these students with disability 443 and school principals 11. Therefore, table 3.1 below shows the total numbers of population in the three selected government primary schools was 6883(males 3,038 and females 3,845) from that in Haikie primary school were 3,465 (males 1,533and females1,888), in Ethiopia Tikdem primary school were 2,265(males 995and females 1310)and in Tabor primary school were 1,197(males 550 and females 647).

Table3. 1: The Distribution of Participants

Categories of Participants	Number of populations					
	Male		Female		Total	
	Frequency	%	Frequency	%	Frequency	%
Hawassa Haikie primary School	1,533	22.3	1,888	27.4	3,421	49.7
Ethiopia Tikdem primary School	955	13.9	1310	19.1	2,265	32.9
Tabor primary School	550	7.9	647	9.4	1,197	17.4
Total	3,038	44.1	3,845	55.9	6,883	100

There were 22 governmental primary schools in the study area and from these three schools were selected. The students with and without disabilities, subject teachers and school principals were participants in the study used as population of the study. The selected 3 government primary schools had 6,618 students (2,917 males & 3,704 females) from those 443 students with disabilities (195 males &248 females), 254 subject teachers (117 males & 137 females from those 20 teachers

who trained in special needs and inclusive education) who teach children with disabilities, and 11 schools principals (7 male & 4 female).

3.4.2. Samples, Samples size determination and Sampling technique

Sampling is the process of selecting several study units from a defined study population. Thus, from the entire target population 443 students with disabilities, 210 then refined 205 (females 68 & males 137) students were selected randomly. From these sample 59 (Female=23 & male=36) were students with low visual; 95 (female 24 & males 71) were students with hard of hearing; 35 (females 13 & males 22) were students with physical disabilities particularly 7 students (females=4 & males=3) with hand impairment and 28 students (females=9 & males=19) with leg impairment and 16 students with intellectual limitation. 5650

The study areas were selected purposively because they had high number of students with disabilities. The researcher focused students with various disabilities in selected government primary schools in Hawassa city administration whereby only Hawassa Haik, Tabor and Ethiopia Tikdem primary Schools specifically enrolled students with various disabilities. Regarding students with disability, the researcher used simple random sampling technique (Yemane, 1967) formula in order to determine sample size of the study. The target population was 443 students with disabilities from the sample primary schools. The study considered 95% level of significance and 5% margin of error. The sample size will be calculated using the Yemane formula (Yemane, 1963) as follow:-

$$n = \frac{N}{1+N(e^2)} = n = \frac{443}{1+443(0.05^2)} = 210$$

Where: - n= sample size required, N= total population and e= allowed error (5%)

Concerning respondents, out of 443 students with disability in the sample primary schools, 210 students with disability were selected through simple random sampling technique; with the assumption that all students with disability had equal chance of being selected and to obtain representative samples.

To get representative samples, simple random sampling, particularly lottery system was used. The sizes of sample schools were proportional to the number of students with disabilities in each Primary School. Here again, to make the sample more representative, the size of sample students

with disability was proportional to the total number of students with disability in each selected school. The target population, sample and sampling techniques were provided below in the table 1:

Table3.2 Representative Sample Distributions of students with disabilities (SWDs)

Categories of Strata's	Total No SWDs			Sample Size of SWDs		
	M	F	Sum	M	F	Sum
Hawassa Haike primary School	114	111	225	71	33	104
Ethiopia Tikdem primary School	32	74	106	28	22	50
Tabor primary School	49	63	112	38	18	56
Total	195	248	443	137	73	210

In the above table 3.2, the representative sample would be selected after obtaining the total number of target population in all three schools is 443 students with various disabilities. The required sample size by the Yemane formula sample size calculator 210 students with disabilities, calculating the distribution frequency, percentage and obtaining required number of targeted respondents in each stratum.

3.7. Source of Data Collection

In this study, the researcher employed both primary and secondary data sources. Primary data sources were those collected by researchers from the field to answer research questions obtained from students with disabilities. These sources were directly collected from the field through questionnaires which gave fresh and first-hand information. The secondary source of data was obtained from office documents and students' document reviews. Data collection is a reliable way to evaluate the responsiveness and effectiveness of the study.

3.8. Data Collection Tools

This study used different questionnaires as the main data collection tool. Questionnaire was one of data collection tool which contained closed and open-ended questions developed for students with disabilities aiming at pretesting if the questions are understandable and to make sure if it can collect the required information for achievement of the study. Pre-test was conducted on 30 Students with disabilities selected from other primary schools. Therefore, 210 self-administered questionnaires for

students with disabilities in all 3 schools as a survey sample intended to generate quantitative data, but 205 correctly filled out questionnaires were returned.

3.8.1 Questionnaire

The survey questionnaire was adapted to get opinion of respondents towards the relationship between school suitability and academic achievement of students with disabilities in selected government primary schools at Hawassa city administration. It was one of data collection tool which contained closed and open ended questions developed for students with disabilities aiming at pre testing if the questions are understandable and to make sure if it can collect the required information for achievement of the study objectives. Therefore, 210 self-administered questionnaires for students with disabilities in all 3 schools as a survey sample intended to generate quantitative data. Questionnaire for the SWDs would be written originally in English and translated into Amharic in order to make questions clear and understandable.

Moreover, the research questionnaires were used for the purpose of getting an overview understanding on student's experiences, feelings, perception as well as views on infrastructural conditions in relation to academic achievement. And it was preferred because smoothens summarization of the findings and make a logical and sequential connection of the causality relationship. The questionnaire was a series of questions asked to persons to obtain statistically helpful information about a given topic. When properly constructed and reliably administered, questionnaires become a very important instrument by which statements can be made about specific groups or people or entire populations.

The equivalence of the English and Amharic version of the questionnaire was kept with the help of language professionals found in Hawassa University. An assistant professor from English department of the University was cooperated to translate the original English version questionnaire in to Amharic. Then the Amharic translation was given to another Assistant professor of English language to translate back to Amharic. Finally, the original document and the second English translation were given to three English language experts to check their equivalence. Based on their comments and feedback, amendments were made and the final version was approved by the supervisor.

3.9 Method of Data Analysis

In this study the researcher analyzed data by using quantitative method. The researcher collected the data by the questionnaire. Then, the data gathered through the questionnaires were analyzed by both descriptive and inferential statistical techniques using SPSS 28 software. Descriptive statistics was employed via frequency and percentages to compute the characteristics of respondents related to sex, age, disability types and educational status of the respondents. Whenever the research design was correlational, the researcher addresses the research questions initially to identify the pattern of relationship. So that Pearson's Product Moment was employed to measure the degree of relation. The strength of relation was measured by statistic called Pearson's Correlation Coefficient.

3.10 Reliability and Validity of Instruments

Reliability in quantitative research ensures that the result is replicable while validity ensures the means of measurement are accurate and they measure what they are supposed to measure. In quantitative research validity and reliability is used to eliminate researcher's bias and increase truthfulness of a proposition about some social phenomenon (Coolican, 2014). In this study, the reliability of the research instrument was the extent to which the instrument yields the same results on repeated measures. Hence, as indicated in instruments section above, the main data collection and assessment tools of this study; open and closed-ended questionnaires. For this to validate the quantitative data, the researcher checked the data's quality and results. For the quantitative data, the researcher had drawn meaningful inferences from the results to a population. For reliability, the researcher checked whether the instruments yield the same scores that would be obtained from participants on repeated measures or not.

To test the reliability of tools, the novice researcher selected 30 students from other schools different from the three schools selected for the main study. It was through lottery method the samples were selected to administer the questionnaire. The result helped the researcher to verify vague items and to reject redundancy and unclear questions. Finally, the reliability scale was found to be above 0.7, so that accepted. The following table shows specifically.

Table 3.3 Reliability of Instruments

Variables Name	N _o of items	Cronbach's alpha	Internal consistency
Building accessibility	9	.802*	Accepted
Technology accessibility	9	.886*	Accepted
Resource Allocation	7	.890**	Accepted
Curriculum flexibility	8	.880**	Accepted
Instructional Approach	6	.726*	Accepted
Students' Achievement	6	.870**	Accepted

Source: Researcher survey, 2023

For past use of instruments, the researchers examine reviews of instruments or reports on the validity and reliability of the scores taken from the instruments. Specifically, the researcher looked for content validity (how assess whether the items or questions are representative of items), criterion-related validity (whether the scores relate to some external standards, such as scores on a similar instruments), or construct validity (whether the scores are consistent or measures what they intended to measure).

Therefore, these research instruments were validated by expert evaluations and suggestions for contents of the questionnaire. The experts evaluated the questionnaire before administration. The assistance of his advisor, who is an expert in research, helped to improve the content validity of the instrument. According to this expert's judgmental evaluation and suggestions the researcher modified certain items which were found to be defective based on the results of the pilot testing.

3.11. Ethical Consideration of Research

Research ethics is interested in the analysis of ethical issues rose when people are involved as participants in research. The three objectives in research ethics are; to protect human participants, to ensure that research is conducted in a way that serves interests of individuals, groups and/or society as a whole and the third is to examine specific research activities and projects for their ethical soundness, looking at issues such as the management of risk, protection of confidentiality and the process of informed consent (Marshall & Rossman, 2014). The researcher applied to a letter from his learning Institution that introduced him to the authorities. The researcher was granted research

permission by heads of schools which he intends to gather data. Ethical issues were considered in the construction of items and at the time of administering it. Respondents were asked for their accent; the participants were informed about to get willingness of the research activities and whether to participate or not. The researcher ensured that the study has no harm/suffer to anybody; it will be used only for academic purpose. The respondents were free to withdraw any time if they feel discomfort. In this study, the respondents were informed about the intention of the study. The researcher was honest, open, used no coercion, and cared for the participant's confidentiality.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

Introduction

This chapter deals with the analysis of collected data, presentation of the findings and discussion of the result of analysis related with the study's objective and basic research questions. Quantitative data analysis was done by using the descriptive and inferential statistical. The inferential statistics analysis examined the correlation and regression of infrastructural facilities with the academic achievements of students with disabilities. Data collection was done through closed and open-ended questionnaires. Frequencies were used to determine the percentage of responses for assorted items.

4.1 Descriptive Analysis

Descriptive statistics can only be used to describe the population or data set under study: The results cannot be generalized to any other group or population (Fraenkel & Wallen, 2009). Therefore, the study used mean value to show the typical response among respondents to the extent of relationship between independent and dependent variables. In the process of examining the data, standard deviation (SD) was used. Small SD (relative to the value of the mean itself) indicates that data are close to the mean whereas a large SD (relative to the mean) indicates that the data points are distant from the Mean. Standard deviation is a measure of how well the mean represents the data (Field, 2009).

4.1.1 Demographic Information of Respondents

Describing the information of the respondents is important because they influence their opinions on the issues under study. The respondents' background information such as sex, age, grade level of students, types of disability across sex, types of disability across age, grade level, level of students' satisfaction on academic success based on first semester average score across grade level are essential in analyzing for specific objectives in a more comprehensive way.

4.1.1.1 Sex of Students with various disability

The collected information on sex of students with various disability in selected government primary schools in Hawassa city administration showed that out of 205 (100%) students with various disability from three primary schools clusters centers, sixty-eight 68 (33.2%) were females and of the total sample and one hundred thirty-seven 137 (66.8%) were males, respectively. Table 4.1 below shows sex of students with variously disabled and percentages which indicated that the whole participants involved in the study.

Table4.1. Sex of students with various disabilities

Sex of Students					
Valid	Sex	Frequency	%	Valid Percent	Cumulative Percent
	Female	68	33.2	33.2	33.2
	Male	137	66.8	66.8	100.0
	Total	205	100.0	100.0	

The researcher found out those primary schools in Hawassa tow administration enrolled most of males' students with disability compared to female who were few. This means that female students with disability had limited chances to enroll in primary school. The experience and information collected by the researcher focused on extra measures should be taken to improve school suitability to increasing academic achievement of those students and alleviated attitudinal and environmental barriers concerning to give equal chances of participation to all children regardless their sex and disability categories.

4.1.1.2 Age of Students with Disability

The data of respondents in the table 4.2 below indicates that the age of most of the participants found with that 49 (23.9%) were 9 years old, 45 (22.0%) were 10 years old, 59 (28.8%) were 11 years old, 10 (4.9%) were 12 years old, 3 (1.5%) were 13 years old , 20 (9.8%) were 14 years old, 17 (8.3%) were 15 years old and 2 (1.0%) were 16 years old and above years. The age group of the participants implies that they were in the appropriate age level to express and to provide information about the state of infrastructures accessibility and their effect on their academic achievement responses

Table 4.2 Age of students with disability

Age of Students					
	Age	Frequency	%	Valid Percent	Cumulative Percent
Valid	9	49	23.9	23.9	23.9
	10	45	22.0	22.0	45.9
	11	59	28.8	28.8	74.6
	12	10	4.9	4.9	79.5
	13	3	1.5	1.5	81.0
	14	20	9.8	9.8	90.7
	15	17	8.3	8.3	99.0
	16 & above	2	1.0	1.0	100.0
	Total	205	100.0	100.0	

4.1.1.3 Grade level of Students with disability

According to table 4.3 below the grade levels of students with disabilities in the selected primary schools were that the study consists of 205 (100%) students with various disabilities. From this total number, 60 (29.3%) were grade 4; 42 (20.5%) were in grade 5; 55 (26.8%) were in grade 6; 30 (14.6%) were in grade 7; and 18 (8.8%) were in grade 8.

Table 4.3 Grade level of Students

	Grade	Frequency	%	Valid Percent	Cumulative Percent
Valid	Grade 4	60	29.3	29.3	29.3
	Grade 5	42	20.5	20.5	49.8
	Grade 6	55	26.8	26.8	76.6
	Grade 7	30	14.6	14.6	91.2
	Grade 8	18	8.8	8.8	100.0
	Total	205	100.0	100.0	

Most of the students with various disabilities attended from grades 4 up to 8 who were with various disabilities were believed to have their own lived experience on the infrastructures accessibility and associated educational challenges. So, they give appropriate information about the condition of leaning environment.

4.1.1.4 Types of Disability across sex

As table 4.4 depicts below, the study found out the types of disability sample students faced. These were visual impairment, hearing impairments, physical disabilities, and intellectual disabilities. Among the four disability types included in this study, 59 were with low vision (Female=23 & Male=36), 95 were with hard of hearing (Female=24 & Male=71), 35 were with physical disability (seven had hand impairment (Female=4 & Male=3) and 28 had leg impairment (Female=9 & Male=19) as well as 16 were with mild intellectual disabilities (Female=8 & Male=8).

Table 4.4. Types of Disability across sex

Types of Disabilities		Sex of Students		Total
		Female	Male	
	Low vision	23	36	59
	Hard of Hearing	24	71	95
	Hand impairment	4	3	7
	Leg impairment	9	19	28
	Mild Intellectual disability	8	8	16
Total		68	137	205

4.1.1.5 Types of Disability across Age

The respondents' age was also analyzed in this study, as indicated in table 4.5 below, in order to understand the age distribution across various disabilities. Fifty-nine students with low vision were in the category of age 9 up to 16 years old. In other words, 19 students were 9 years old, 11 students were 10 years old, 18 students were 11 years old, one student was 12 years old, two students were 13 years old, four students were 14 years old, and four students were 15 years old. In the other category, 95 students were with hard of hearing which consists ages group such as 20 students were 9 years old, 17 students were 10 years old, 13 students were 11 years old, six students were 12 years old, one students was 13 years old, 12 students were 14 years old, seven students were 15 years old and two students were 16 and above years old.

The third disability group was physically disability which involves hand and leg impairments. Therefore, there were 35 students with physical disability, seven students faced hand impairment and 28 students faced leg impairment. These students' ages ranges from 9 up to 16 and above years but there were no students with hand impairment in age of 11, 13, 14, 15, 16 and above years old.

Besides, there were no students with leg deformed in only ages 13, 16 and above years old. The last part of the participants' disability types in this study was mild intellectual disability with age between 9 up to 16 and above.

Table 4.5 Types of Disability across Age

Types of Disabilities		Age of Students								Total
		9	10	11	12	13	14	15	16 & above	
Valid	Low vision	19	11	18	1	2	4	4	0	59
	Hard of Hearing	20	17	30	6	1	12	7	2	95
	Hand impairment	4	2	0	1	0	0	0	0	7
	Leg impairment	5	9	5	1	0	3	5	0	28
	Mild Intellectual disability	1	6	6	1	0	1	1	0	16
Total		49	45	59	10	3	20	17	2	205

4.1.1.6 Types of Disability across Grade Levels

To understand the grade levels of students with disabilities it is important to determine how primary level education respondents participated. As described below in table 4.3, 95 were students with low visual found in grades 4, 5, 6, 7, and 8. Besides, the number of students with low vision in each grade level was 25, 7, 16, 7 and 4 respectively with their sum 59. There were also seven students in grade 4 and 6. The table also shows that there were 28 students with leg impairment from grades 4 up to 8. Lastly there were 16 students with mild intellectual disability in grade 4, 5 and 6.

Table 4.6 Types of Disability across Grade Level

Types of Disabilities		Grade level of Students					Total
		Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	
Valid	Low vision	25	7	16	7	4	59
	Hard of Hearing	23	18	27	18	9	95
	Hand impairment	4	0	3	0	0	7
	Leg impairment	6	10	4	4	4	28
	Mild Intellectual disability	7	5	4	0	0	16
Total		60	42	55	30	18	205

To sum up, this section focused on describing the background information of students with disabilities in some selected primary schools of Hawassa city administration. It attempts to examine

the condition of students with disabilities in terms of schools suitability and educational achievement.

4.1.2 Students' Satisfaction on the school software and hardware

The accessibility of infrastructure facilities is very important for the educational outcomes of students with special needs. Hence, the quality and standard of education both curricula and co-curricular activities offered in a school should be determined by provision, adequacy, utilization and lead educational physical facilities. However, the schools that do not have good or adequate infrastructural facilities affect the academic success of students with disability. The study investigated the Students' Satisfaction on the school software (instructional approach, curriculum issues, IEP, teachers preparedness, school leadership & supervision, etc.) and hard ware (the physical building, streets and resource allocation) As table 4.7 shows, 113(55.7%) respondent's reported that they were not satisfied with the school building including class room, offices, toilet. Ninety two (44.9%) of participants said that they strongly disagreed with their satisfaction with the school building.

In the next question, 96(46.8%) and 109(53.2%) participants replied that the streets in the school are uncomfortable for them with response of disagree and strongly disagree, respectively. Concerning classroom suitability 98(47.8%) and 107(52.2%) respondents said disagree and strongly disagree, respectively.

Furthermore, regarding suitability of the instructional approaches 118(57.6%) and 87(42.4%) participants disagreed and strongly disagreed respectively. Hence, instructional approaches are not adapted and differentiated according to the learning style of students with disabilities. A similarly considerable number of students 90(43.9%) disagree and 115(46.1) strongly disagree depicted the schools did not follow flexible curriculum.

Resource allocation is the other concern of the study, by which considerable number of samples 189 (92.2%) disagree with and 16 (7.8%) strongly disagree to indicate that the sample schools had no appropriate resources allocation.

The study also investigated the students' satisfaction on peer support in the sample schools. Most respondents 189 (92.2%) disagreed and 16 (7.8%) strongly disagreed to indicated that they did not get appropriate peer support in the sample schools. Similarly, considerable number of

respondents, 94 (45.8%) with disagree 111(54.1%) with strongly disagree that to indicate teachers had not dedication and cooperation.

Based on the above conditions, the respondents reported that they have poor satisfaction with their education. For instance, 95 (46.3) respondents said that they disagree about whether they were successful in their education due to appropriate support of their school. Similarly, 110 (53.7%) respondents strongly disagreed to reveal that they are dissatisfied.

Generally, the result of finding this study revealed that the poor hardware (in accessible school infrastructures) and the school software (pedagogical concerns, curriculum issues, support provision and related issues) hampered the academic achievement and satisfaction of students with disability in the selected schools. Therefore, the researcher concludes that appropriate software and hardware school infrastructural facilities were very importance to achieve the educational needs and potential of students with disabilities. So, every stakeholder was working cooperatively to access the educational activities for students with disabilities which foster the students able to achieved good educational results.

Table 4.7 Level of Students' Satisfaction on the school soft and hardware

Scales: 5. Strongly Disagree (SDA) 4. Disagree(D) 3. Undecided(U) 2. Agree (A) 1. Strongly Agree (SA)

No	Students' Satisfaction on the school soft & hardware	Scale									
		SA		A		U		D		SDA	
		N	%	N	%	N	%	N	%	n	%
1	I am satisfied with the school building.	0	0	0	0	0	0	113	55.7	92	44.9
2	The streets in the school are extremely comfortable for me.	0	0	0	0	0	0	96	46.8	109	53.2
3	Classrooms are very suitable for my special conditions.	0	0	0	0	0	0	98	47.8	107	52.2
4	Instructional approaches are adapted and differentiated according to my learning style.	0	0	0	0	0	0	118	57.6	87	42.4
5.	The curriculum of my school is flexible and that satisfies me.	0	0	0	0	0	0	90	43.9	115	46.1
6.	I am satisfied with the resources allocated in my school.	0	0	0	0	0	0	189	92.2	16	7.8
7	I am happy with the peer support of my school.	0	0	0	0	0	0	189	92.2	16	7.8
8	I am happy with my teacher's dedication and cooperation of my teachers.	0	0	0	0	0	0	94	45.8	111	54.1
9	I am successful in my education due to the appropriate support of my school.	0	0	0	0	0	0	95	46.3	110	53.7

4.1.3 First Semester Average Score of the Students

In table 4.8 below the study identified the first semester average result of students. Out of 205 total number of samples, most of the students with disability 74 (36.1%) scored between 46 up to 49 average score. The table also shows that the considerable number of students with disability 100 (48.8%) scored from 50 up to 59 average score on the first semester result. Lastly, 31(15.1%) samples scored 56-59 average results in the selected schools.

Table 4.8 Average score of the whole Students

Average score		Frequency (n)	Percent (%)	Valid Percent	Cumulative Percent
Valid	From 46-49	74	36.1	36.1	36.1
	From 50-55	100	48.8	48.8	84.9
	From 56-59	31	15.1	15.1	100.0
	Total	205	100.0	100.0	

From the above findings one can ascribe that the inaccessible infrastructures and poor pedagogical approach rigid curriculum had impact on the academic achievement and satisfaction of students with disabilities.

First Semester Average Result across Grade levels

The study examined effect of school suitability and academic achievement of students with disability in the selected primary schools in the study area. It was revealed that infrastructures have impact on the academic achievement of students with disability as indicated in table 4.9. Even though the expansion of primary education is increasing in Ethiopia with growing number of attendance of students with disability in primary; the students face many challenges due to inaccessible infrastructures and poor pedagogical utilization of teachers. Table 4.9 below presents the first semester average result across their grade levels.

For instance, in 4th grade there were 17 (28.3%), 29(48.3%) and 14(23.3%) students with first semester average score from 46 up to 49, 50 up to 55 and 56 up to 59 average results respectively. In this grade level, the scored range interval of students with disability indicated that inaccessible infrastructures affected their academic achievements. As seen in 5th grade level the numbers of students found out with that of 14 (33.3%), 18 (42.9%) and 10(23.8%) with average score from 46 up to 49, 50 up to 55 and 56 up to 59.

Besides, students with disability in grade 6th with quantity of 26 (47.3%) and 29 (52.7%) got average scores between 46 up to 49, 50 up to 55 and 56 up to 59, respectively. Likewise grade 7th students with disabilities also with quantity of 12(40.0%), 15(50.0%) and 3(10.0%) scored average first semester result from 46 up to 49, 50 up to 55 and 56 up to 59, respectively. Lastly, grade 8 students with disabilities 5(27.8%), 9(50.0%) and 4(22.2%) scored between 46 up to 49, 50 up to 55 and 56 up to 59, respectively.

Grade level of Students * First Semester Average Cross tabulation						
			First Semester Average			Total
			From 46-49	From 50-55	From 56-59	
Grade level of Students	Grade 4	N	17 _a	29 _{a, b}	14 _b	60
			28.3%	48.3%	23.3%	100.0%
		% within 1 st Semester Average	23.0%	29.0%	45.2%	29.3%
	Grade 5	N	14 _a	18 _a	10 _a	42
			33.3%	42.9%	23.8%	100.0%
		% within 1 st Semester Average	18.9%	18.0%	32.3%	20.5%
	Grade 6	N	26 _a	29 _a	0 _b	55
			47.3%	52.7%	0.0%	100.0%
		% within 1 st Semester Average	35.1%	29.0%	0.0%	26.8%
	Grade 7	N	12 _a	15 _a	3 _a	30
			40.0%	50.0%	10.0%	100.0%
		% within 1 st Semester Average	16.2%	15.0%	9.7%	14.6%
	Grade 8	N	5 _a	9 _a	4 _a	18
			27.8%	50.0%	22.2%	100.0%
		% within 1 st Semester Average	6.8%	9.0%	12.9%	8.8%
Total		N	74	100	31	205
			36.1%	48.8%	15.1%	100.0%
		% within 1 st Semester Average	100.0%	100.0%	100.0%	100.0%
Each subscript letter denotes a subset of First Semester Average categories whose column proportions do not differ significantly from each other at the .05 level.						

Table 4.9 First Semester Average score across Grade level

4.2. Inferential Statistics Analysis

4.2.1 Correlation and Regression Analysis

The word correlation is used in everyday life to denote some form of association. We might say that we have noticed a correlation between incentives and the employees' performance. However, in statistical terms we use correlation to denote association between two quantitative variables. We also assume that the association is linear, that one variable increase or decreases a fixed amount for a unit increases or decreases in the other (Fraenkel & Wallen, 2009). The other technique that is often used in these circumstances is regression, which involves estimating the best straight line to summarize the association.

Pearson's Correlation Coefficient

The degree of association is measured by a correlation coefficient, denoted by 'r.' It is sometimes called Pearson's correlation coefficient after its originator Kar Pearson and is a measure of linear association. If a curved line is needed to express the relationship, other and more complicated measures of the correlation must be used. The correlation coefficient is measured on a scale that varies from + 1 through 0 to - 1. Complete correlation between two variables is expressed by either + 1 or -1. When one variable increases as the other increases, the correlation is positive; when one decreases as the other increases, it is negative. Complete absence of correlation is represented by 0. The following Figure shows the three types of correlation between two variables

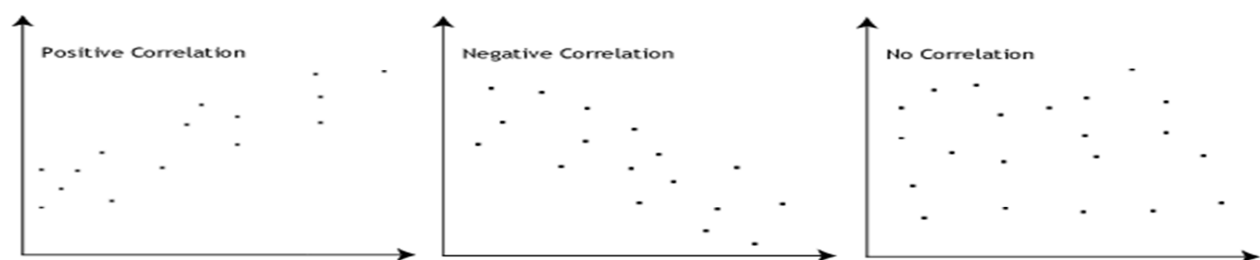


Figure 4.1 Pearson's Correlation between variables

Correlational research, like causal-comparative research, is an example of what is sometimes called associational research. It is also sometimes referred to as a form of descriptive research because it describes an existing relationship between variables. It describes the degree to which two or more quantitative variables are related, and it does so by using a correlation coefficient.

Therefore, the current study employed correlation analysis to estimate the extent of association between two variables in the study and the strength of relationship is represented by the correlation coefficient (r). Fraenkel and Wallen (2009) suggest that the correlation value (r) 0.80 and above is taken as very strong and also would indicate the existence of multi-collinearity; While correlation value (r) above 0.70 is considered as very strong relationships among the constructs, likewise correlation value (r) of 0.50 - 0.70 shows strong relationships between constructs; and finally, correlation value (r) of 0.30 - 0.50 indicates moderate relationships between constructs, and correlation value (r) of 0.10 - 0.30 indicates relatively weak relationships between constructs. The results of the Pearson correlation test and one tailed t-test are presented in the following table.

Table 4.10 Results of the Pearson correlation test and one tailed T-test

		Students Achieve	Infrastruct ure	Technology	Resource	Curriculum	Teaching Method
Pearson Correlation	Students Achievement	1.000					
	Infrastructure	.702*	1.000				
	Technology	.716*	.741	1.000			
	Resource	.870**	.567	0.542	1.000		
	Curriculum	.726*	.940	0.78	0.569	1.000	
	Teaching Method	.830**	.897	.930	0.424	.931	1.000
Sig. (1-tailed)	Students Achievement	.	.000	.000	.000	.000	.000
	Infrastructure	.000	.	.000	.000	.000	.000
	Technology	.000	.000	.	.	.000	.000
	Resources	.000					
	Curriculum	.000	.000	.000	.000	.	.000
	Teaching Method	.000	.000	.000	.000	.000	.

As the above Table 4.10 depicts the study used Pearson product-moment correlation analysis to examine the relationships between dependent variable which is academic achievement and independent variables which are school facilities (Infrastructure, Technology, resource allocation, Curriculum flexibility & Teaching Method). The findings indicate that positive correlation between independent and dependent variables. Therefore, the variables are significantly correlated. For instance, infrastructure has strongly and statistically significant correlation with academic achievement at ($R = .702^*$), ($P < 0.01$).

This implies that school infrastructure (accessibility & suitability of buildings including offices, classrooms, & toilets; conformability of recreation centers, playgrounds & streets) and academic

achievement of students with disabilities are firmly correlated. In other words, if the infrastructure is suitable, it will increase the students' academic achievements. Besides, the finding indicates that technology availability and accessibility is positively and significantly correlated with academic achievement at ($R = .716^*$), ($P < 0.01$). From this it is possible to infer that there is a strong correlation between technological availability and accessibility and academic achievement. Resource allocation has correlation with students' academic achievement at ($R = .870^{**}$) ($P < 0.01$). The study also found out positive correlation between curriculum differentiation and flexibility and academic achievement ($R = .726^*$), ($P < 0.01$). In addition to this, teachers teaching method was found with strongly correlation with academic achievement at ($R = .830^{**}$) ($P < 0.01$).

4.2.2 Regression Analysis

In statistical modeling, regression analysis is a set of statistical processes for estimating the relationships between a dependent variable (often called the 'outcome' or 'response' variable) and one or more independent variables (often called 'predictors', 'covariates', 'explanatory variables' or 'features'). The most generic form of regression analysis is linear regression, in which one finds the line (or a more complex linear combination) that most closely fits the data according to a specific mathematical criterion (Dennis & Sanford, 1982)

Regression analysis is primarily used for two conceptually distinct purposes. First, regression analysis is widely used for prediction and forecasting, where its use has substantial overlap with the field of machine learning. Second, in some situation's regression analysis can be used to infer causal relationships between the independent and dependent variables. Importantly, regressions by themselves only reveal relationships between a dependent variable and a collection of independent variables in a fixed dataset. To use regressions for prediction or to infer causal relationships, respectively, a researcher must carefully justify why existing relationships have predictive power for a new context or why a relationship between two variables has a causal interpretation. The latter is especially important when researchers hope to estimate causal relationships using observational data (David, 2009).

4.2.3 Assumption Tests of Regression Analysis

The study employed multiple regression analysis to study the influence of independent variables on dependent variables. Multiple regressions were also used to study the overall fit (variance explained) of the model and the relative contribution of each of the predictors to the total variance explained. The correct use of the multiple regression models requires that several critical assumptions be satisfied to apply the model and establish validity. Inferences and generalizations about the theory are only valid if the assumptions in an analysis have been tested and fulfilled. Therefore, prior to the commencement of carrying out multiple regression analysis, it was mandatory for the researcher to address the required assumptions tests that the data must meet to make the analysis reliable and valid. Consequently, the researcher employed the following assumptions of multiple linear regression tests using SPSS.

4.2.3.1 Test of autocorrelation

Autocorrelation is the coefficient of linear correlation between two terms of a sequence of random variables. Autocorrelation is also called serial correlation. In other words, the autocorrelation coefficient is just the coefficient of linear correlation between two random variables belonging to the same sequence (Taboga, 2021). For instance, let be a sequence of random variables. The autocorrelation coefficient between two terms of the sequence X_n and X_{n+k} is represented by;

$$\rho(n, n+k) = \frac{\text{Cov}[X_n, X_{n+k}]}{\sqrt{\text{Var}[X_n]\text{Var}[X_{n+k}]}}$$

Therefore, the study calculated the autocorrelation of the random variables and found out less autocorrelation. Table 4.11 below also shows the Durbin-Watson tests produce a test statistic Values of 1.012a. These values are close to 2 (the middle of the range). This shows that degrees of autocorrelation between the values of the same variables across different data observations were less and indicates less autocorrelation.

Table 4.11 Test of autocorrelation

Model Summary^b

Model	Durbin-Watson
1	1.012 ^a

a. Predictors: (Constant): Teaching Method; Infrastructure; Technology: & Curriculum

b. Dependent Variable: COMPUTE Students Achievement

4.2.3.2 Test of Collinearity Diagnostics

The study also carried out a Collinearity diagnostic test to verify combination between variables. Collinearity diagnostic implies two variables are near perfect in linear combinations of one another. Multi collinearity involves more than two variables. Test of collinearity diagnostics of independent and dependent variables was conducted. As the study presented on Table 4.12 below, some variables are correlated.

Table 4.12. Test of Collinearity Diagnostics

Dimension	Eigen value	Condition Index	Variance Proportions				
			(Constant)	Infrastructure	Technology	Curriculum	Teaching Method
1	6.946	1.000	.00	.00	.00	.00	.00
2	.050	11.787	.00	.00	.00	.00	.00
3	.003	51.017	.01	.00	.00	.00	.00
4	.001	92.114	.80	.02	.00	.00	.00
5	.000	217.701	.07	.55	.00	.00	.61
6	.000	261.021	.04	.42	.00	.00	.38
7	4.000E-007	4167.221	.08	.01	1.00	1.00	.01

a. Dependent Variable: Retention

Source: Researcher's survey (May 2023)

From the above Table 4.12, it is possible to infer that there is association between independent and dependent variables. In other words, the dependent variable which is students' achievement is predicted by the independent variable namely teaching method; infrastructure; resource allocation, technology and curriculum flexibility.

4.2.4 Multiple Linear Regressions

Linear regression is a statistical technique used to learn more about the relationship between an independent (predictor) variable and a dependent (criterion) variable. When you have more than one independent variable in your analysis, this is referred to as multiple linear regressions (Saunders, et al., 2014).

R-Square

Table 4.13 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change		df1	df2	Sig. F Change	
1	.912 ^a	.832	.827	.019	.832	1.840	6	198	.000*	1.012
a. Predictors: (Constant); Teaching Method; Infrastructure; Technology; Resource Allocation& Curriculum Flexibility										
b. Dependent Variable: COMPUTE Students Achievement										

R-square, which is known as the coefficient of determination, is a commonly used statistic to evaluate the model fit of a regression equation. That is, how good are all independent variables at predicting the dependent variable? The value of R-square ranges from 0.0 to 1.0 and can be multiplied by 100 to obtain a percentage of variance explained. Therefore, as indicated in Table 4.13 above, the regression equation with four independent variables (Teaching Method; Infrastructure; Technology; Resource Allocation& Curriculum), $R = .912^a$ and the R-square for the equation was .832. It indicates that 83% of the variance in the five variables is explained by the dependent variable (students' achievement). In other words, the proportion of variance in the dependent variable can be explained by the independent variables. Since the $R^2 = .832$ is strong, it is possible to conclude that the independent variables are significantly strong predictors for the dependent variable.

Table 4.14 ANOVA Result

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	263.335	6	43.889	163.141	.000 ^b
	Residual	53.267	198	.269		
	Total	316.602	204			

a. Dependent Variable: COMPUTE Students' Achievement

b. Predictors: (Constant); Teaching Method; Infrastructure; Technology; Resource Allocation & Curriculum

Flexibility

As indicated in table 2.14, the study used ANOVA analysis to examine the regression model overall fit. Therefore, finding shows that the value of R and R^2 found from the model summary is statistically Significant at ($F=163.141$), ($P < 0.001$) which implies the regression model is a good fit of the data. From this it can be concluded that if the significant value is less than 0.05, the combination of independent variables is a good predictor of dependent variable.

4.2.2 Regression Analysis

Table 4.15 Regression Coefficients

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.714	.019		6.019	.000
	Students Achievement	.857	.012	.922	7.656	.000
	Infrastructure	.706	.059	.831	12.026	.000
	Resource allocation	.678	.086	.745	13.010	.000
	Technology	.618	.056	.646	11.010	.000
	Curriculum	.783	.055	.796	4.260	.000
	Teaching Method	.601	.087	.788	13.408	.000
a. Dependent Variable: Students Achievement						

The regression coefficient (coefficient of determination) indicated on the above Table 4.15 explains the extent to which changes in the dependent variable can be explained by change in the independent variables or the percentage of variation in which academic achievement is explained by changes in independent variables such as school facilities which includes infrastructure, technology, curriculum and teaching method. The finding also indicates the confidence level (significance level or P value) for the four independent variables. Therefore, the Sig. value of infrastructure is .000, which is < 0.05 , they have a significant positive effect on students' academic achievement. The

unstandardized coefficients (X1 up to X5) are the coefficients of the estimated regression model. Hence, by including the error term (ϵ), the regression model of this study can now be written in an equation form as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \epsilon$$

$$Y = .714 + .678X_1 + .857X_2 + .706X_3 + .618X_4 + .783X_5 + .583X_6$$

The value of 'Y' is 0.714 which means the expected value of academic achievement of students with disability is 0.714 when all the four variables assume zero value. The five factors are found to be statistically significant conditions and significant predictors of the dependent variable (academic achievement). These are *infrastructure, technology, resource allocation, curriculum flexibility & differentiations and teaching method* as verified by their P-values ($P < 0.05$).

4.2.4 Validating the Proposed Hypotheses

Table 4.16 Result of Proposed hypotheses

Proposed hypotheses	Confidence level at $p < 0.05$	Decision based on finding
Building inaccessibility has effect on students' academic achievement	0.000	Accepted
Poor Resource allocation has effect on students' academic achievement	0.000	Accepted
Technology inaccessibility has effect on students' academic achievement	0.000	Accepted
Curriculum inflexibility has effect on Students' Academic Achievement	0.000	Accepted
Poor Instructional Approach has effect on Students' Academic Achievement	0.000	Accepted

Source: Researcher's survey (May 2023)

The table above indicated that the *building inaccessibility has an effect on students' poor academic achievement*. So, estimation of the study would be accepted. And also, the next part of the study proposed hypotheses was *poor resource allocation has effect on students' poor academic achievement*, its response on the research finding accepted which means independent variables indicated the value of dependent variable. The third hypothesis of this was that *technology inaccessibility has an effect on students' poor academic achievement*. The research finding shows that it was accepted because the technology facilitates the teaching learning process. The fourth hypothesis was that *curriculum inflexibility has an effect on students' poor academic*

achievement, the response of finding showed that accepted. The fifth hypothesis of the study was that the *Poor Instructional Approach has an effect on Students' poor academic achievement*, the result of research finding indicated that it is accepted. The instructional approach has an effect on the academic achievement of students with disabilities. In the findings of this study showed that the school facility has positive correlation with the students' academic achievement so one variable associated with the other variable in the determination of correlation coefficients of the study.

4.3 Discussion

The objective of this study was to examine the relationship between school suitability and academic achievement of students with disabilities in selected government primary schools at Hawassa city administration. This section presents discussion on the identified variables in relation to their effect on each other.

4.3.1 Resource allocation

The resource allocation was important to facilitate good opportunity in accessing teaching learning for students with various disabilities and make the learning environment inclusive for all students. It was essential to Students' Satisfaction on the school software such as instructional approach, curriculum issues, IEP, teachers' preparedness, school leadership & supervision, etc. and hardware such as the physical building, streets, ramps, and classrooms arrangement. However, most of the respondents in this study determined that the sample schools had no appropriate resources allocation, it facilitates the poor educational outcomes of students. The quality and standard of education both curricula and co-curricular activities offered in a school should be determined by provision, adequacy, utilization and lead educational physical facilities.

However, the schools that do not have good or adequate infrastructural facilities affect the academic success of students with disability. More of the participants answered strongly disagreed with their satisfaction with the school building. The participants replied that the streets in the school are uncomfortable for them with response of disagree and strongly disagree, respectively. Concerning classroom suitability⁹⁸ (47.8%) and 107(52.2%) respondents said disagree and strongly disagree, respectively. Furthermore, regarding suitability of the instructional approaches¹¹⁸ (57.6%) and 87 (42.4%) participants disagreed and strongly disagreed respectively. Hence, instructional approaches are not adapted and differentiated according to the learning style of students with disabilities.

4.3.2 Technology Accessibility

Accessible technology plays a significant role in improving the quality of education. It enhances “presentation, demonstration, drill and practice, interaction and collaboration – that are more interactive and participatory than traditional modes” (Haddad and Draxler cited in UNESCO, 2015, p. 212). Teachers would like to have more accessible infrastructures facilities resource allocation, technology, instructional approach, school building. But lack of electricity and finance prevent the utilization of ICT in school. Teachers believe that ICT supported learning could enhance student motivation for learning and improve the quality of education. Similarly, the students noted that the use of radio instruction enhances their motivation for learning. In School, there is no Interactive radio instruction because the school has no digital radio, and they experience signal problems.

The fifth quality inclusion component is special needs education. It has two indicators: special needs education; and teacher training on how to deal with students with disabilities. The social justice perspective emphasizes special needs education stressing the importance of access to basic education for students with disabilities and ongoing teacher training on how to deal with them (Tikly & Barrett, 2009, 2011). However, the QLE substandard indicators do not identify this quality inclusion component.

4.3.3. Curriculum Flexibility and Differentiation

The purpose of this study was assessing school suitability for students with disabilities so that curriculum flexibility and differentiation was one adapting teaching learning process to all students’ needs and potentials. Therefore, ensuring that all learners have access to quality education also acknowledges the intrinsic value of diversity and respect for human dignity (UNESCO, 2015). In this way, differences are seen positively as the stimulus for fostering learning among all children. Hence, the same source stressed the curriculum as the central means for enacting the principles of inclusion and equity within an education system. In support to this, UNICEF, (2011) suggested that inclusive curricula should be based on the view that learning occurs when students are actively involved, taking the lead in making sense of their experiences.

Hence, this was suggested by Dessalegn, Adugna, & Kasech, (2016) as curriculum developers should consider students with special needs during its design and development. Dessalegn, Adugna, & Kasech, (2016) suggested that curriculum can have potential to address multi- dimensional needs

of students. According to Belay, Fantahun, & Missaye (2015), one of the big challenges to inclusiveness in education in Ethiopia is the rigidity of the curriculum and lack of teachers' ability to adapt and modify for the individual needs of learners. This was again supported by Ludego, (2020) as one of the challenges to inclusive education on his study area was curricular rigidity and skill gap within regular teachers to adapt the curriculum. Teketel, (2018) further pointed out that curriculum is not flexible for all learners and there is no practice for individualized education programs (IEP). However, the study revealed that had no adequate curriculum flexibility and differentiation in the selected government primary schools teaching learning activities. This was one of the challenges of students' participation in school

4.3.4 Poor Instructional Approach

This study indicated that the poor instructional approach was affecting the academic achievements of students with various disabilities in primary school settings. And also, it did not involve all students in the teaching learning process of schools. The infrastructures facilities in primary school are much more barriers for children with disability. The study was conducted in Hawassa city administration, and it came out with the results that then teachers had limited knowledge and skills in supporting children with disabilities enrolled in primary schools. The primary schools' teachers lacked skills in sign language, using Braille machine and in managing classes with diverse learners, they have less ability in creating an inclusive classroom. Hence the instructional approaches are not adapted and differentiated according to the learning style of students with disabilities in those primary schools.

4.3.5 Building Inaccessibility

The inaccessibility of the building was one of the factors which affect the participation of whole students' special students with mobility disability. The same too that it made the environment difficult to perform academic activities in primary schools. Therefore, this study in table 4.7 showed 113(55.7%) respondents reported that they were not satisfied with the school building including classroom, offices, toilet, library, laboratory, etc. However, physical accessible infrastructures result to an easy learning and comfort ability in class, easy movement and accessible infrastructures saves time as it avoids a lot of delaying of studies, accessible infrastructures contribute into the rising of study passion and enthusiasm within the community.

Although most of them showed that schools do not have good or adequate physical facilities, they do not produce good results and also students produce low levels of learning ability. However, the academic concepts are made to establish the participation of students and teachers in the classroom setting. Therefore, it is vital that classroom environment should be maintained and well organized (Kudari, 2016). The finding results of this study revealed that infrastructures have impact on the academic achievement of students with disability.

However, the expansion of primary education increasing in Ethiopian as the same to that students have been entering schools in thousands, the students with disabilities face inaccessible infrastructures to participate in teaching learning activities. Therefore, according to the educational score the researcher realized findings result of this study was correlating the fact that the inaccessible infrastructures limit the ability of children to learning and succeed which acting as factor to score educational results. Some of the common answers that were provided were; accessible infrastructures result to an easy learning and comfort ability in class, easy movement and accessible infrastructures saves time as it avoids a lot of delaying of studies, accessible infrastructures contribute into the rising of study passion and enthusiasm within the community.

However, most of them showed that schools do not have good or adequate physical facilities, do not produce good results and also students produce low levels of learning ability. And also, the researcher described the academic achievement scores interval of students with disability in each grade level by using numbers and percent which get from registered their roster card. However, the academic concepts are made to establish the participation of students and teachers in the classroom setting. Therefore, it is vital that classroom environment should be maintained and well organized (Kudari,2016). Also, the efficiency management of the classroom promotes the lesson delivery, instructional strategies and teaching and learning process to make effective discipline and communication in the classroom and to help the students to learn better and improve their academic performance.

Even though the study employed Correlational research it sometimes referred to as a form of descriptive research because it describes an existing relationship between variables. The way it describes this relationship, however, is quite different from the descriptions found in other types of studies. This study describes the degree to which two or more quantitative variables are related, and it does so by using a correlation coefficient. When a correlation is found to exist between two

variables, it means that scores within a certain range on one variable are associated with scores within a certain range on the other variable. If the variables are correlated, then a correlation coefficient is produced. This coefficient will be a decimal, somewhere between 0.00 and +1.00 or -1.00. The closer the coefficient is to +1.00 or -1.00, the stronger the relationship. If the relationship sign is positive, indicating that high scores on one variable tend to go with high scores on the other variable. If the relationship sign is negative, indicating that high scores on one variable tend to go with low scores on the other variable. Coefficients that are at or near .00 indicate that no relationship exists between the variables involved. Therefore, the current study employed correlation analysis to estimate the extent of association between two variables in the study and the strength of relationship is represented by the correlation coefficient.

However, in statistical modeling, regression analysis is a set of statistical processes for estimating the relationships between a dependent variable and one or more independent variables. The most generic form of regression analysis is linear regression, in which one finds the line (or a more complex linear combination) that most closely fits the data according to a specific mathematical criterion (Dennis & Sanford, 1982). In this study the regression analysis can be used to infer causal relationships between the independent and dependent variables. Regressions by themselves only reveal relationships between a dependent variable and a collection of independent variables in a fixed dataset.

Therefore, the study used multiple regression analysis to study the influence of independent variables on the dependent variable. Multiple regressions were also used to study the overall fit of the model and the relative contribution of each of the predictors to the total variance explained. The correct use of the multiple regression models requires that several critical assumptions be satisfied to apply the model and establish validity. Inferences and generalizations about the theory are only valid if the assumptions in an analysis have been tested and fulfilled. Therefore, prior to the commencement of carrying out multiple regression analysis, it was mandatory for the researcher to address the required assumptions tests that the data must meet to make the analysis reliable and valid. In addition, the researcher noticed that most of the Participants were giving many credits to their primary school system, the researcher wanted to know the availability accessibility of infrastructures facilities of school assist in enhancing the educational outcomes of all students including those with impairments and special needs. Hence, the quality and standard of education

both curricula and co-curricular activities offered in a school should be determined by provision, adequacy, utilization and lead educational facilities.

However, the primary schools that do not have good or adequate infrastructural facilities do not produce results, as do the schools that produce students with low levels of learning ability. Regarding the Effect of infrastructure accessibility on academic achievement of Students with disabilities asked different questions. However, most of the arguments were similar on the questions raised. Some of the common answers were that when infrastructures were accessible, we can create equal opportunities for everyone to participate fully and achieve good educational results in their school activities. This study revealed that building accessibility, classroom suitability, technology accessibility and instructional approach has effect on students' academic achievement. The Ethiopian Building Proclamation No. 624/2009 (Article 36) specifically addresses the accessibility of design and construction for physically impaired persons, as follows: "Any public building shall have a means of access suitable for use by physically impaired persons, including those who are obliged to use wheelchairs and those who are able to walk but unable to negotiate steps (36.1). Where toilet facilities are required in any building, an adequate number of such facilities shall be made suitable for use by physically impaired persons and shall be accessible to them."

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter presents the summary, conclusion and recommendations of the findings in relation to objectives of the study and research questions. The summary part gives the general idea of the study, whereby the conclusion is based on the objectives of the study. Also, recommendations were drawn for further important measures to be taken and more areas were suggested for further studies on the issues of the relationship between school suitability and academic achievement of students with disabilities in primary schools.

5.1 Summary

This study was done to investigate the relationship between school suitability and academic achievement of students with disabilities in selected government primary schools at Hawassa city administration. The study was guided by the following objectives; to evaluate the infrastructures accessibility for students with disabilities in government primary schools, to assess the effect of school suitability on academic achievements for students with disabilities and to investigate the condition of accessible infrastructure for students with disabilities. Literature review on infrastructural accessibility issues for students with disabilities were revised covering the aspects of accessibility and condition status of infrastructures, school life progress and academic aspect in relation to infrastructural. More theories like critical theory on disability and theory of infrastructure-led development have been presented to support the study.

This study revealed that inadequate infrastructural facilities were not suitable for students' participation. The status of infrastructural accessibility condition is directly contributing to poor academic performance of students with disabilities. Findings also show that there were no adequate classrooms building, no written materials, poor teaching instruction, specifically for those with visual impairments (low vision), absence of adapted physical education and lack of special sitting facilities were very challenging scenario of the schools investigated. Some of the infrastructures like toilet facilities, wheelchair roads and footways, water services, teaching approaches, learning materials, height of chairs and tables, classroom seating arrangement, library and laboratory were not conducive to accommodate of students with various disabilities specifically those who had visual and physical impaired.

Hence low academic achievement of the students was found strongly related with infrastructures inaccessibility, building inaccessibility, poor instructional approach, the lack of resource allocation, technology inaccessibility, curriculum rigidity, and lack of teaching aids specifically for those students with visual impairments (low vision). Besides, poor infrastructures such as toilet facilities, lack of wheelchair roads and footways, lack of clean water services, absence of health and emergency response, height of some chairs and tables, poor teacher-student relationship, and lack of special teachers were seriously challenging.

5.2. Conclusion

The conclusion of this study was established based on the research objective. It was concluded that there was a significance of high positive correlation found between schools unsuitability and students' poor academic achievement at Hawassa city administration.

According to the study result of Pearson product moment correlation indicates positive and significant relationship between the school suitability and academic achievement which implies the existence of positive correlation between the independent variables and dependent variable. Accessible infrastructures and appropriate instructional approach make students academically successful.

Moreover, literature review reveals that good infrastructure is truly at the base of quality education. The society searching for ways to address the educational needs of children, it is a good motivation to build itself. The students getting basic rights is not just about literacy and numeracy it also means putting the right facilities in right place so that teachers and children can learn" (David & Berner, 2002). All these literature sources strongly recognize the importance and strong connection between infrastructure and wellbeing of students with disabilities.

Moreover, there are several efforts done by the government in ensuring inclusiveness of students with various disabilities not only in higher schools but also in primary school level, through restructuring previous primary schools not primarily specialized in accommodating students with various disabilities. From this study it can be concluded that little emphasis is directed in allowing easy and smooth infrastructure accessibility for students with disabilities in selected government primary schools. All researched government primary schools were not primarily constructed to fully accommodate infrastructural needs of students with various disabilities. This made some

difficulties in inserting some of necessary special infrastructures, for instance some of the stairways to upper floor are very impossible in allowing construction of ramps, the issue of lighting and light reflection on the writing board cannot be adjusted to cater for the needs of every student as eye visions differs.

Furthermore, the sensitivity of academic performance no matter in which state of health the students are very crucial and living in positive stand is helpful in attaining educational goals. Being a student with disability does not add any difference when it comes to academic results with the students without any forms of disabilities. Therefore, differences in academic performance are common country wide. Moreover, social context is an inseparable part of the learning process. It is important to deal with the necessary factors that can contribute to good academic performance. Among the most important factors is the good setup of infrastructural facilities in the schools. It is difficult for students with various disabilities to attain good academic performance and to have positive academic results.

In generally the result of this study indicated that infrastructure inaccessibility, poor resource allocation, technology inaccessibility, curriculum rigidity, and poor instructional approach have negative effect on students' academic achievement of primary schools. However, the adequate school infrastructural accessibility is a key activity to improve students' achievement and increase the rate of attendance. It also helps the students achieve the learning goals.

5.3 Recommendations

In this study, the researcher found inadequate infrastructural facilities for students with disabilities, and most of those accessible are not in the way of student condition. The prevailing status of infrastructure inaccessibility was directly contributing to poor academic performance and low academic achievement of students with various disabilities. However, infrastructural accessibility has a positive effect on the academic achievement of all students with special disabilities. Most of the time infrastructural facilities and academic achievement of students have correlations with each other. Correlation is a more concise summary of the relationship between two variables than regression. Therefore, the general recommendations and areas for further research were also established in this study.

The following recommendations were addressed to ministry of education, educational planners, policy makers, national infrastructures designers, school leaders and teachers:

- The ministry of education should provide regular financial support needed to allocate the infrastructure and focus on maintenance in primary schools for students with disabilities.
- Educational planners should make effective set up that could enhance the schools to be equipped accordingly and to have all necessary infrastructures required in school setting.
- Restructuring National Building Design, Infrastructural Design and National Policies to strongly recognize and cater for the needs of people with various disabilities.
- The government should focuses on the production of enough special needs education teachers and other professionals like sign language translators, Braille trainers, speech therapists and physiotherapists as well as setting enough training to regular teachers aiming at capacity building in schools that enrolls students with various disabilities.
- The primary school leaders should seriously work on minimizing and removing physical barriers the restrict students access to different service centers such as classrooms, libraries, laboratories, sport game fields, administrative offices, toilets.
- Providence of special funds for disability requirements in schools that could cover special infrastructural facilities to smoothen educational life of students with various disabilities.
- Taking extra care of students with disabilities when it comes to conducting national examinations on aspects like providence of extra time and extra care when marking the examination papers.
- The primary schools' leaders and teachers to revisit the existing policy provisions and guidelines on the education of students with disability
- Primary schools need policy guideline on matters of infrastructural accessibility such as allocation of classrooms, teaching approaches, examination, and commitment to provide support in related to students with various disabilities.
- The government Organizing Training, workshops and seminar involving the primary education leaders, teachers and supportive staff and students would help to remove problems related to lack of awareness and attitudes towards disabilities.
- Educational modifications like extended time during exam, large font print materials and magnifying glasses for students with low vision, alternative way of activities for students with hearing impairment made teachers should supported and recognized in doing so.

- Primary schools need teaching learning materials to give special attention particularly to avail resources the technology to enhance quality of education among students with disabilities.

5.4 Implication of the Study

The findings have several implications for primary schools and stakeholders as applied in this study. The main contribution of the study is that it examined the relationship between school suitability and academic achievement of students with disabilities in primary schools based on the concept of inclusive education. The finding of the study shows that student satisfaction results among in the selected primary schools that achieved or did not achieve the infrastructures accessibility. This could be used as a practical example for future practice. The findings show disparity academic results between appropriately accessible schools and inappropriately accessible schools Hawassa city administration. The schools' first semester average score in the selected primary schools is extremely low. This indicates that more students with various disabilities need accessible infrastructures in schools.

It can be argued that the selected schools can be role models for other schools in the region and even city primary schools. However, accessible schools should give more emphasis to pedagogic processes. Even though accessibility of infrastructures focuses on providing school materials, more emphasis could be put on basic school infrastructure, teacher motivation, instruction methods, textbook distribution, and special needs education in framework. While some of basic school infrastructure and special needs education training by government, this is not indicated in the. Furthermore, the infrastructures facilities of primary schools do not address relevance to meet national education goals which may mean that accessibility is not adequately context specific. The findings also have implications for the MOE understanding of accessibility in terms of resource allocation, teacher motivation, special needs education, access to clean water and toilet facilities, menstrual hygiene products, and the use of a code of conduct in schools.

5.4.1 Policy Implication

There are national and international policy implications on the infrastructures accessibility for students with disability in achieving educational goals. Therefore, Ethiopia has ratified and

adopted all of the relevant initiatives and international legal texts on the rights of persons with disabilities. On a national level, the issue of persons with disabilities has been included in many legal documents (MoE, 2012). The efforts of the government policies and strategies in Ethiopia research suggest that there is still a great need to work with persons with disabilities towards their full inclusion in all aspects of society in general and inclusion in education specifically (MoE, 2012; Teketel, 2018; UNESCO, 2015). In the Education Proclamation No 650/2009 of Ethiopia indicated necessary and feasible academic assistance and guidance to be provided to the students. Support through sign language, amenable facilities, and programs, relocated classes and accessible environments, alternative testing procedures and educational auxiliary aids shall be provided to the physically challenged students.

5.4.2 Practice Implication

Adequate and quality school infrastructures remain a key component of the UPE programme because it promotes access to education. However, what needs to be considered is the question of adequate accessibility of schools and the best appropriate and effective model. Investment in infrastructure is quite heavy and may take time to yield outcomes. Increasing the participation of parents and communities to support school construction is crucial because it can increase their voice on accountability through social audits.

5.4.3 Future Research Implication

The study findings indicated that further research could be developed to examine the relationship between school suitability and academic achievement of students with disabilities. This could help to examine the variations between the school's accessibility for example, teaching-learning process, safe and conducive learning environment, and trained teacher that contribute to the good academic achievement. This could help to understand the school's accessible environment, a particular contribution to the academic performances of the students. Also be examined in student learning outcomes, particularly as regards literacy. It could also be worthwhile to explore strategies to address the challenges encountered in the schools, including basic school infrastructure, teacher shortages, electricity, and water supply which affect the quality of education. This may mean identifying context-specific solutions, for instance, by mobilizing and allocating local resources, creating income generating activities, and strengthening community participation, government, and

donor commitment. Further research could also focus on the correlation between independent variables and dependent variables as a means access infrastructures facility in the schools.

- The further study can be conducted to find out the relation between school suitability and academic achievement of students with disability in government primary schools in Ethiopia whereas to make comparative analysis of the study.
- Assessing the infrastructures facilities and academic achievement of Persons with Disabilities in Hawassa city administration.

REFERENCES

- Abberley, P. (1987), The Concept of Oppression and the Development of a Social Theory of Disability. *Disability, Handicap & Society*, 2(1), 5-19.
- Biermann, J., & Powell, J. J. W. (2014). Institutional dimensions of inclusive schooling: Comparing the challenge of the UN Convention on the Rights of Persons with Disabilities in Germany, Iceland and Sweden. *Zeitschrift für Erziehungswissenschaft*, 2014, 17(4), 679–700. 679.
- Bless, C., Higson-Smith, C., & Kagee, A. (2006), *Fundamentals of social research methods: An African perspective*: Juta and Company Ltd.
- Brinsky, A. (2006), 'American Public Opinion in the 1930s and 1940s: The Analysis of Quota Controlled Sample Survey Data', *The Public Opinion Quarterly* 70(4), p.499-529 [doi://dx.doi.org/10.1093/poq/nfl021]
- Centre for Citizens with Disabilities (2015), *Access to Public Infrastructures for Persons with Disabilities in Nigeria*. Centre for Citizens with Disabilities (CCD), Salvation Road, Ikeja, Lagos, Nigeria.
- Cheung, M.K., Hung, A.T., Poon, P. K., Fong, D. Y., Li, L. S., Chow, E. S. Liou, T.-H. (2015), Validation of the World Health Organization Assessment Schedule II Chinese Traditional Version (WHODAS II CT) in persons with disabilities and chronic illnesses for Chinese population. *Disability and rehabilitation*, 37(20), 1902-1907.
- Clark, Helen (2002), *Building Education: The Role of the Physical Environment in Enhancing Teaching and Research. Issues in Practice*. Institute of Education, 20 Bedford Way, London, WC1H 0AL, England.
- Crossman, A. (2014), *Purposive Sampling*. Harvard, USA
- Deines-Jones C. (2007), *Improving Library Services to People with Disabilities*. Oxford; Chandos Publishing.
- Deku, P., & Vanderpuye, I. (2008), *Assessing Instructional Strategies: A Case Study of Selected Regular Schools in Ghana. Implication for Inclusive Education*. *African Journal of Special Educational Needs*, 5(4), 67-78.
- Department for Children, Schools and Families, UK. (2008), *Designing for Disabled Children and Children with Special Educational Needs - Guidance for Mainstream and Special Schools*. Building Bulletin 102. The Stationery Office, London.

- Dettmer, J., Ettel, D., Glang, A., & McAvoy, K. (2014), Building Statewide Infrastructure for Effective Educational Services for Students with TBI: Promising Practices and Recommendations. *The Journal of Head Trauma Rehabilitation*, 29(3), 224-232.
- Draft African Protocol, (2014), Protection of Rights of Persons with Disabilities in Africa, [<http://www.achpr.org/news/2014/04/d121>].
- Ethiopian Ministry of Education. (2011). Education sector development program IV (ESDP IV). 2010/2011–2014/2015. Addis Ababa: Ethiopian Ministry of Education.
- Folz, D.H, (1996), Survey Research for Public Administration. Sage Pub, Harvard, USA.
- Gilbert, Nigel (2008), *Researching Social Life* (3rd edn), Sage Publications Ltd. 1 Oliver's Yard. 55 City Road. London
- Hayford, S. K. (2008), Frustrations of Lower Attaining Learners about Class Test in Primary Schools in Ghana. *African Journal of Vocational Education*, 3(3), 59-80.
- Helou, A.M., & Rahim, N.Z.A. (2014), The Influence of Social Networking Sites on Students' Academic Performance in Malaysia. *International Journal of Electronic Commerce*, 5(2), 247-254
- Hersh, R H (2009), *A Well-rounded Education for a Flat World*. Education Leadership. Chicago, USA.
- Hosking, D. L. (2008), Critical Disability Theory. Paper Presented at the A Paper Presented at the 4th Biennial Disability Studies Conference at Lancaster University, UK.
- Human Right Watch (2015), "Left Out? Obstacles to Education for People with Disabilities in Russia, [<https://www.hrw.org/report/2015/09/01/leftout/obstacles-education-people-disabilities-russia>].
- Human Rights Watch (2013), *As Long as They Let Us Stay in Class: Barriers to Education for Persons with Disabilities in China*. Printed in the United States of America. ISBN: 978-1-6231-30343.
- Human Rights Watch (2017), *I had a Dream to Finish School: Barriers to Secondary Education in Tanzania*. Printed in the United States of America. ISBN: 978-6231-34419
- Israel, M. (2014), *Research Ethics and Integrity for Social Scientists: Beyond Regulatory Compliance*: Sage.
- Justesen, T., Gilmore, R., & Morrow, D. (2006), The Individuals with Disabilities Education Act (IDEA). *Journal of American Indian Education*, 68-71.

- Kaplan, I., Lewis, I., & Mumba, P. (2007). Picturing global educational inclusion? Looking and thinking across students' photographs from the UK, Zambia, and Indonesia. *Journal of Special Education* 7(1), 23–35.
- Kinzie, J. (2015), Focus Groups. *Research in the College Context: Approaches and Methods*, 62.
- Kolucki, B. (2004), South Africa: Innovative Approaches to Including Children with Physical Challenges, [<http://www.disabilityworld.org>].
- Kubáľková, V., & Cruickshank, A. (2015), *Marxism-Leninism and the Theory of International Relations* (Vol. 4): Routledge.
- Kuhn, T.S. (1962), *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press. USA.
- Labaree, R. V (2009), *Organizing Your Social Science Research Paper: Limitations of the Study*. Harvard, USA.
- Law, M., Hanna, S., Anaby, D., Kertoy, M., King, G., & Xu, L. (2014), Health Related Quality of Life of Children with Physical Disabilities: A Longitudinal Study. *BMC Pediatrics*, 14(1), 26.
- Leicester M. (1999), *Voice of Disabled: Towards an Enabling Education*. Jessica Kingsley Publishers, London, and Philadelphia.
- Leong, R. W., Huang, T., Ko, Y., Jeon, A., Chang, J., Kohler, F., & Kariyawasam, V. (2014), Prospective Validation Study of the International Classification of Functioning, Disability And Health Score in Crohn's Disease and Ulcerative Colitis. *Journal of Crohn's and Colitis*, 8(10), 1237-1245.
- Marshall, B., Cardon, P., Poddar, A., & Fontenot, R. (2013), Does Sample Size Matter in Qualitative Research?: A Review of Qualitative Interviews in IS Research. *Journal of Computer Information Systems*, 54(1), 11-22.
- Marshall, C., & Rossman, G. B. (2014), *Designing Qualitative Research*: Sage Publications.
- Marshall, M. N. (1996), Sampling for Qualitative Research. *Family Practice*, 13(6), 522-526.
- Maureen M. Berner (1993), *Building Conditions, Parental Involvement and Student Achievement in the District of Columbia Public School System*. University of North Carolina at Chapel Hill.
- Merriam, S. B., & Tisdell, E. J. (2015), *Qualitative Research: A Guide to Design and Implementation*: John Wiley & Sons.
- Michael, L.W. (2014), *Accommodating Disabled Students into Athletic Programs*, CMAA.

Maryland, USA.

- Mwaijande T.V. (2004), Access to Education and Assistive Devices for Children with Physical Disabilities in Tanzania .Oslo and Akershus University College.
- Nussbaum, M. C. (2011). Creating capabilities. The human development approach. Cambridge, MA/London: Harvard University Press.
- Oonk, A., Huygen, P., Kunst, H., Kremer, H., & Pennings, R. (2016), Features of Autosomal Recessive Non-Syndromic Hearing Impairment: A Review to Serve as a Reference. Clinical Otolaryngology.
- Patten, M. L. (2016), Questionnaire Research: A Practical Guide: Routledge.
- Peter McKevitt. (2012), Improving the Accessibility of School Buildings. National Disability Authority, [<http://www.universaldesign.ie/buildingforeveryone>].
- Pierre-Richard, A. (2006), A Theory of Infrastructure-led Development. University of Manchester, Manchester, M13 9PL, UK.
- Ranjit Kumar. (2011), Research Methodology: A Step-By-Step Guide for Beginners. Sage Publications Ltd. 1 Oliver's Yard. 55 City Road London. EC1Y 1SP.
- Richard V. Olsen, Ph.D. (2005), Summary Guidelines for School Design to Include Children With Disabilities, Center for Architecture and Building Science Research. New Jersey Institute of Technology.
- Richardson, J. G., & Powell, J. J. W. (2011). Comparing special education: Origins to contemporary paradoxes. Stanford: Stanford University Press.
- Rossmann, G. B., & Rallis, S. F. (2011), Learning in the field: An introduction to qualitative research: Sage. Saldaña, J. (2015), The Coding Manual for Qualitative Researchers: Sage.
- Seto, K. C., Dhakal, S., Bigio, A., Blanco, H., Delgado, G. C., Dewar, D., Lwasa, S. (2014), Human Settlements, Infrastructure and Spatial Planning.
- Skempes, D., Stucki, G., & Bickenbach, J. (2015), Health-Related Rehabilitation and Human Rights: Analyzing States' Obligations under the United Nations Convention on the Rights of Persons with Disabilities. Archives of physical medicine and rehabilitation, 96(1), 163-173.
- Tait, B. L. (2013), 'Talking Up and Talking Down': The Presentation of Educational Need in And Age of Inclusive Education Policy Reforms. International Journal of Inclusive

- Education, 17(6), 555-570.
- Taylor, S. J., Bogdan, R., & DeVault, M. (2015), Introduction to Qualitative Research Methods: A Guidebook and Resource: John Wiley & Sons.
- Titchkosky, T. (2014), Monitoring Disability: The Question of the 'Human' in Human Rights Projects. Disability, Human Rights, and the Limits of Humanitarianism, 119-135.
- Thomas, N., & Smith, A. (2009), Disability, Sport, and Society: An Introduction. Rutledge 2 Park Square, Milton Park, Abingdon Oxon Ox14 5RN
- Trochim, W.M (2006), Qualitative Measures, Research Measures Knowledge Base 361, Chicago, USA.
- UN Convention, (2007). Rights of Persons with Disabilities and Optional Protocol, [<http://www.un.org/disabilities/documents/convention/convoptprote.pdf>].
- Wainwright, D. (1997), Can sociological research be qualitative, critical, and valid? The qualitative report, 3(2), 1-17.
- Warren, A., & Warren, J. (2016), Accessibility in the Design of Learning Resources.
- WHO & World Bank (2011), World Report on Disability, [http://www.who.int/disabilities/World_report/2011/report.pdf]. <http://www.news-medical.net/health/What-is-visual-impairment.aspx>

APPENDICES



HAWASSA UNIVERSITY

COLLEGE OF EDUCATION

DEPARTMENTE OF SPECIAL NEEDS AND INCLUSIVE EDUCATION

Questionnaires to be filled by students with disabilities in Some Selected Government

Primary Schools of Hawassa city Administration for the Fulfillment of Master

Dear Respondent,

The purpose of this questionnaire is to collect data to assess THE RELATION BETWEEN SCHOOL SUITABILITY AND ACADEMIC ACHIEVEMENT OF STUDENTS WITH DISABILITIES IN SOME SELECTED GOVERNMENT PRIMARY SCHOOLS AT HAWASSA CITY ADMINISTRATION. Your school has been chosen for this purpose. The success of this study depends on your cooperation and genuine response to the questions. Therefore, you are kindly requested to read each of the statements carefully and give response honestly and frankly to them. I promise that the information that you supply will be used only for academic purposes and strictly confidential. I will keep it safely, so it does not hurt any person.

Thank you for your cooperation.

General direction

1. No need to write your name
2. Read all the instructions and items before answering.
3. No need to consult others to fill in the questionnaires.

4. Please, provide appropriate response by using “√” to choose one of the suggested scales which best suits your opinion. And kindly write your opinion briefly for the short answer questions in the space provided.
5. Please do not leave the question not answered.

Part I: Background Information of the Respondents

Instruction 1: Indicate your responses by circling the given options or writing on blank space provided.

1. Name of the school _____
2. Sex: A. Male ☐ B. Female ☐
3. Age _____
4. First semester Average Result _____
5. Grade level _____
6. Type of Disability _____

Part II: - The questionnaire filled by students with disabilities on “What infrastructures are accessible to students with disabilities in those primary schools of Hawassa city administration?”

Instruction: Dear respondents, you are kindly requested to indicate the extent you agree with each item listed in the table below. Please, use the scale given below and mark “√” in the box for your choice.

Scales: 5. Strongly Agree 4. Agree 3. Undecided 2. Disagree 1. Strongly Disagree

No	Infrastructures Accessibility	Scale				
		5	4	3	2	1
1	The schools' entrance and exit are suitable for students with disabilities.					
2	The school has an accessible office building.					
3	The school has an accessible classroom building.					
4	The classrooms are suitable & accommodate all students with disabilities.					
5	The school has an accessible toilet building.					
6	The roads within the school are suitable for students with disabilities.					
7	The chairs/desks in the classroom are accessible & suitable,					
8	Infrastructures accessibility has an effect on the academic achievement of students with disabilities.					

9	Library buildings are accessible to students with various disabilities.					
---	---	--	--	--	--	--

If you have additional idea, please specify here _____

Instruction: Dear respondent, you are kindly requested to indicate the extent of your agreement on the items given on the table below after carefully reading each item. Please, use the scale given here under and mark “√” in the box for your choice.

Scales: 5. Strongly Agree 4. Agree 3. Undecided 2Disagree 1. Strongly Disagree

No	Technology accessibility	Scale				
		5	4	3	2	1
1	The school uses advanced technologies to facilitate the teaching learning process.					
2	Students with disabilities have access to assistive technology.					
3	Accessibility of assistive technology has a positive effect on the academic achievement of students with disabilities.					
4	Teachers have good skills & knowledge on using educational technologies.					
5	Students with visual impairment have assistive technologies for their education.					
6	Students with hearing impairment have assistive technologies for their education.					
7	Students with physical impairment have assistive technologies for their education.					
8	Students with learning disabilities have assistive technologies for their education.					
9	The school strives to improve the educational achievement of students with disabilities through assistive technologies.					

If you have additional idea, please specify here _____

Part II: - The questionnaire filled by students with disabilities on “What infrastructures are accessible to students with disabilities in those primary schools of Hawassa city administration?”

Instruction: Dear respondents, you are kindly requested to indicate the extent you agree with each item listed in the table below. Please, use the scale given below and mark “√” in the box for your choice.

Scales: 5. Strongly Agree 4. Agree 3. Undecided 2. Disagree 1. Strongly Disagree

No	Resource Allocation	Scale				
		5	4	3	2	1
1	The schools have appropriate Resource.					
2	The school has resources are accessible					
3	The school resources are easy to use by students with disabilities.					
4	The classrooms are full of appropriate resources.					
5	The school uses local materials to prepare resources.					
6	Students are motivated to enhance their education by using resources.					
7	The students’ academic achievement is increased due to resources available.					

If you have additional idea, please specify here _____

Instruction: Dear respondent, you are kindly requested to indicate the extent of your agreement on the items given on the table below after carefully reading each item. Please, use the scale given here under and mark “√” in the box for your choice.

Scales: 5. Strongly Agree 4. Agree 3. Undecided 2. Disagree 1. Strongly Disagree

No	Curriculum flexibility	Scale				
		5	4	3	2	1
1	The school curriculum is flexible for all students.					
2	Curriculum flexibility is essential to address the educational needs of all students.					
3	The flexible curriculum has an impact on academic achievement of all students.					
4	Teachers adapt & differentiate the school curriculum to make it accessible to all students.					
5	The flexibility of curriculum invites all students to participate in school activities.					
6	Teachers have appropriate skills & knowledge in adapting & differentiating the curriculum to make it accessible to all students.					
7	With a flexible curriculum, students are provided with more opportunities to regulate their learning process & the learning environment.					
8	The school uses technologies to adapt & differentiate the school curriculum.					

If you have additional idea, please specify here _____

Instruction: Dear respondent, you are kindly requested to indicate the extent of your agreement on the items given on the table below after carefully reading each item. Please, use the scale given here under and mark “√” in the box for your choice.

Scales: 5. Strongly Agree 4. Agree 3. Undecided 2. Disagree 1. Strongly Disagree

No	Instructional Approach	Scale				
		5	4	3	2	1
1	Classroom teaching and learning approach used by teachers are accessible to all students.					
2	The classroom educational approaches are suitable for students with special needs.					
3	The use of appropriate instructional approach in the classroom increases the academic achievement of students with disabilities.					
4	Inaccessible instructional approach affects the educational involvement of students with special needs.					
5	Teachers have appropriate skills & knowledge in adapting & differentiating the Instructional Approach to make it accessible to all students.					
6	Teachers have a positive attitude in adapting & differentiating the Instructional Approach to make it accessible to all students.					

If you have additional idea, please specify here_____

Instruction: Dear respondent, you are kindly requested to indicate the extent of your agreement on the items given on the table below after carefully reading each item. Please, use the scale given here under and mark “√” in the box for your choice.

Scales: 5. Strongly Agree 4. Agree 3. Undecided 2. Disagree 1. Strongly Disagree

No	Students' Achievement	Scale				
		5	4	3	2	1
1	The school infrastructure accessibility increases students' enrolment.					
2	The school infrastructure's accessibility increases students' achievement.					
3	Students' achievement has increased because the school has adapted & differentiated curriculum.					
4	Students' Achievement has increased because the school has adapted & differentiated instructional approach.					
5	Adapted & differentiated curriculum increases classroom participation of students with special needs.					
6	Adapted & differentiated instructional approach increases classroom participation of students with special needs.					

If you have additional idea, please specify here _____

Thank you very much for allowing your time and cooperation in this study!



ሀዋሳ ዩኒቨርሲቲ

ትምህርት ኮሌጅ

የልዩ ፍላጎትና አካቶ ትምህርት ክፍል

በሀዋሳ ከተማ አስተዳደር በተወሰኑ የተመረጡ የመንግስት የመጀመሪያ ደረጃ ትምህርት ቤቶች ላይ የሚደረግ የማስተርስ ዲግሪ ማቀማሪያ ጥናት

በልዩ ፍላጎት ተማሪዎች የሚሞሉ ጥያቄዎች

ውድ መልስ ሰጪ፤

የዚህ ጥያቄ አላማ በሀዋሳ ከተማ አስተዳደር በተመረጡ ውስን የመንግስት የመጀመሪያ ደረጃ ትምህርት ቤቶች ውስጥ የሚገኙ የአካል ጉዳተኞች ተማሪዎች በመሰረተ ልማት እና በትምህርት ውጤታቸው መካከል ያለውን ተደራሽነት ለመገምገም በጥናቱ አማካኝነት መረጃዎችን ለመሰብሰብ ነው። ትምህርት ቤታችሁ ለዚህ ዓላማ ተመርጧል። ይህ ጥናት ስኬታማ መሆኑ በአብዛኛው የተመሰረተው ለጥያቄዎቹ ባላችሁ ትብብርና ክልብ በመነጨ ምላሽ ላይ ነው። ስለዚህ እያንዳንዱን ሐሳብ በጥንቃቄ በማንበብ ግልጽ መልስ እንድትሰጡ በትህትና እጠይቃለሁ። የምታቀርቡት መረጃ ለትምህርት ዓላማ እና በጥብቅ ሚስጥራዊነት ብቻ እንደሚውል ቃል እገባለሁ። በማንኛውም ሰው ላይ ተጽዕኖ እንደማይፈጥር አረጋግጣለሁ።

ለተደረገልኝ ትብብር አመሰግናለሁ!

አጠቃላይ አቅጣጫ

1. ስምህን መጻፍ አያስፈልግህም
2. መልስ ከመስጠትዎ በፊት ሁሉንም መመሪያዎችና እቃዎች ያንብቡ።
3. ጥያቄዎቹ እንዲሞሉ ሌሎችን ማማከር አያስፈልግም።
4. እባክዎ "✓" በመጠቀም ለእርስዎ አስተያየት የተሻለ የሚስማማውን የሐሳብ መለኪያ አንዱን በመምረጥ ተገቢውን ምላሽ ይሰጡ። እንዲሁም በስፍራው ላይ ለሚነሱት አጭር መልስ ጥያቄዎች ሐሳብዎን በአጭሩ ጻፍ።
5. እባክዎ ጥያቄው ሳይመለስ አትተው።

ክፍል I:- የመልስ ሰጪዎች ታሪካዊ ዳራ

መመሪያ 1 የተሰጡትን አማራጮች በባዶ ቦታ ላይ በመጻፍ ምላሾችህን አመልክ።

1. የትምህርት ቤቱ ስም _____
2. የታ ሀ. ወንድ ለ. ☐ ☐
3. ዕድሜ: _____ 5. የክፍል ደረጃ: _____
4. የ1ኛ ስሚስተር ድምር ውጤት _____ 6. ምን አይነት የአካል ጉዳት አለብህ/ሽ?

ክፍል II: "በሀዋሳ ከተማ አስተዳደር የመጀመሪያ ደረጃ ትምህርት ቤቶች የሚገኙ የአካል ጉዳተኛ ተማሪዎች ምን ዓይነት መሰረተ ልማት ማግኘት ይችላሉ?" በሚል አቋም በአካል ጉዳተኛ ተማሪዎች የሚሞላ መጠይቅ

መመሪያ:- ከታች ባለው ሠንጠረዥ ላይ ከተዘረዘሩት ሃሳቦች ጋር ምን ያህል እንደምትስማሙ እንድትጠቁሙ ተጠይቃችኋል።

ከታች የተዘረዘሩትን መለኪያዎች ተጠቀሙ እና ለምርጫዎ በሣጥኑ ውስጥ ያለውን "✓" ምልክት ያድርጉ.

መለኪያዎች:-

5. እጅግ በጣም እስማማለሁ 4. እስማማለሁ 3. መወሰን አቸገራለሁ
2. አልስማማም 1. እጅግ በጣም አልስማማም

ተቁ	የመሠረተ ልማት ተደራሽነት	መለኪያ				
		5	4	3	2	1
1	የትምህርት ቤቱ መግቢያና መውጫ ለአካል ጉዳተኛ ተማሪዎች ተስማሚ ናቸው።					
2	ትምህርት ቤቱ በቀላሉ የሚደረስበት የቢሮ ሕንፃ አለው።					
3	ትምህርት ቤቱ በቀላሉ የሚደረስበት የመማሪያ ክፍል ሕንፃ አለው።					
4	የመማሪያ ክፍሎች ተስማሚ በመሆናቸው ሁሉንም ተማሪዎች ከአካል ጉዳተኞች ጋር ያስተናግዳሉ።					
5	ትምህርት ቤቱ በቀላሉ ተደራሽ የሆነ የመጻፍያ ቤት ሕንፃ አለው።					
6	በትምህርት ቤቱ ውስጥ ያሉት መንገዶች ለአካል ጉዳተኞች ተስማሚ ናቸው።					
7	በክፍል ውስጥ የሚገኙት ወንበሮች/ጠረጴዛዎች በቀላሉ የሚደረስባቸውና ተስማሚ ናቸው።					
8	የትምህርት ቤት መሰረተ ልማት ተደራሽነት በአካል ጉዳተኛ ተማሪዎች የትምህርት ውጤት ላይ ተፅዕኖ ያሳድራል።					
9	የትምህርት ቤቱ ቤተ መጻሕፍት ሕንፃዎች ለአካል ጉዳተኛ ተማሪዎች ተደራሽ ናቸው።					

ተጨማሪ ሃሳብ ካለዎት፣ እዚሁ ላይ ይፃፉ _____

ክፍል I. መመሪያ 2. ከታች ባለው ሠንጠረዥ ላይ ለተዘረዘሩት ሃሳቦች የሚስማሙበትን ደረጃ የ" $\sqrt{\quad}$ " ምልክት በማድረግ ያመልክቱ።

መለኪያዎች:-

5. እጅግ በጣም እስማማለሁ 4. እስማማለሁ 3. መወሰን አቸገራለሁ
2. አልስማማም 1. እጅግ በጣም አልስማማም

ተ.ቁ	የቴክኖሎጂ ተደራሽነት	መለኪያ				
		5	4	3	2	1
1	ትምህርት ቤቱ የማስተማር ሂደቱን ለማቅለል የተሻሻሉ ቴክኖሎጂዎችን ይጠቀማል።					
2	የአካል ጉዳተኛ ተማሪዎች የቴክኖሎጂ እገዛ ማግኘት ይችላሉ።					
3	የቴክኖሎጂን ተደራሽነት ማግኘት የአካል ጉዳተኛ በሆኑ ተማሪዎች የትምህርት ውጤት ላይ በጎ ተፅዕኖ ያሳድራል።					

4	መምህራን የትምህርት ቴክኖሎጂዎችን በመጠቀም ረገድ ጥሩ ችሎታ እና እውቀት አላቸው፡፡					
5	አይነ ስውራን ተማሪዎች ለትምህርታቸው የሚረዱ ቴክኖሎጂዎችን ያገኛሉ፡፡					
6	የመስማት ችግር ያለባቸው ተማሪዎች ለትምህርታቸው የሚረዱ ቴክኖሎጂዎችን ያገኛሉ፡፡					
7	የአካል ጉዳት ያለባቸው ተማሪዎች ለትምህርታቸው የሚረዱ ቴክኖሎጂዎችን ያገኛሉ፡፡					
8	የመማር ችግር ያለባቸው ተማሪዎች ለትምህርታቸው የሚረዱ ቴክኖሎጂዎችን ያገኛሉ፡፡					
9	ትምህርት ቤቱ በእርዳታ ቴክኖሎጂዎች አማካኝነት የአካል ጉዳተኛ የሆኑ ተማሪዎችን የትምህርት ውጤት ለማሻሻል ጥረት ያደርጋሉ፡፡					

ተጨማሪ ሃሳብ ካለዎት እባክዎ እዚህ ላይ ያመልክቱ _____

መመሪያ 3:- ከታች ባለው ሠንጠረዥ ላይ ለተዘረዘሩት ሃሳቦች የሚስማሙበትን ደረጃ የ"✓" ምልክት በማድረግ ያመልክቱ፡፡

መለኪያዎች:-

5. እጅግ በጣም እስማማለሁ 4. እስማማለሁ 3. መወሰን አቸገራለሁ
2. አልስማማም 1. እጅግ በጣም አልስማማም

ተ.ቁ	ሥርዓተ-ትምህርት ምቹነት	መለኪያ				
		5	4	3	2	1
1	የትምህርት ቤቱ ሥርዓተ ትምህርት ለሁሉም ተማሪዎች እንደየሁኔታቸው ማመቻቸት የሚቻል ነው፡፡					
2	የሁሉንም ተማሪዎች የትምህርት ፍላጎት ለማሟላት የሥርዓተ ትምህርት እንደሁኔታው ማመቻቸት አስፈላጊ ነው፡፡					
3	እንደሁኔታው የሚመቻች ሥርዓተ ትምህርት በሁሉም ተማሪዎች የትምህርት ውጤት ላይ በጎ ተፅዕኖ ያሳድራል፡፡					
4	መምህራን የትምህርት ቤቱን ሥርዓተ ትምህርት ለሁሉም ተማሪዎች ተደራሽ ለማድረግ ጥረት ያደርጋሉ፡፡					
5	የሥርዓተ-ትምህርት ማመቻቸት ሁሉም ተማሪዎች በትምህርት ክንውኖች ውስጥ እንዲሳተፉ ይጋበዛል፡፡					
6	ትምህርት ለሁሉም ተማሪዎች ተደራሽ እንዲሆን መምህራን ስርዓተ ትምህርቱንና የማመቻቸትና የማጣጣም እውቀትና ችሎታ አላቸው፡፡					
7	ተለዋዋጭ ስርዓተ ትምህርት፣ ተማሪዎች የመማር ማስተማር ሂደታቸውን እና የመማሪያ አካባቢያቸውን ለመቆጣጠር ተጨማሪ እድል ይሰጣቸው፡፡					
8	ትምህርት ቤቱ ሥርዓተ ትምህርቱን እንደተማሪዎቹ ሁኔታ ለማጣጣም ቴክኖሎጂዎችን ይጠቀማል፡፡					

ተጨማሪ ሃሳብ ካለዎት እባክዎ እዚህ ላይ ያመልክቱ _____

መመሪያ፦ ከታች ባለው ሠንጠረዥ ላይ ለተዘረዘሩት ሃሳቦች የሚስማሙበትን ደረጃ የ"✓" ምልክት በማድረግ ያመልክቱ፡፡

መለኪያዎች፦

5. እጅግ በጣም እስማማለሁ 4. እስማማለሁ 3. መወሰን አቸገራለሁ
2. አልስማማም 1. እጅግ በጣም አልስማማም

ተ. ቁ	የማስተማሪያ ዘዴ	መለኪያ				
		5	4	3	2	1
1	መምህራን የሚጠቀሙበት የክፍል የማስተማርና የመማር ዘዴ ሁሉም ተማሪዎች ተደራሽ ነው፡፡					
2	የመማር ማስተማር ዘዴው ለልዩ ፍላጎት ላላቸው ተማሪዎች ተስማሚ ነው፡፡					
3	በክፍል ውስጥ ተገቢውን የማስተማሪያ ዘዴ መጠቀም የአካል ጉዳተኛ የሆኑ ተማሪዎችን የትምህርት ውጤት ከፍ ያደርገዋል፡፡					
4	ተደራሽ ያልሆነ የማስተማሪያ ዘዴ ልዩ ፍላጎት ያላቸው ተማሪዎች በትምህርት ተሳትፎ ላይ አሉታዊ ተጽዕኖ ያሳድራል፡፡					
5	መምህራን ትምህርቱ ለሁሉም ተማሪዎች ተደራሽ ለማድረግ የሚያስችላቸው በቂ ክህሎትና እውቀት አላቸው፡፡					
6	መምህራን ትምህርቱ ለሁሉም ተማሪዎች ተደራሽ ለማድረግ ቀና አመለካከት አላቸው፡፡					

ተጨማሪ ሃሳብ ካለዎት፣ እባክዎን እዚህ ላይ ያመልክቱ _____

መመሪያ:- ከታች ባለው ሠንጠረዥ ላይ ለተዘረዘሩት ሃሳቦች የሚስማሙበትን ደረጃ የ"✓" ምልክት በማድረግ ያመልክቱ።

መለኪያዎች:-

5. እጅግ በጣም እስማማለሁ 4. እስማማለሁ 3. መወሰን አቸገራለሁ
2. አልስማማም 1. እጅግ በጣም አልስማማም

ተ.ቁ	ስርአተ ትምህርት	መለኪያ				
		5	4	3	2	1
1	የትምህርት ቤቱ ስርዓተ ትምህርት እንደየተማሪው ሁኔታ ማሻሻሻል የሚቻል ነው።					
2	የተማሪዎችን ውጤት ለማሻሻል ስርዓተ ትምህርት የተማሪዎችን ማጣጣም ይገባል።					
3	ትምህርት ቤቱ ሥርዓተ ትምህርቱን ተደራሽ በማድረግ የተማሪዎች ስኬት ጨምሯል።					
4	የመምህራኑ የማስተማሪያ ዘዴ ስርዓተ ትምህርት ተደራሽ በመደረግ የተማሪዎች ውጤት ጨምሯል።					
5	ስርአተ ትምህርት ተደራሽ እንዲሆን በመደረግ ልዩ ፍላጎት ያላቸው ተማሪዎች የክፍል ተሳትፎ ጨምሯል።					
6	የማስተማሪያ ዘዴ ተደራሽ እንዲሆን በመደረግ ልዩ ፍላጎት ያላቸው ተማሪዎች የክፍል ተሳትፎ ጨምሯል።					
7	ስርዓተ ትምህርቱ የተጣጣመ በመሆኑ የተማሪዎቹን ተሳትፎ አሳጓል።					
8	ትምህርት ቤቱ ስርዓተ ትምህርት ለማጣጣም ቴክኖሎጂ ይጠቀማል።					

ተጨማሪ ሃሳብ ካለዎት፣ እባክዎን እዚህ ላይ ያመልክቱ _____

_____ በዚህ ጥናት ጊዜያችሁንና

ትብብራችሁን ስለፈቀዳችሁ በጣም አመሰግናለሁ!