

**ACADEMIC CHALLENGES AND SUPPORT PROVISION OF  
STUDENTS WITH VISUAL IMPAIRMENT IN HIGHER EDUCATION  
INSTITUTION: THE CASE OF HARAMAYA UNIVERSITY**

**MA THESIS**

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**Academic Challenges and Support Provision of Students with Visual  
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## **DEDICATION**

I dedicated this thesis to my beloved Mother Sake Haro who passed in 2019 when I was starting my MA 2<sup>nd</sup> year and my Father LibanDabasa who educated me to this level while they themselves remain illiterate.

## **STATEMENT OF THE AUTHOR**

This is to certify that, this thesis is my own work and that all sources of materials used for this thesis have been duly acknowledged. This thesis has been submitted in partial fulfillment of the requirements for M.A. degree at the Haramaya University and is deposited at the University Library to be made available to borrowers under rules of the Library. I solemnly declare that this thesis is not submitted to any other institution anywhere for the award of any academic degree, diploma or certificate.

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## **BIOGRAPHICAL SKETCH**

The author was born in Oromia Region, Yabelo Woreda on January 22, 1986 E.C. He attended Elementary school at Darito Primary School and Secondary School Education at Yabelo Secondary School. Then he joined Haramaya University with regular Program in 2008 E.C and graduated with BA degree in Special Needs and Inclusive Education. Soon after, he joined again Haramaya University for postgraduate studies in 2011 E.C. to pursue his M.A. Degree in Special Needs and Inclusive Education.

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## ABSTRACT

### **Academic Challenges and Support Provision of Students with Visual Impairment in Higher Education Institution: The Case of Haramaya University** **ButeLibanDabasa**

*The Purpose of this study was to investigate academic challenges and support provision of students with visual impairments in higher education institution at Haramaya University. The researcher used explanatory sequential mixed method design. The study was carried out in Haramaya University at the three colleges including college of Social Sciences and Humanities, Law, and College of Education and Behavioral Science that students with visual impairment join in. The target population was 116 respondents who included head of department, lecturers, experts of special needs education, learners with visual impairments and sighted learners. A sample size of 72 respondents was obtained through the use of purposive sampling, simple random sampling and available sampling. Questionnaires, interview and observation guides were used to collect data. Data collected was analyzed using descriptive statistics. Findings show that around 80% of respondents confirmed that the method of teaching was not flexible, because of lack of training teachers on SNE. Learning resources were not well equipped in lab, library as well as classes to meet the needs of students with visual impairment. The University should promote lecturers training and providing support to students with VI.*

**Keywords:** *Academic Challenges, Support Provision, Students with Visual Impairment*

## **ACRONYMS AND ABBREVIATIONS**

HEI	Higher Education Institution
ICT	Information Communication Technology
IDEA	Individual Disability Education Act
IT	Information Technology
MoE	Ministry of education
QAA	Quality Assurance Agency
SNIE	Special Needs and Inclusive Education
UN	United Nations
UNICEF	United Nations International Children's Emergency Fund
UNESCO	United Nations Educational, Scientific and Cultural Organization
VI	Visual Impairment
WHO	World Health Organization

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# 1. INTRODUCTION

## 1.1. Background of the Study

According to the World Health Organization (WHO, 2010) over 40 million people in the world are blind and over 120 million people have significant low vision conditions that cannot be corrected, cured or treated by conventional refraction, medicine or surgery. This number is expected to double by the year 2020 (WHO, 2010). As the figure of the case of people with visual impairment, continents like Africa and Asia and corresponding countries in the continents are believed to constitute the bigger share. In this regard, the document from the World Health Organization report (2010) states that Ethiopia has one of the highest rates of people with visual impairment prevalence in the world, with more than 1.2 million people who are totally blind and an estimated more than 5 million people suffering from low vision.

Vision provides a wealth of context for learning and interpreting information as well as it plays an important role in the day to day activities. Vision impairment often leads to a lack of context and delay the development of cognitive skills (Gothwal, Lovie-Kitchin, and Nutheti, 2003). In addition to this, children with limited vision, have fewer opportunities to explore their world. Usually, people with visual impairments are routinely faced with significant challenges in their daily lives such as recognizing objects and people, mobility, reading difficulties, effective socialization and taking care of their daily living skills.

The combination of all these factors has an impact on the functioning and learning potential of students with visual impairment. Therefore, unless these challenges are ameliorated through education-based interventions, the outcome of the child's education will be at risk. IDEA (2004) as cited in Vaughn, Bos, and Schumm (2011) also stated that visual impairment adversely affects the student's educational performance.

The direct comparisons between the academic achievement of students with visual impairment and sighted students are questionable, because the two groups need different learning styles. For example, there are Braille and large type forms of some achievement tests for students with visual impairment. But because reading Braille is an essentially slower process than

reading print, students with visual impairment are usually allowed to take a long time on the tests. According to Taylor and Sternberg (Cited in Tirussew, 2000), with the exception of unique problems of visual input and if possible greater demand in processing addressed, the fundamental learning procedures of students with visual impairment do not differ from those of the sighted children.

However, students with visually impaired requires specific learning styles to understand the concept academic development. These learning styles include Braille reading, writing, listening skills, keyboarding and environmental accessibility/indoor and outdoor arrangement are required for students with visual impairment. At present time, blind students are assigned to learn together with the sighted students starting from elementary to higher education. But, this integrated system without understanding learning styles of students with visual impairment has its own shortcomings.

According to the United Nations Conventions on the Rights of Persons with Disabilities, all governments are currently required to ensure the rights and equal opportunities of peoples with impairments through the collaborative efforts of policymakers, practitioners, people with impairments and their associations (Mji, MacLachlan, Melling- Williams & Gcaza, (2009). However giving opportunity to learn is not enough because students with visual impairment are requiring more emphasis from various stakeholders. As the role of teacher education is vital for higher education institutions (HEIs) to ensure equal opportunities for learners with diverse needs (Opertti, Brady & Duncombe, 2009; Quality Assurance Agency (QAA), 2010), all University staff need extensive training in inclusive education (Sapon-Shevin, 2007). Students with visual impairment need various learning styles, so the Ethiopian Ministry of Education should be requires trainable teachers for students with VI that have a good understanding about the issue of students with VI by incorporating introductory courses in special needs education in the regular teacher training programs as ( MoE 2006).

The document of the United Nations Standard Rules on the Equalization of Opportunities for People with Disabilities generally mentions that "provision should be made to assist people with impairments with issues such as awareness-raising, support services, access to the physical environment, information, equal tertiary educational opportunities, employment, social security and income maintenance, culture, recreation and sports (UN, 1994)". Attention

should pay to these issues in the present study in the examination of the Challenges of students with VI at Haramaya University.

## **1.2. Statement of the Problem**

A report by United Nations International Children's Emergency Fund (UNICEF, 2007) indicates that in Africa children with disabilities and their families constantly face social, political and economic barriers that adversely affect their development and prevent them from being included in society and enjoying their basic right to education to the fullest. As a consequence, the strengths and abilities of children with disabilities are unnoticed, their potential is underestimated, and their needs are given low priority in allocating resources.

Among these students with visual impairment are more likely to have several series of academic challenges, for instance, due to frequent change of curriculum, environmental accessibility/indoor and outdoor arrangement, teaching/learning materials, especially production of Braille books, and book in format are not available.

. Because knowledge and attitude about students with visual impairment varies according to our educational background and socio economic situation of the country, in Ethiopia, there is a general tendency to think of persons with disabilities as weak, hopeless, dependent and unable to learn and the subject of charity (Tirusew, 2005).

Even though there are some studies on areas related to problems of students with visual impairment such as; Anto,(June, 2004) conducted research on the educational challenges of "integrated" blind students: the case of Soddo Comprehensive High School to finding the views of participating students with visual impairment, their sighted peers and teachers regarding to integration of students with visual impairment into regular classrooms. For various reasons the teachers respectively support the integration or the students into regular classes for the enhancing academic and psychosocial development of the students with visual impairment.

Moreover, Teferi (2016) conducted study on the inclusion of students with visual impairment at Addis Ababa University, Ethiopia: challenges and prospects. Finding from his study revealed that since inclusive education was introduced in Ethiopia as a mandatory approach only in 2006, it is still in its infancy stage, especially in higher education institutions. As a

result, students with VI are currently learning and living in these institutions with little or no support from decision-makers and practitioners, because there are no well-organized support systems in place. This, in turn, causes a variety of challenging situations to students with VI for them to be successful in their higher education studies. The typical strategies that have been applied in Ethiopian higher education institutions to address the issues of inclusion were merely undertaking conventional researches about the exploration of causes and types of challenges and their possible solutions. It was apparent that the existing understanding and reaction of the university staff members towards the inclusion of students with VI was informed by the philosophy of the medical model rather than the social model of disability. As the staffs lack awareness on how to apply the principles of the social model of disability and its associated theories, they felt the cause of the students' problems is their visual impairment or incapability instead of making the necessary changes to accommodate such students.

Teferi (2016) recommended that it is essential to focus on the importance of training staff members from a social model of disability perspective. If this is not done, too many students will not realize their God-given potential. He more focused on training of staff members reduce inclusive challenges, but this researcher more focus on support provision in addition to flexible method of teaching to improve academic challenges of students with visual impairment. The poor performance for students with visual impairments despite the fact that they were educated with their sighted peers prompted the researcher to investigate the prevailing problems that hamper them from performing to their optimal academic potential.

As it was discussed above, there are some researches that are related to problems of students with visual impairment. However, no one has emphasized specifically, on the academic challenges of students with VI in higher education institutions rather educational challenges of students with VI. Therefore, this study focuses on exploring existing academic challenges of students with VI at Haramaya University. Taking this into account, the researcher formulated the following research questions for this study.

### **1.3 Research Questions**

1. What are some of the major academic challenges of students with VI at Haramaya University?
2. What kind of support is being provided to students with VI?
3. To what extent responsible stakeholders are working together in providing support to overcome the academic challenges of students with VI?

### **1.4 Objectives of the Study**

#### **1.4.1. General Objective**

The general objective of the study is to find out the academic challenges and support provision of students with visual impairment in higher educational institution specifically at Haramaya University.

#### **1.4.2. Specific Objectives**

1. To investigate the academic challenges of students with visual impairment in Haramaya University
2. To identify the kinds of support being provided for students with VI
3. To examine the extent to which responsible stakeholders are working in collaboration to overcome the academic challenges of students with VI by providing necessary support.

### **1.5. Significance of the Study**

The researcher of this study believes that the research findings may help different stakeholders of Haramaya University such as; teachers, parents and staff members to identify the major factors that affect the well-being of students with visual impairment. To identify their technical support and take timely corrective actions with their combined effort; to take the required measures that might solve the challenges and scaling up the best practices to other areas. The

research might enable institution to make rational decisions for their future planning. The research could also help other researchers undertake wide-scale research in other dimensions of this challenge.

In otherwise the result of this study regarding these challenges facing students with visual impairment is hoped to have the following significance. Planning better ways of assisting students with visual impairment through providing them with the required services and/or support like training. It may help policymakers to look into the condition of visual impairment. Together with these, the study may give an insight for other interested researchers in the area and hence, serves as a springboard for other similar studies.

## **1.6. Scope of the Study**

The study was delimited to the academic challenges and support provision of students with visual impairment. In Haramaya University there are 11 collages students with visual impairment join in three colleges, including college of Social Sciences and Humanities, Law, and College of Education and Behavioral Science. Therefore, the study was focused only on these three collages. Besides, there were several stakeholders involved in the academic performance of students with visual impairment; the study was comprised of only students with visual impairment, class representatives, teachers, and department heads. Finally, in terms of time, the study investigate the academic challenges(curriculum/teaching and learning methodology)and support provision including (flexible method of teaching, assistive technologies (e, g Braille , tape recorder, print magnification tool etc), environmental accessibility/indoor and outdoor arrangement) for students with VI who attended Haramaya University starting from (2016).

## **1.7. Definition of key Terms**

**Academic challenges:**In this study Academic challenge refers to the problems or obstacles that hinder academic achievements of students with visual impairment which include challenges related to curriculum/teaching and learning methodology.

**Challenges-** refer to disabling conditions, such as barriers and constraints that restrict the full participation and inclusion of students with VI in all aspects of university life and education (MoE, 2006).

**Students with Visual Impairment (VI);** refer to those students who are legally blind or who use Braille and other non-visual sources for their education (Akbar, 2008).

**Support Provision:**in this research refers to the available providing support for students with visual impairment after identifying their problems to improve the academic challenges those learners that including; flexible method of teaching, assistive technologies (e, g Braille , tape recorder, print magnification tool etc), environmental accessibility/indoor and outdoor arrangement.

**Visual Impairment:**in this study refers to bothan individual who partially sighted and totally blind.

## **2. LITERATURE REVIEW**

### **2.1. The Concept of Visual impairment**

In this study, the term visual impairment refers to total blindness or difficulty to see things and events in the immediate environment. It refers to the loss of vision, even when a person makes use of corrective lenses. Visual impairments are the reduced vision it may be caused by eye diseases, accidents or eye conditions present from birth. Thus, the term students with visual impairment refers to those who are totally blind and cannot see what is happening in the environment they are in, even with the help of specialized devices. Students with VI are those who use their non-visual senses rather than their visual senses in order to learn (Akbar, 2008). Learners with visual impairments are the heterogeneous group with varied nature of problems and difficulties that require appropriate attention in the implementation of curriculum and instructional systems in order to perform well academically.

### **2.2. Academic Challenges of Students with Visual Impairment**

The students in higher education institutions can be influenced by many challenges or problems as a result of visual impairments and these are unfavorably affecting their academic performance. The challenges or barriers of learners can be explained simply in terms of the features of the education system itself; these barriers include unresponsive policies, badly designed curricula, inappropriate methods of instruction and assessment, poorly trained teachers, as well as inaccessible physical environments or facilities (Peters, 2007).

As Jacklinet *al.*, (2007) found, the absence of formal and informal academic support structures at the University of Sussex in the United Kingdom is experienced as a potential challenge to learners with impairments. Their study also found that students with impairments themselves reported that the absence of academic support structures is a substantial challenge which affected their social and learning performance. It is the researcher's belief that inaccessibility of information in alternative formats and a lack of formal and informal support systems are the most likely challenges to students with VI at the university under investigation.

Integration has become a critical part of the reform effort to improve the delivery of services to students with disabilities by focusing on the placement of these students in general education classes. Public schools have an obligation to provide free education in the least restrictive environment possible to all children who have diagnosed conditions of exceptionality, (UNESCO, 2005). According to Wray (2002) Students with VI experience educational barriers owing to the absence of curricular materials and hand-outs in accessible formats; especially materials printed in Braille or voice recorded on mobile devices (Sygall and Scheib, 2005).

### **2.3. Support Provision for Students with Visual Impairment**

#### **2.3.1. Institutional support**

Most higher education institutions employ specialist colleagues to provide disability services to students (Gardiner & Anwar, 2001). A local Disability Officer, or an Equal Opportunities Officer, will be able to provide on-campus information and advice of a general nature, and may also have resources that can be channeled into more specialist study activities relating to support provision for students with VI. A useful starting point is, therefore, to make contact with those involved, and explore with them how they can help plan and execute the students work. In particular, they may be able to advise on, and maybe help undertake, the education audit (Gardiner& Anwar, 2001). But the institutional support network is not just about helping staff to help students, it is also there (primarily) to help the students themselves.

##### **2.3.1.1. Flexible methods of teaching**

Perhaps the most effective mindset for staff to adopt when dealing with visually impaired students is that of flexibility (Shaw, 2000). Individual staff, departments and institutions all need to be able to act flexibly to attract and support the visually impaired student. This flexibility might include: Attendance requirements, Availability of programme in various study modes (e.g. full-time, part-time, open learning mode, online),Choice of modules and/or study elements,Extensions to assessment due dates, Scope for transfer to alternative programmes. Naturally, the issue of flexibility has to be considered in relation to the needs of sighted students – and this raises the over-arching issue of equity of treatment.

### **2.3.2 Equipment ownership and provision**

Some students with visual impairment, particularly those who may have been suffering from visual impairment from an early age, already owned the kind of aids they need to complete education effectively, and will also have developed preferred ways of working, (Hall, Harrison & Healey 2001). However, others may have only a rudimentary grasp of the aids available, may own few items of specialist equipment, and may still be seeking guidance on the best way to study, particularly in relation to their academic achievement. In both cases, it is important to take the trouble to find out what equipment is already owned, and what preferred styles of teaching may have been adopted.

For the experienced students, very little advice or support may be needed, but for the recently impaired student, there may be a lot that the teacher can do to inform, guide and advise them in their choice of support aids (Hall Harrison & Healey 2001). Among the items of equipment commonly owned by students with visual impairment are:

- Portable Braille embosser, Tape recorder, Print magnification tool
- Laptop computer, with speech or large print output, Scanner and optical character recognition software (for input of printed text to computer).

### **2.3.3. General resources and assistive devices**

Students with visual impairment have for many years made use of various kinds of aid to help them in their studies (Loomis, Golledge, & Klatzky, 1998). Among the more popular are the following:

Environment accessibility-is the environmental arrangement or removing obstacles, it is used to easily movement of many person with disability, particular for students with visual impairment. Long cane widely used by total blind people to navigate the outdoors environment. Its main drawbacks are that users are unable to maintain a straight travel path without some form of external feedback, and cannot normally detect hazards. Large print Valuable for anyone with reduced vision or poor visual acuity. Most libraries stock large print versions of popular titles, but more specialist material has to be specifically converted into the format. It is relatively easy for students to produce large print versions from original digital sources. Audiotape Useful supplement to note-taking in lectures, seminars, guest presentations and interviews. Peer note-taking particularly useful in field situations where the students with visual impairment are attending to other tasks, such as interviewing.

### **2.3.3.1. Assistive technologies**

A wide range of products have been developed for the blind that are referred to variously as 'adaptive' or 'assistive' technologies, (Williams, G. J. 1998). These include traditional devices (e.g. long cane, magnifying glass, portable Braille typewriter, hand-held video camera, talking calculator/clock/dictionary/measuring device, cassette recorder and large-print books and raised-line drawings), as well as more recent technology associated with the computer (e.g. Braille keycaps, Braille embosser, Braille display, screen reader, screen magnifier, speech synthesizer, text-to-speech software, scanner and electronic travel aid, personal navigation assistant and laptop/portable computer).

## **2.4. Higher Education's Requirements for Students with Visual Impairment**

Students with VI are as a grouping of persons with disabilities, they have the right to access equitable and quality education in higher institution through inclusive approaches. The higher education institutions are currently required to adopt the rules and regulations set out both internationally and locally (Peters, 2007) to meet the needs of students with VI. The most important thing here is that higher education institutions should determine the fundamental requirements that will contribute towards the perceptions of people's rights and entitlements of students with VI (Powell, 2003). To this effect, several writers describe diverse requirements that need to be achieved by higher education institutions when they deal with the inclusion of students with VI.

### **2.4.1. Academic Requirements**

As discussed above academic is the interest of students in their learning to obtain wide knowledge. Education in higher institution requires the consideration of academic variables that seem by useful inclusive practices (Meijer, 2001). There are several academic requirements that university staff need to take into account when working with students with VI (Powell, 2003). One of the fundamental requirements for widening participation in higher education institutions is the designing of inclusive programs with academic guidance and support (Powney, 2002).

### **2.4.2. Staffing Requirements**

Salisbury (2008) suggests that support staff, such as disability support workers, teaching assistants and teachers qualified to assist students with VI, should be available at higher education institutions to provide students with impairments and their lecturers with effective support in every aspect of higher education. In particular, it is essential for higher education institutions to employ specialist staff to provide students with VI with disability-related services (Shepherd, 2001). For example, there should be either a disability officer or an equal opportunity officer to provide on campus information, general advice and resources that students with VI need (Shepherd, 2001). In addition to university-wide support structures being made available, course leaders should actively involve staff with VI or staff members with experience of visual impairment as members of teams or as advisers about programs (Powney, 2002). In addition, student counsellors and peer tutors who can provide students with VI with important services should be available (Powney, 2002).

### **2.4.3. Curricular Requirements**

The other needed for higher education institution is dealing with curricula to suit the diverse needs of learners with visual impairments (Sapon-Shevin, 2007). According to the Salamanca Framework, curricula should be adapted to learners' needs rather than vice-versa (UNESCO, 2005). Such adaptation of a curriculum requires the analysis of what higher education institutions offer to their students and what expectations they have of students with impairments (Powell, 2003). In particular, higher education institutions are expected to focus on curricular adaptations and modifications (Jacklin et al., 2007) that should include admission requirements, course selection. Alternatively, curriculum differentiation could refer to an alternative way in which the curriculum is delivered (Ashman, 2010). Thus curriculum differentiation can be achieved by making changes to the learning environment, the content, the process or methods of teaching and learning as well as the human and material assistance needed (McCarthy & Hurst, 2001). Both curriculum adaptations and curriculum differentiation are relevant to this study.

#### **2.4.4. Instructional Requirements**

The student-centred pedagogy recommended by the Salamanca Framework is a proven principle that can benefit all learners, avoid the waste of resources, and reduce the attrition rate at higher education institutions (UNESCO, 2005). It has been seen in practice that students with VI require more instruction time and a wide range of instructional adaptations to address their unique learning needs (Meijer, 2001). For example, instruction in the academic core curriculum might require additional time beyond that allocated in the normal academic day and year (Clayton et-al, 2010). Therefore, plans to provide extended instructional time and other instructional and program modifications need to be in place to meet all identified needs of students with VI so that they are able reach the same levels of performance as sighted students (Clayton et al., 2010).

### **2.5. Possible Overcomes to Reduce Academic Challenges of Students with VI**

#### **2.5.1. Providing Support Services to Students with Visual Impairment**

It is clear that strengthening support services will enable inclusive education in HEIs to reduce barriers of learners with VI at all levels and is imperative in meeting the unique needs of students with VI (Department of Education, 2001). The types of support that should be considered are, academic (e.g., access to information and tutorial support), emotional (e.g., commitment from family and partners, or co-operation with fellow students), and practical (e.g., help with academic tasks, housework, space to study, facilities, time and comfortable working arrangements) (McNicol&Nankivell, 2001: Moreland &Carnwell, 2000). In this regard, Avramidis and Skidmore (2004) include the provision of a physical working environment (e.g., buildings), learning resources (e.g., adaptive materials), working arrangements (e.g., time for study) and technical support of IT technicians as important types of support. As far as academic support is concerned, both formal and informal support structures, including personal tutor support, support from lecturers in departments and teaching assistants, should be provided to students with VI (Jacklin et al., 2007). Peer tutoring programs are also an easy and effective form of support (Meijer, 2001).

### **2.5.1. Modifying or Adapting the Curriculum**

It is reasonable to suggest that curricula should be flexible enough to accommodate different learning needs and styles (Department of Education, 2001). Flexible curricula that are accessible to all learners, irrespective of the nature of their learning style, should be central to any attempts to accommodate diversity at HEIs (Ashman, 2010). Hence, curricula need to be adapted to remove the barriers faced by learners with VI and to ensure their full inclusion (Ashman, 2010; UNESCO, 2010). To this effect, HEIs should consider the needs of students with VI when designing the curricula of various programs (Powell, 2003). As assistive technology and devices have been shown to help to minimize barriers for students with VI studying visual fields of specialization (Murr& Blanchard, 2011), HEIs should allow defines students to join departments of their choice by adapting the content and delivery style of the subjects (Smith, 2002).

### **2.5.2. Adapting the Instructional Methodologies**

It has become very important to allow students with VI to take advantage of choices available in terms of instructional strategies or multiple methods and tools for inclusive learning (D'Andrea, 2012). Co-operative teaching (team teaching), co-operative learning (peer tutoring), individual planning, collaborative problem-solving and flexible instruction are the five approaches used in effective inclusive education (Meijer, 2001). In keeping with these propositions, Ashman (2010) advises HEIs to consider innovative instructional approaches like co-teaching and peer-mediated learning, in order to remove the barriers that students with VI face.

## **2.6. Legal Policy and Frameworks to Improving the Academic Challenges of Students with VI**

With the aim of meeting the rights and entitlements of people with impairments and others, the United Nations member countries, including Ethiopia, have developed several international and national laws or conventions. The international conventions, in particular,

provide legal frameworks to understand and interpret the practical actions of UN member countries when dealing with disability-related issues (Peters, 2007).

### **2.6.1. International Laws**

The international conventions formulated during the 1990s demonstrated considerable advances in legal support for students with VI, in terms of their educational needs (Shepherd, 2001). Those frameworks, the 1993 United Nations Standard Rules on the Equalization of Opportunities for Persons with Disabilities and the 1994 Salamanca Statement and Framework for Action on Special Needs Education have been used as basic sources to formulate local policies and legislation in Ethiopia and other UN member countries for the protection of the rights of people with impairments and to ensure their educational and social inclusion at all levels of education. The 1993 United Nations Standard Rules on the Equalization of Opportunities for People with Disabilities especially contributes significantly to mobilize resources to all people with impairments (United Nations, 2007).

Peters (2007) states the United Nations Standard Rules represent a definite move towards a social model of inclusive education, especially with respect to Rule 6 on the provision of equal education at all levels.” The purpose of this rule is to ensure that people with impairments are allowed to exercise the same rights and obligations as others. This rule also serves as an instrument for policy-making and actions to remove the barriers that prevent people with impairments from exercising their rights, as well as having full participation in the activities of their societies and organizations (UN, 2007).

### **2.6.2. National Laws**

The introduction of the United Nations Convention on the Rights of Persons with Disabilities offers new opportunities particularly to African countries to reconsider their domestic legal laws relating to disability rights (Reenenand Combrinck, 2011). For example, Ethiopia is one of the developing countries that endorsed and adopted the 1993 United Nations Standard Rules (Reenen and Combrinck, 2011) pertaining to the rights of people with impairments in its national constitution, as well as other legal frameworks such as the Education Policy and Special Needs Education Strategy. The Ethiopian constitution was created in 1995 to provide

legal frameworks for ensuring the overall rights and entitlements of its entire people (the Federal Democratic Republic of Ethiopia, 1995).

The federal-level strategy shows the direction for providing access to inclusive education to all learners by identifying and removing existing barriers at all levels of schooling and higher education (MoE, 2006). As a result, HEIs are expected to establish resource centers that support students with VI and their lecturers, and that provide students with Braille literature, reading and writing tools, and training on ICT applications (MoE, 2006).

### **2.6.3. Legal Policy**

In most UN member countries, including Ethiopia, the inclusion of people with impairments is usually considered to be a policy issue (Economic Commission for Africa 2009). As policy frames the way we think and act, it should be in place in order to shape the responses of higher education institutions towards the inclusion of students with impairments (Nguyen, 2010). As stated in the Salamanca Framework, educational policies should take into account both individual differences and contextual situations. In this regard, higher education institutions can act as a catalyst for change in promoting the rights and equality of students with impairments (ECA, 2009; UNESCO, 2005).

National as well as institutional policies or legislation should recognize the principle of equal opportunities for people with impairments in higher education (UNESCO, 2004). These policies should look at special provisions for students with impairments in terms of the nature of their impairment and gender (Daniels, 2001).

Specifically, higher education institutions are responsible for creating and enforcing enabling policies so as to ensure equal opportunities for students with impairments, including students with VI (UNESCO; 2010). These policies should be publicized widely and also be made available in a range of formats that suit students with VI (McCarthy & Hurst, 2001; Powell, 2003). By the same token, Haramaya University has an obligation to achieve the policy-related requirements for addressing the special needs of students with VI as discussed above.

In conclusion, both the theoretical principles and legal frameworks discussed above have been used as the foundation to identify the prevailing challenges and intervention strategies that

should be adopted by universities in order to ensure the rights and full inclusion of students with VI. If Haramaya University and other HEIs do not respond properly to meet those requirements that are enshrined in international and local legal documents, those students will be challenged.

#### **2.6.4. Theoretical framework**

The study was based on social model of disability, as discussed by Rieser (2002). This model encourages the society to view the issue of persons with disabilities, including person with visual impairment, from a human right and equality perspective rather than a focus on the persons with disabilities from participating in any situation as what handicaps them (Oliver & Barnes, 1998). People with disabilities are often made to feel that it is their own fault that they are different. Impairments do not make them less human beings. This is emphasized well by the social model. The People with disabilities movement believe that cure to the problem of disability lies in the restructuring of the society, and not focusing on the individual's impairments.

In an academic setting, it is the universities responsibility to re-adjust in order to meet the needs of learners with visual impairments. In the social model, it is well emphasized that children with disabilities could experience difficulties in the education system. This could be due to extensive, demanding, rigid and inflexible curriculum, inaccessible university environment, lack of adequate resources. The university should not be seen as creating barriers to learning for the learners with special needs by failing to create an enabling and supportive environment for them. A more appropriate response is to understand the barriers to learning and work out systematically to alleviate them. This model first sees the strength of the child, rather than the disability. It advocates for the inclusion of all children, however "severe" the disability is in the mainstream education system (Diana, 2008).

This study therefore, uses the social model of disability for it supports the ideas of inclusive education and encourages the removal of barriers that hinder the learners with visual impairments from accessing quality higher education. The performance of students with visual impairments learning in Haramaya University may be highly affected by barriers highlighted in this model of disabilities and unless these barriers are removed, individual's academic performance of students with visual impairments may not be achieved.

## **2.7. Conceptual framework**

In this conceptual framework dependent variable is academic challenges of students with visual impairment; this variable could depend on independent variables such as challenges related to resource which include human resource (teachers & special need experts) & material resource including Braille book, Jaws, large print and so on. Challenges related to curriculum Method of teaching/ways of instructional delivery and also Challenges related to environmental accessibility which include both in the classroom (Class size) and out of the classroom, environment inaccessible to the movement of students with visual impairment. In this study, support provision might be available to overcome those challenges are flexible method of teaching, (e.g. Attendance requirements, availability of programme in various study modes (e.g. full-time, part-time, open learning mode, online), choice of modules and/or study elements), assistive technologies (e.g., Portable Braille embosser, Tape recorder, Print magnification tool, etc), environmental accessibility (indoor and outdoor arrangement) may improve the academic challenges of students with visual impairment.

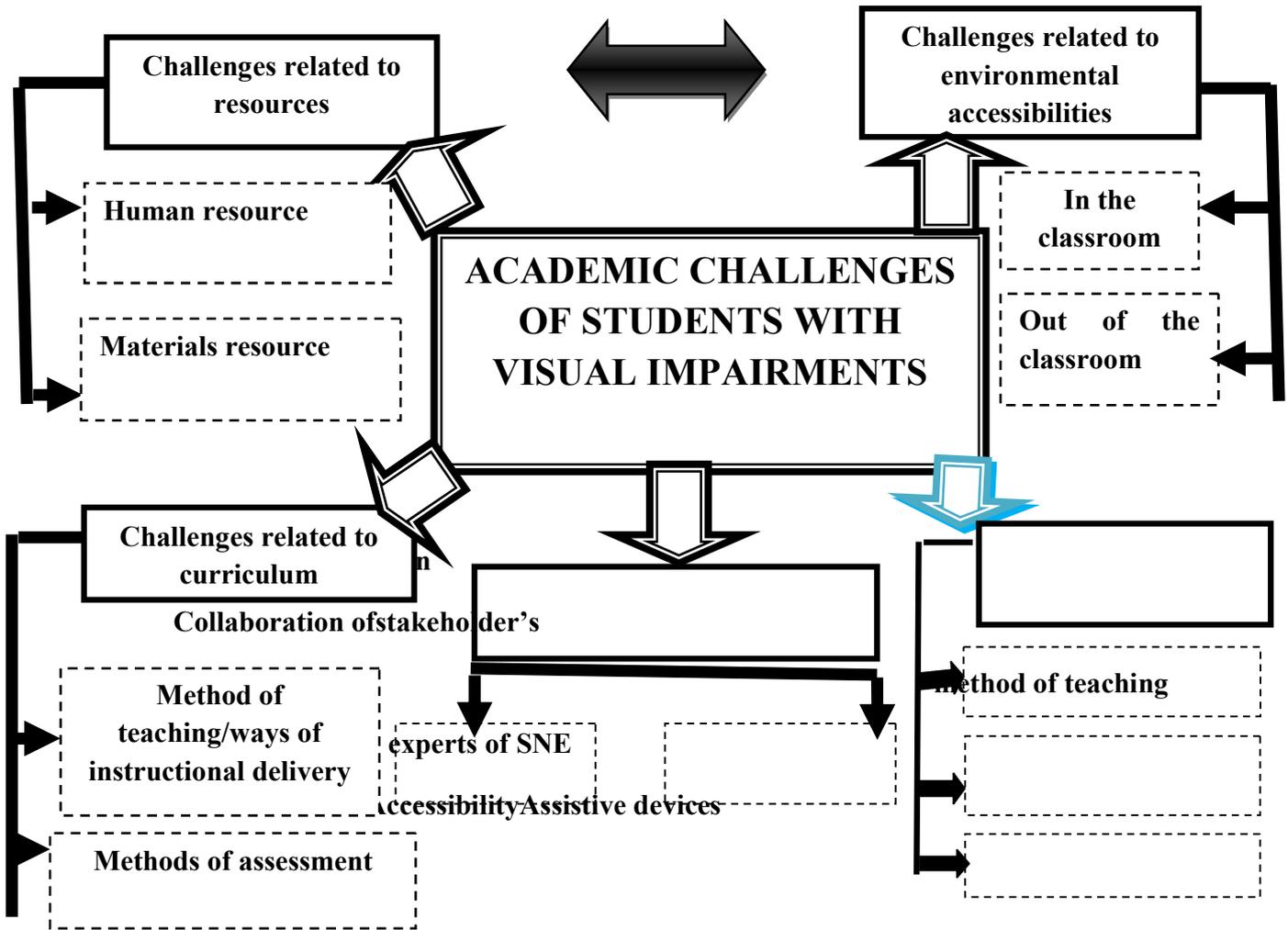


Figure 1 Conceptual Framework of the Study

### **3. RESEARCH DESIGN AND METHODOLOGY**

This chapter presents various issues related to the research methods that were employed and the rationale for using them in this study. The issues include research site, research design, sources of data, sampling procedures, data collection procedure and instruments, method of data analysis, and ethical considerations.

#### **3.1. Description of the study Area**

The area which has been chosen to conduct the study is Haramaya University which is located in East Hararghe zone, Oromia region in the direction of the east of Addis Ababa at 515 Km between Dire Dawa and Harar city. The reason that the researcher selected this area is that the researcher has lived for 5 years in the university and this was help him to get available information about the practice of this campus. This site is the main study area because the selected institution admits students with visual impairment only in three college including college of Law, college of Education and Behavioral Science and college of Social Science and Humanities and institution defines to using inclusive education in regular programs. Then, the researcher can get access to participants of the study.

#### **3.2. Research Design**

The major purpose of this study is going to be to assess the academic challenges and support provision of students with VI in higher education institution in general and in Hramaya University in particular. In order to meet this purpose, an explanatory sequential mixed method design was used. Because mixed method design defines as a ways to integrate the quantitative and qualitative data, which one database, could be used to check the accuracy (validity) of the other database,(Tashakkori and Teddlie, 2010).

The explanatory sequential mixed method design is a mixed research approach; pragmatist view of the research paradigm and it is a type of design in which quantitative data collected, analyzed and qualitative data are collected in follow up, analyzed separately, and then interpreted. The pragmatist researchers look to what and how to research based on the intended consequenceswhere they want to go with it. Mixed methods researchers need to

establish a purpose for their mixing, a rationale for the reasons why quantitative and qualitative data need to be mixed in the first place (Creswell, 2014).

This mixed methods study addressed the academic challenges and support provision for students with VI in HEI. For this purpose, the study was employing mixed research method where both qualitative and quantitative data gathering methods and analysis were used. The researcher employed the mixed research methods to expand a thorough understanding and to triangulate findings from different data sources which are gathered sequentially.

Creswell and Plano Clark (2011) stated that explanatory sequential mixed method design is one in which the researcher first conducts quantitative research, analyzes the results and then builds on the results to explain them in more detail with qualitative research. It is considered explanatory because the initial quantitative data results are explained further with the qualitative data. It is considered sequential because the initial quantitative phase is followed by the qualitative phase. This type of design is popular in fields with a strong quantitative orientation, but it presents challenges of identifying the quantitative results to further explore and the unequal sample sizes for each phase of the study.

In line with this, Creswell (2007) argued that, combining quantitative and qualitative methods in educational and social research is a better approach. Using both Quantitative and qualitative methods can capitalize on the strength of each approach and offset their different limitations. It could also provide more comprehensive and complete answers to the basic research questions, going beyond the limitations of a single approach.

## **2.6. Sources of Data**

The data sources that were employed for this specific investigation are both primary and secondary data including in this study.

### **2.6.1. Primary Sources**

Primary data for the study will be collected from selected students with visual impairment, teachers, and heads of departments, special needs experts and classroom representatives.

### **2.6.2. Secondary Sources**

Secondary data from formal sources such as, record offices, education experts, related literature and office workers from the study area were used as a source of information for issues under study.

### **2.7. Population, Sample Size and Sampling Techniques**

In Haramaya University there are 11 colleges including agriculture, natural and computational science, education and behavioral science, business and economics, veterinary medicine, computing and informatics, law, medical and health science, institutional technology, sport science and social science and humanities. Since from mentioned 11 colleges above, student with VI join in three colleges including college of Law, college of Education and Behavioral Science and college Social Science and Humanities, these three colleges were involved in this study through applying the purposive sampling technique. Besides, in three purposively selected colleges (Law, Education and Behavioral Science and Social Science and Humanities) there are 12 departments. Among these, only four departments (including SNIE, Law, Afan Oromo and Gender) were involved in this study through purposive sampling technique due to the fact that maximum number of learner with VI are studying in these departments. The study was focus more specifically on 2<sup>nd</sup> years and 3<sup>rd</sup> year's classes by indicating their experiences more than fresh students.

On the other hand, there are 116 number of population which involves 74 students with visual impairment including 44 total blind and 30 low vision and also 51 male and 23 female students, again 20 teachers and 4 department heads from four departments, 16 class representatives and 2 experts from gender, HIV/AIDS and special needs directorate.

Besides to this, for a questionnaire, 42 students with visual impairment which means 32 males and 10 females were selected through using simple randomly method and 16 class representatives' students were included in this study through purposive sampling technique. Besides, for interview, all 4 department heads, 8 teachers, and 2 experts working in gender, HIV/AIDS and special needs office through purposive sampling technique was selected. Overall,

14 informants for interview and 58 informants for questionnaire were included in this study. In total 72 respondents were selected as the sample.

**Table 1: Target population, sample and sampling technique**

Respondents	Target Populations	Samples	Sampling Technique
Students with VI	74	42	stratified sampling technique
Class representatives	16	16	Purposive sampling technique
Department Heads	4	4	Purposive sampling technique
Experts from gender issue office	2	2	Purposive sampling technique
Instructors	20	8	Purposive sampling
Total	139	72	

**Table 2. Target population from each department**

Departments	No of Students with VI	Class representatives	Total no of instructors
SNIE	17	4	9
Law	9	4	8
Afan Oromo	10	4	7
Gender	6	4	7
Fresh and other departments	32		
Total	74	16	31

### 3.4. Data Gathering Instruments

In this study, the researcher has been using both close-ended and open-ended questionnaire, observation and interview.

### **3.4.1. Questionnaire**

The Questionnaire was addressing the main factors which have a direct implication on academic challenges and support provision of students with visual impairment. Major themes that were included are curriculum, scheduling and assessment aspect, teaching and learning methodology and material they are using. Hence, in this research, questionnaire was distributed amongst the 58 respondents which include (42 students with visual impairment and 16 class representatives). The questionnaire was attempted to obtain the data from students with visual impairment and their class representatives at Haramaya University. It was organized in three parts. The first part incorporates personal information of the respondents which could include sex, age, departments, year level, age of onset of disability and severity of disability. The second part of the questionnaire was include fixed response rating by using likert scale that requires the respondents to indicate their degree of agreement or disagreement with set of statements dealing with the aforementioned issues. The items in the questionnaire were designed to be rated on a five-point likert scale type (strongly agree, agree, undecided, disagree and strongly disagree). Respondents were asked to place tick (✓) mark on the space to show their level of agreement with each statement. The third part of questionnaire was formulated as an open-ended form so as to capture respondents' views and opinions on the challenges faced in academics and their suggestions.

### **3.4.2. Interview**

Interview is a verbal form of data gathering instrument. It is a form of verbal questioning and is on define important means of data gathering tool. It is one of the most accepted techniques in the research Robson (1993); the research uses unstructured interviews to collect more detailed information about the topic. Hence, in this research, interview was conducted with the 14 respondents which would include (4 department heads, 8 teachers and 2 experts from gender, HIV/AIDS and special needs directorate). For the interview, questions that would examine working in collaboration with responsible stakeholders to overcome the academic challenges of students with VI were prepared by a researcher. The interview was conducted in two various time with locally appropriate language including English and Afan Oromo based on the interest of interviewees and documented by an audiotape recorder.

### **3.4.3. Observation**

Observation of the real condition is very important in the study in order to validate information obtained from other data collection instruments and for the aim of cross checking the responses with the existing source. Therefore, an appropriate observation checklist was prepared in the classroom and class environment in order to see issues like method of teaching, available materials students with VI are using, accessibility of class environment including road and toilet. The purpose of this observation is to identify the academic challenges of students with visual impairment in the teaching/learning styles, materials support provision and environmental in accessibility. The observation sessions has been held in two various times and more covert observation were conducted.

### **3.5. Validity and reliability**

Validity was conduct to which empirical evidences and theoretical rationales support the adequacy and appropriateness of interpretations and actions based on test scores. The instruments for data collection were initially developed based on the qualitative result of the current study and review of related literature in order to achieve its validity in securing relevant information for the study. The instruments were prepared in the English language. Then, it was shown to the advisor in order to comment on their appropriateness to gather relevant information for the research. Certain modifications and amendments were made based on the comments obtained from the advisor. After this, the questionnaires were translated into Afan Oromo.

Reliability was conduct to which a test is free from measurement errors, since the more measurement errors occur the less reliable the test. According to Kumar (2005) a research instrument is reliable if repeated measurements under similar conditions give the same results. In order to check the reliability of the instruments the six questions from the questionnaires were modified and two new questions were added. After making the necessary modifications, the instruments were retyped and administered.

### **3.6. Data Collection Procedure**

Before collecting the data, the researcher has explained his mission and the purpose of the research to respondents of the study. After permission is secured, the researcher with the

respondents were arranged the time and place to collect the necessary data from them. Participants were informed about the objective of the study and will be asked to participate as scheduled.

The main data gathering tools for this study were a questionnaire, interview guide; observation checklist which were developed by the researcher. Since this study employed explanatory mixed method design, the quantitative data was collected in the first phase. Accordingly questionnaire was distributed to 58 respondents and collected. After quantitative data collected and analyzed, the qualitative data was collected and analyzed. Accordingly, the interview was conducted with all 4 department heads, with teachers and experts from gender, HIV/AIDS and special needs directorate. The interview guide has been unstructured, accordingly, other important questions might be generated during the interview and leading questions are introduced ahead. Ample time was allowed to satisfactorily probing the issue. The recording of interviews on tape has been performed. Since it is convenient and obviates the necessity of writing during the interview, which may be distracting to both interviewer and subject (Best and Kahn 2006). Similarly, class observation will be made in this sample which means one period in each based on the preparation checklist.

### **3.7. Method of Data Analysis**

After the necessary data collected from primary and secondary sources by using different data collecting instruments like questionnaires, interview and observation, both quantitative and qualitative data analysis methods were employed. Since the study was conducted through explanatory sequential mixed-method design, the quantitative data was collected and analyzed first. Accordingly, the quantitative data were organized, tabulated, coded and the analysis were made using different statistical tools such as frequency count, and percentage. Thus frequency and percentage are used to analyze the various characteristics of the sample population such as sex, age, level of education and work experience. Besides, responses from questionnaire respondents were sorted out by using SPSS 20 (statistical packages for social science).

On the other hand, the qualitative data analysis method was employed for the information /data collected through interviews, observation, and open-ended questions were analyzed qualitatively using the direct words of participants whenever necessary. In doing so, analyses

were made systematically through elimination of personal bias that would affect the reflections and interpretations of the data. Accordingly, the audio-recorded interviews were transcribed manually. The relevant portion of the interview was transcribed and summarized since transcribing every word. Pertaining to observation, after the end of each session, the researcher kept detailed notes of direct observation based on the checklists as soon as possible. The researcher recorded the major activities, facilities, and general situation form a strong basis for analysis and interpretation of collected data. Generally, the data obtained through unstructured interview, and observation were presented and analyzed through qualitative methods. Themes and sub-themes have been generated with the progress of analysis.

### **3.8. Ethical Considerations**

In the process of the study, a number of measures were taken to observe basic ethical standards. Primarily, all of the respondents were provided with information regarding the objectives of the study and ethical issues during data collection. As target populations were persons with Visual Impairment, while raising the data collection instrument, as well as interviewing, survey respondents, necessary protection were taken to avoid the use of deprecating words. Each respondent was informed about the privacy of all information and his/her right to conclude if there is feeling of discomfort. Next, the provision of information totally depends on the willingness of the respondents and they would not be forced to give information they do not want to. Moreover, all the information obtained from the respondents was kept in secret. Thus any information which may affect personality and security of the respondents was not being included in relation to their names.

## **4. RESULT AND DISCUSSION**

### **4.1. Introduction**

The study investigated the academic challenges and support provision of students with visual impairment in higher education institution of the Haramaya University, in the three key areas addressed by the research objectives of the study. These were: to investigate the academic challenges of students with visual impairment in Haramaya University; to identify the kinds of support being provided for students with VI; and to examine the extent to which responsible stakeholders are working in collaboration to overcome the academic challenges of students with VI.

### **4.2. Demographic information**

This part presents demographic data collected from 42 students with Visual Impairment, 16 sighted students, 8 lectures and 4 head of department and 2 special need education experts. The demographic data were analyzed alongside with variables such age, gender, level and area of study, age of onset and severity level for students with visual impairments, working experience, training level and area of specialization for lecturers and other workers.

#### **4.2.1. Characteristics of students with visual impairments**

This part answers section A of the questionnaires which was used to gather demographics details of the participants of students. The demographic characteristics of respondents were discussed in terms of age, gender, year of study and area of study, age of onset and severity level of disability.

**Table 3. Demographic data for students with VI and class representatives**

Category		SWVI		CLR		Total	
		F	%	F	%	F	%
Sex	Male	32	76.2	8	50	40	68.9
	Female	10	23.8	8	50	18	31.1
	Total	42	100	16	100	58	100
Age	18-20 years	7	16.7	6	37.5	13	22.4
	21-25 years	33	78.6	9	56.3	42	72.4
	26-30 years	2	4.8	1	6.3	3	5.17
	Total	42	100	16	100	58	100
Department	SNIE	17	40.5	4	25	21	36.2
	Afan Oromo	10	23.8	4	25	14	24.1
	Gender Education	6	14.3	4	25	10	17.2
	Law	9	21.4	4	25	13	22.4
	Total	42	100	16	100	58	100
Year of study	2 <sup>nd</sup>	21	50.0	8	50	29	50
	3 <sup>rd</sup>	21	50.0	8	50	29	50
	Total	42	100	16	100	58	100
Onset time	Congenital	10	23.8	-	-	10	23.8
	Acquired	32	76.2	-	-	32	76.2
	Total	42	100	-	-	42	100
Severity level	low vision	11	26.2	-	-	11	26.2
	Total Blind	31	73.8	-	-	31	73.8
	Total	42	100	-	-	42	100

Regarding with demographic information of both students with and without VI, the above table 3 shows that the majority 32 (76.2%) of participants with visual impairment were males while, the remaining 10 (23.8%) of them were females. and also 8(50%) of learners without visual impairment were males and 8(50%) of them were females. Regarding with the age of respondents the above table indicated that, 7 (16.7%) of learners with visual impairment were between 18- 20 years old, those 33 (78.6%) of them were between 21-25 years while, those

26-30 years were 2 (4.8%) and 6 (37.5) of learners without visual impairment were between 18- 20 years old, while 9(56.3) of them between 21- 25 years and those 26-30 years were 1 (6.3%). This implies that the majority of learners with visual impairments in Haramaya University are between ages 21-25 years of age. A quite good number of them have passed the age of being in the university pursuing their first degree. The main reason is that most of them stayed for quite a long time at home after completion of the primary education. Some of them could have lost their sight when they were pursuing their secondary school education and needed lot of time to be rehabilitated so as to be able to continue with their education.

Regarding with the years of study, table 3 shows that, 21 (50%) of learners with VI were in 2<sup>nd</sup>, 21 (50%) of them were 3<sup>rd</sup> year. As the statistical data for students with disability from Haramaya University, special needs education office in 2019/20 shows 5 of learners with VI were repeating their years of study this means one to 2<sup>nd</sup> and the remain four were 3<sup>rd</sup> year. The findings show that the data of those students were not increasing from year to year. This implies that there is less facility that can be attracts those students to this campus.

With regarding to the field of study, the above table indicated that, 17 (40.5%) of learners with VI were in the SNIE, 10 (23.8%) were in the Afan Oromo, 6 (14.3%) were in the Gender Education and 9 (21.4%) were in the Faculty of Law. The findings show that majority of learners with VI were taken from SNIE while a few of them were taken from Gender Education.

On the other hand regarding age of onset, the above table 3 indicated that, 10 (23.8%) of them were congenital, whereas 32 (76.2%) of them had acquired. This result shows that there are more pupils with acquired visual impairment in the Haramaya University than the congenital. The obtained data shows that, although the causes of visual impairment in children vary between different regions in the world, it can be caused either by congenital or acquired. However, some studies (WHO, 2007) suggested that visual impairment in children is mostly caused by congenital or hereditary. This is may be due to the fact that there are limited eye care services and few experts in developing countries like Ethiopia. And, there are also preventable eye diseases leading to acquired VI at a higher rate. In relation to this, ORBIS Ethiopia (2011) and Ministry of Health (2007) reported that Ethiopia is especially impacted by a high prevalence of trachoma a highly contagious but completely preventable eye disease that

can result in acquired low vision or blindness after years of repeated infection. Therefore, further investigation and comprehensive studies need to be done in this regard.

Finally, with regarding to the severity level, the above table 3 shows that, 11 (26.2%) of students with VI were low vision, whereas 31 (73.8%) of them had total blind. This result shows that there are more pupils with total blind in the Haramaya University than the low vision/partial. Finding revealed that, the requirement support for those students may more focuses on Braille writer, sound system materials in lab, library and classrooms than large print. The Ministry of Health (2007) reported that Ethiopia is especially impacted by a high prevalence of trachoma a highly contagious but completely preventable eye disease that can result in acquired blindness after years of repeated infection.

#### **4.2.2. Demographic Information of Workers**

This part answers section A of the interviews which was used to gather demographics details of the participants of workers (lecturers, head of department and special needs education experts). The demographic characteristics of respondents were discussed in terms of sex, working experience, area of specialization and training level on SNE.

**Table 4: Demographic data for workers (lecturers, head of department and special needs education experts)**

Variable	Category	Lecturers		Head of Department		SNE Experts	
		F	%	F	%	F	%
Sex	Male	7	87,5	3	75	-	-
	Female	1	12.5	1	25	2	100
	<b>Total</b>	<b>8</b>	<b>100</b>	<b>4</b>	<b>100</b>	<b>2</b>	<b>100</b>
Working experience	-5 years	6	75	1	25	2	100
	6-10 years	2	25	3	75	-	-
	11-15 years	-	-	-	-	-	-
	+16 years	-	-	-	-	-	-
	<b>Total</b>	<b>8</b>	<b>100</b>	<b>4</b>	<b>100</b>	<b>2</b>	<b>100</b>
Area of specialization	SNIE	2	25	1	25	-	-
	Afan Oromo	2	25	1	25	-	-
	Gender Ed	2	25	1	25	-	-
	Law	2	25	1	25	-	-
	Another field	-	-	-	-	2	100
	<b>Total</b>	<b>8</b>	<b>100</b>	<b>4</b>	<b>100</b>	<b>2</b>	<b>100</b>
Training level on SNE	Below Certificate	4	50	1	25	1	50
	Certificate	2	25	2	50	1	50
	Diploma	-	-	-	-	-	-
	Degree	-	-	-	-	-	-
	Master degree and above	2	25	1	25	-	-
	<b>Total</b>	<b>8</b>	<b>100</b>	<b>4</b>	<b>100</b>	<b>2</b>	<b>100</b>

Regarding to demographic information of workers, the above table 4 shows that the majority 10 (75%) participants of workers were males while, the remaining 4 (25%) of them were females, which means 8(100%) lecturers, 4(100%) head of departments and also 2(100%) of them were special needs education experts. and the table also show that from 8 (100%) lecturers 7(87,5%) were males, while 1 (12.5%) of them were females and from 4(100%) head of departments 3(75%) of them were male while 1(25%) of them were females and from 2(100%) of special needs education experts all of them were females.

Regarding with the years of working experience, the above table 4 also shows that 6(75%) of lecturers, 1(25%) head of departments and 2(100%) of special needs education experts have -5 years of working experience on special needs education, and also 2(25%) of lecturers and 3(75%) head of departments have 6-10 years of working experience on special needs education. Beside to this table 4 shows that, from 8(100%) lecturers 2 (25%) of them were selected from each four departments and 4(100%) head of departments were from fourth departments and 2(100%) of special needs education experts were other field.

This table also indicates that regarding with the training level 4of lecturers, 1head of departments and 1of special needs education experts were under certificated on training level of special needs education, and also 2of lecturers, 2 head of departments and 1of special needs education experts were Certified and 2 of lecturers and 1head of departments were holding master degree and above in special needs education.

The finding shows that, most of those workers have lack of training and working experience on special needs education, except department of special needs and inclusive education. This implies that the above findings may seriously contribute to poor academic performance of learners with visual impairment in the university. Students with visual impairments need teachers who have knowledge and enough training in area of SNE in order to be able to adapt teaching/ learning resources, and be able to meet their individual academic needs in inclusive classes.

The findings were similar to study of Van Reuse, (2001) who found that teachers may resist inclusive practices on account of inadequate training. Berne-Smith, and Latham, (2000) found out that it would appear that teachers perceive themselves as unprepared for inclusive education because they lack appropriate training in this area. Sharon, Vaughn, Boss and Scum, (2001) added that inadequate training relating to inclusive education may result in lowered teacher confidence as they plan for inclusive education.

### **4.3. Support Provision for SWVI at Haramaya University**

Under this section result of study on support provision for SWVI is presented in the following both table 5 and 6. The questions were developed based on the legal policy to assess the education of learners with visual impairment. The respondents of this questionnaire were

learners with visual impairment and class representatives. Moreover, data was collected through interview from the teachers, head of department and special needs education officials'experts' respondents. Besides, observation was conducted to triangulate with data obtained through interviews and questionnaire.

The support provision analysis was conducted through by comparing the suggestion of both SWVI and SWOVI on the same items presented in the below table, and even their differences.

Table 5.1: Questions related with support provision for students with visual impairment

No	Items	Respondents																							
		Students with Visually Impaired												class representatives											
		SD		D		U		A		SA		Total		SD		D		U		A		SA		Total	
		F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
1	There is suitable provision of books and notes for learners with visual impairment	12	28.6	13	31.0	-	-	7	16.7	10	23.8	42	100	3	18.8	8	50.0	3	18.8	2	12.5	-	-	16	100
2	There is availability of free technical aids / devices for students with visual impairment	3	7.1	20	47.6	2	4.8	14	33.3	3	7.1	42	100	3	18.8	6	37.5	-	-	5	31.3	2	12.5	16	100
3	There is better access in classes for students with visual impairment	5	11.9	16	38.1	-	-	17	40.5	4	9.5	42	100	5	31.3	5	31.3	1	6.3	3	18.8	2	12.5	16	100
4	There is better access in labs for students with visual impairment	3	7.1	19	45.2	3	7.1	7	16.7	10	23.8	42	100	-	-	10	62.5	1	6.3	1	6.3	4	25.0	16	100
5	There is better access in libraries for students with visual impairment	8	19.0	14	33.3	2	4.8	8	19	10	23.8	42	100	6	37.5	2	12.5	2	12.5	5	31.3	1	6.3	16	100
6	There is appropriate Screen reader equipment software in your computer labs at your institution	4	9.5	19	45.2	4	9.5	10	23.8	5	11.9	42	100	1	6.3	8	50.0	-	-	4	25.0	3	18.8	16	100
7	There is appropriate scanner equipment software in your computer labs in your institution	8	19.0	15	35.7	3	7.1	11	26.2	5	11.9	42	100	3	18.8	6	37.5	2	12.5	5	31.3	-	-	16	100
8	There is appropriate Braille printer equipment software in your computer labs at your institution	17	40.5	6	14.3			9	21.4	10	23.8	42	100	1	6.3	7	43.8	2	12.5	2	12.5	4	25.0	16	100

Regarding to the support provision for students with visual impairment, the above table 5.1 item 1 results indicated that, 12(28.6%) respondents of learners with visual impairment replied strongly disagree, 13 (31.0%) disagree, 7(16.7%) of them were agree and 10 (23.8%) of them were strongly agree with suitable provision of books and notes for learners with visual impairment. Similarly, in the above table 5.1 item 1 respondents of class representatives replied that, 3(18.8) strongly disagree, 8 (50%) disagree, 3(18.8) undecided, 2(12.5%) of them were agree and none of them were strongly agree with this statement. The results of respondents from both tables on this item were the same. This means majority of respondents replied disagree part.

Regarding this, one of a head departmentsaid,

*... although there were materials provided for learners with visual impairment such as audio recorder but there were not suitable provision of books, Braille printed materials, large printed materials to enhance their academic performance. On the other hand all lecturers supported learners with visual impairment by confirming that there were no Braille books in the colleges and the students highly depended on their sighted peers in doing their assignments through group discussions and some lecturers were provide softcopy notes then, few of those students used lab screen reader because there were few computer labs'' (Head of Department, 2020).*

This implies that, the individual provision of books and notes for learners with visual impairment was very poor. That means they used the same books and notes with their sighted peers. Evidently these impacts could be the cause of academic challenges for students with visual impairment. Concerning with this issue, national as well as institutional policies or legislation was recognized the principle of equal opportunities for people with impairments in higher education (UNESCO, 2004). According the policies, it should look at special provisions for students with impairments in terms of the nature of their impairment and gender (Daniels, 2001). The findings agreed with a study done by Marylyn (2008) who found out that one key accommodation that is absolutely essential is access to textbooks and instructional materials in the appropriate media and at the same time as their sighted peers. For students who are blind this may mean Braille and/or recorded media. For student with low vision, this may mean large print text or the use of optical devices to access text and/or recorded media while in class.

Concerning the item 2 of the above table 5.1,3(7.1%) of respondents of students with visual impairment replied strongly disagree, 20(47.6%) disagreed, 2(4.8%) undecided, 14(33.3%) of them were agreed and 3 (7.1%) of them were strongly agreed with availability of free technical aids / devices for students with visual impairment. regarding with this items from the above table 6 respondents of learners without visual impairment also replied that, 3(18.8) of respondents strongly disagree, 6 (37.5%) disagree, 0 (0%) undecided, 5(31.3%) of them were agree and 2(12.5%) of them were strongly agree with this statement. From the both tables the majority of SWVI and SWOVI responses the disagree part. This indicated that there was lack of technical aids / devices for students with visual impairment.

Regarding with this item interview from the head of SNIE department revealed;

*There is technical aids/devices for students with visual impairment, for example in orientation and mobility devices such as cane, environmental arrangement in the Braille training; such as slat styles, Braille typewriter, classroom seating arrangement in our department and audio recorder but the availability of these technical aids were less. For example in the developed countries there were the traditional devices (e.g. long cane, magnifying glass, portable Braille typewriter, hand-held video camera, talking calculator/clock/dictionary/measuring device, cassette recorder and Dictaphone, large-print books and raised-line drawings), as well as more recent technology associated with the computer (e.g. Braille keycaps, Braille embosser, Braille display, screen reader, screen magnifier, speech synthesizer, text-to-speech software, scanner) (Head of SNIE Department,2020).*

On the other hand interview from the SNE experts revealed that;‘there are technical aids/devices for students with visual impairment, such as individual lab, library, toilet, cane and environmental arrangement for mobility, Braille embosser and audio recorder’,’ (SNE experts, 2020).However, observation revealed that, there were lab, library, toilet, cane and environmental arrangement but not sufficiently available, for example lab and library were not well equipped with available resources and Braille embosser is not giving any purpose it simple taking place in their office.

The federal-level strategy shows the direction for providing access to inclusive education to all learners by identifying and removing existing barriers at all levels of schooling and

higher education (MoE, 2006). As a result, HEIs are expected to establish resource centers that support students with VI and their lecturers, and that provide students with Braille literature, reading and writing tools, and training on ICT applications (MoE, 2006). According to Ulsan (1990) most mobility experts and clients agree that the long cane was the most efficient, convenient and affordable and almost universally available mobility aid so far developed which was said to be one of the only proven and widely accepted primary modes of independent travel.

Regarding with the item 3 of the above 5.1, the result showed that 5(11.9%) respondents of students with visual impairment replied strongly disagree, 16(38.1%) disagree, 0(0%) undecided, 17(40.5%) of them were agree and 4 (9.5%) of them were strongly agree with better access in classes for students with visual impairment. However, respondents of learners without visual impairment replied that, 5(31.3%) strongly disagree, 5(31.3%) disagree, 1 (6.3%) undecided, 3(18.8%) of them were agree and 2(12.5%) of them were strongly agree this item's statement. In this item the half of respondents students with visual impairment replied disagree whereas half of them response agree but majority of respondents of learners without visual impairment replied disagree. This indicated that from these result no more difference ideas that means there were some challenges in class room accessibility.

Concerning with this issue, interview conducted with a lecturer revealed that;

*There was lack of better accessibility relation in classroom. For example many classes were on the building it has more challenges for students with visual impairment to ascending and descending steps and the class space was very narrow with full in furniture and also relation to interacting with teachers and their peers is less from some departments (lecture of Afan Oromo, 2020).*

The findings correspond with findings by Simon *et al.* (2010) who found out that school did not have appropriate teaching and learning resources to help students with visual impairment as learn better in inclusive classrooms. The educational environment itself can be a barrier for students with visual impairments if the environment is not designed for their specific needs (Harlan, 2005).

With regards to the support provision, the above table 5.1 item 4 results shows that, 3(7.1%) of respondents of students with visual impairment replied strongly disagree,

19(45.2%) disagree, 3(7.1%) undecided, 7(16.7%) of them responded agree and 10 (23.8%) of them strongly agree with the statement access in labs for students with visual impairment. Besides to this the above table 5.1 item 4 results shows that, learners without visual impairment replied, 10(62.5%) disagree, 1 (6.3%) undecided, 1 (6.3%) of them were agree and 4(25%) of them were strongly agree with this statement. This shows that, the lab of students with visual impairment has less accessibility.

According to interviewed of special needs education experts,

*there were some inaccessibility in their lab; the amount of computers were not compared with the students number, there are only 20 useable computer and also the lab was far from students dormitory that those students with visual impairment were faced by many challenges when they move to lab(SNE experts,2020).*

On the other hand, as the researcher observed there was no scanner, Braille materials in it, large print materials for low vision students again using only with head phone has also its own impact. Concerning with this, Powell(2003) suggest that in particular, communication with students with VI on campus by email can often be the fastest and most convenient solution for both staff members and students. Students with VI can access e-texts by using a screen-reader, in which they use a screen with speech output in labs and libraries. On the other hand, visual curricular materials such as maps, diagrams, graphs or photographs can sometimes be described to students with VI verbally with the help of an audio recording. While recording lectures requires several hours of transcription, students can use Dictaphones, silent Braille and laptop devices in class.

Regarding with item 5 of the above table 5.1, the results indicated that, 8(19.0%) of respondents with visual impairment replied strongly disagree, 14(33.3%) disagree, 2(4.8%) undecided, 8(19.0%) of them were agree and 10 (23.8%) of them were strongly agree with better access in libraries for students with visual impairment. Similarly, in the table 5.1 above the respondents of learners without visual impairment replied 6(37.5%) strongly disagree, 2(12.5%) disagree, 2(12.5%) undecided, 5 (31.3%) of them were agree and 1 (6.3%) of them were strongly agree with this item. The majority of those respondents disagree with this statement from both tables; this indicated that there were lacks of better accessibility in libraries of students with visual impairment.

Moreover, data obtained from the majority of interviewed special needs education experts revealed that there is one small library for students with visual impairment as their individuals but it has not well equipped with Braille materials, large print materials, computer laptop even if the place was not comfortable to study ( special needs education experts, 2020). Concerning with this issue, Powell (2003) suggests that the adapted materials should be located in regular libraries and study centres rather than in separate locations, because separate locations might marginalize the study and social interaction of students with VI with sighted peers. In addition, institutions could have a pool of appropriate equipment for loan by students with VI (e.g., programmable calculators with speech synthesizers or Dictaphones). However, the findings of this study show that there were some learning resources which were not available in the University and if made available could aid in their learning. The materials mentioned were personal laptops, Braille and large print course books in the library, tactile maps, and victor readers for all students, screen readers, Braille machines for all students, a Braille section with up to date Braille books in all areas of study in the library and jaws systems in all computers.

Regarding the item 6 of the above table 5.1, the results indicated that 4(9.5%) respondents of learners with visual impairment replied strongly disagree, 19(45.2%) disagree, 4(9.5%) undecided, 10(23.8%) of them were agree and 5(11.9%) of them were strongly agree with appropriate screen reader equipment software in computer labs of learners with visual impairment at your institution. Regarding with this item in the table 5.1 the respondents of learners without visual impairment replied 1 (6.3%) strongly disagree, 8(50%) disagree, 0(0%) undecided, 4 (25%) of them were agree and 3(18.8%) of them were strongly agree with this item. From the above both tables, the majority of these respondents disagree with this statement, this implies that most of computers in the lab were unqualified sound. In addition as observed by researcher with the cause of unqualified sound and minimum number of computers in the lab two students were using by one computer.

According to D'Andrea,( 2012) stated assistive technologies Some of the instructional and assessment-related challenges that students with VI and their lecturers experience can be addressed through the use of assistive materials and technologies. It is good practice for higher education institutions to have a variety of assistive materials and computers with appropriate software in stock, since students with VI need them to access learning and

information. For example, some higher education curriculum materials might be made available as computer texts for easy delivery to students with VI via disks or email.

As depicted in the above table 5.1 item 7 indicated results, 8(19.0%) respondents of students with visual impairment replied strongly disagree, 15(35.7%) disagree, 3(7.1%) undecided, 11(26.2%) of them were agree and 5(11.9%) of them were strongly agree with appropriate scanner equipment software in computer labs of SWVI at your institution. Besides to this the above table 6 respondents of learners without visual impairment also replied that, 3(18.8%) strongly disagree, 6(37.5%) disagree, 2(12.5%) undecided, 5 (31.3%) of them were agree and 0(0%) of them were strongly agree with this statement. In this statement the majority respondents replied disagree from the both tables. This implies that there was no appropriate scanner equipment software in their computer lab.

Regarding to this researcher observed that, the computer lab scanner equipment software, are not equipped, even any other materials were not equipped that students with VI could read. Therefore, they had faced by many challenges in using the computer lab in the university. Most of the time, when they were doing their research or intensive reading they depended on their sighted peers. This was therefore a challenge that could affect their academic performance.

According to Wray, (2002) Students with VI experience educational barriers owing to the absence of curricular materials and handouts in accessible formats; especially materials printed in Braille or voice recorded on mobile devices (Sygall and Scheib, 2005).

As shown in the above table 5.1 item 8 indicated results, 17(40.5%) of respondents students with visual impairment replied strongly disagree, 6(14.3%) disagree, 0(0%) undecided, 9(21.4%) of them were agree and 10(23.8%) of them were strongly agree with appropriate Braille printer equipment software in computer labs of students with visual impairment at their institution. Moreover regarding with this the above table 6, respondents of learners without visual impairment replied that 1(6.3%) strongly disagree, 7(43.5%) disagree, 2(12.5%) undecided, 2(12.5%) of them were agree and 4(25%) of them were strongly agree with the item that there is appropriate Braille printer equipment software in computer labs of students with visual impairment at your institution

The majority respondents of students with and without VI replied disagree with this statement, this implies that there was lack of appropriate Braille printer equipment in the labs of students with visual impairment at their institution.

In addition interview of SNE experts said that;

*There are available screen reader computers or JAWS in the lab for students with visual impairment. However there is lack of many equipments in their lab that are available for students with visual impairment if it equipped in this lab those materials such as, Braille display, screen reader, screen magnifier, speech synthesizer, text-to-speech software, scanner (SNE experts, 2020) .*

According to Wray, (2002) Students with VI experience educational barriers owing to the absence of curricular materials and handouts in accessible formats; especially materials printed in Braille or voice recorded on mobile devices (Sygall and Scheib, 2005).

**Table 5.2: Proceeded Questions related with support provision for students with visual impairment**

N o	Items	Respondents																							
		Students with Visually Impaired												Students without Visually Impaired											
		S D		D		U		A		S A		Total		S D		D		U		A		S A		Total	
		F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
9	There is appropriate Screen reader equipment software in your libraries at your institution	7	16.7	17	40.5	-	-	9	21.4	9	21.4	42	100	2	12.5	7	43.8	1	6.3	4	25.0	2	12.5	16	100
10	There is appropriate scanner equipment software in your libraries at your institution	11	26.2	10	23.8	1	2.4	12	28.6	8	19.0	42	100	1	6.3	8	50.0	3	18.8	2	12.5	2	12.5	16	100
11	There is appropriate Braille printer equipment software in your libraries at your institution	16	38.1	7	16.7	-	-	9	21.4	10	23.8	42	100	1	6.3	7	43.8	4	25.0	4	25.0	-	-	16	100
12	There is technical support when students with visual impairment are learning classroom that meets their needs	9	21.4	11	26.2	2	4.8	12	28.6	8	19.0	42	100	4	25.0	5	31.3	1	6.3	6	37.5	-	-	16	100
13	There is appropriate software that reads what is on the screen scanning / optical character recognition	9	21.4	11	26.2	5	11.9	13	31	4	9.5	42	100	3	18.8	6	37.5	2	12.5	4	25.0	1	6.3	16	100
14	There are suitable labeling systems of the premises signage (e.g. enlarged signs, signs in Braille or audio system, outside the offices / secretariats / rooms, etc)	17	40.5	7	16.7	2	4.8	10	23.8	6	14.3	42	100	5	31.3	2	12.5	2	12.5	3	18.8	4	25.0	16	100
15	There is software facility provided for students with visual impairment that improves the quality of writing (such as grammar and spell check, color and highlighting)	9	21.4	12	28.6	2	4.8	13	31	6	14.3	42	100	1	6.3	7	43.8	2	12.5	6	37.5	-	-	16	100
16	There is suitable scanner / optical character recognition software for students with visual impairment that input of printed text to computer	13	31.	9	21.4	3	7.1	13	31	4	9.5	42	100	-	-	8	50.0	-	-	4	25.0	4	25.0	16	100

As seen in the above table 5.2 item 9 indicated results, 7 (16.7%) respondents of learners with visual impairment replied strongly disagree, 17(40.5%) disagree, 0(0%) undecided, 9(21.4%) of them were agree and 9(21.4%) of them were strongly agree with appropriate Screen reader equipment software in their libraries at the institution. Although, from the table 6 the respondents of learners without visual impairment replied that, 1(6.3%) strongly disagree, 7(43.5%) disagree, 2(12.5%) undecided, 2(12.5%) of them were agree and 4(25%) of them were strongly agree with this statement. The majority of students with and without VI replied disagree. This implies that there was lack of appropriate Screen reader equipment software in libraries for learners with visual impairment.

Accordingly, the observation indicated that libraries were not well equipped with any computer/ resources for students with visual impairments this can making it difficult to them to enjoy the library services especially when doing their research, assignments and revisions for their end of semester exams. The findings agreed with findings by Simon *et. al* (2010) who found out those schools did not have appropriate teaching and learning resources to help students with visual impairment learn better in inclusive classrooms.

Concerning the item 10 of the above table 5.2, results indicated that 11(26.2%) respondents of students with visual impairment replied strongly disagree, 10(23.8%) disagree, 1(2.4%) undecided, 12(28.6%) of them were agree and 8 (19.0%) of them were strongly agree with appropriate scanner equipment software in their libraries at the institution. However, the respondents of learners without visual impairment replied 2(12.5%) strongly disagree, 7(43.5%) disagree, 1(6.3%) undecided, 4(25%) of them were agree and 2(12.5%) of them were strongly agree with appropriate scanner equipment software in your libraries at your institution. Regarding with the results from both tables the majority of respondents responses disagree to this item.

In the evidence observation of researcher was also the same with the above responses. This means in the libraries of students with visual impairment there were only a few materials that written with Braille equipment except that there were no any equipped computer in their library and they using only that few documents and what they recorded from their teachers in classroom and from their peers reader.

Several studies point out that staff working at the Universities' libraries should be trained in assisting students with visual impairments (Jones, 2001; Kinnel and Creaser, 2001

Machell, 1996). In addition, Harris and Oppenheim (2003) argue that libraries need to conduct a survey of facilities, including the physical access of visually impaired students to libraries. Full and easy accessibility of the electronic information via the web can also make optional the physical visit to the library for students with visual impairment, as they can rely on their virtual resources (Jones and Tedd, 2003). Furthermore, Kinnel and Creaser (2001) underline the increased importance of equipment for reading support and IT as the means to enable information access.

Again with regarding providing support to learners with visual impairment the above table 5.2 item 11 results indicated that, 16(38.1%) of respondents learners with visual impairment replied strongly disagree, 7(16.7%) disagree, 0(0%) undecided, 9(21.4%) of them were agree and 10 (23.8%) of them were strongly agree with appropriate Braille printer equipment software in their libraries at the institution. Moreover, the above table 5.2 with the same item, respondents of learners without visual impairment replied that, 1(6.3%) strongly disagree, 8(50%) disagree, 3(18.8%) undecided, 2(12.5%) of them were agree and 2(12.5%) of them were strongly agree with this statement. The majority of those respondents from both table responses disagree with this statement. This implies that there was lack of appropriate Braille printer equipment software in libraries for learners with visual impairment.

Bodaghi, Awang-Ngah and Abdulla (2014) argue that available research has shown that one of the difficulties in providing an inclusive environment is attributable to lack of librarians' awareness of the users with disabilities. Most of the libraries (especially university libraries) are structured in ways that inconvenient for use by visually impaired and inadequacy of appropriate reading materials.

As shows in the above table 5.2 item 12 results indicated, 9(21.4%) respondents of learners with visual impairment replied strongly disagree, 11(26.2%) disagree, 2(4.8%) undecided, 12(28.6%) of them were agree and 8 (19.0%) of them were strongly agree with technical support when SWVIs are learning classroom that meets their needs. However, regarding to same item, respondents of learners without visual impairment replied 4(25%) strongly disagree, 5(31.3%) disagree, 1(6.3%) undecided, 6(37.5%) of them were agree and 0(0%) of them were strongly agree with technical support when you are learning classroom that meets their needs. The results from this item table 5 were

balanced that both from disagree and agree part but from table 6 the majority of respondents replied disagree with this item.

However interview from lecturers of law indicated that;

*The technical support when they are learning classroom were less meet with their needs this means some teachers use visual teaching with the power point (e.g. maps and picture) and using pronounce while comparing two or more things, for example by saying while this is increase this is decrease, which one is more important this or this? And students use only audio recorder with seating arrangements' no other available materials such as Braille, large print. When they were taking exam other sighed students were read to them that learning different department from those students this had also its own impacts, for example some students cannot write with correct spell due to this they miss some blank spaces and said I wrote it. This shows lack of training teachers on special needs education(lecturers of law, 2020).*

This implies that the support they got in the classroom were meets with their needs. The findings were supported by Baraka (2013) who found out that lectures may take longer for students with VI to write down note and they may be unable to see power point slides or board work. Diagrams and new vocabulary can be problematic unless an oral description or additional clarification is given. TV and video/DVD are generally less problematic than might be expected, but students should be told when they are to be used. Some students with VI who are sensitive to light or screen glare may struggle with TV and video conference. Some students may choose to have a note-taker and others prefer to take their own notes on to a computer or other equipment. Recording lectures can also be useful and staff should be prepared to accept such a request.

As seen in the above table 5.2item 13 results indicated, 9(21.4%) respondents of learners with visual impairment replied strongly disagree, 11(26.2%) disagree, 5(11.9%) undecided, 13(31.0%) of them were agree and 4(9.5%) of them were strongly agree with appropriate software that reads what is on the screen scanning / optical character recognition in the institution. Similarly, with regarding to the same item, respondents of learners without visual impairment replied that, 3(18.8%) strongly disagree, 6(37.5%) disagree, 2(12.5%) undecided, 4(25%) of them were agree and 1(6.3%) of them were strongly agree with this statement. From the above two table majority responses shows disagree with this

statement. This implies that there is scanner software computer but it cannot read what scanning on it this means students cannot differentiated in simple ways the important terms that they went to scan.

According to Wray, (2002) Students with VI experience educational barriers owing to the absence of curricular materials and handouts in accessible formats; especially materials printed in Braille or voice recorded on mobile devices (Sygall and Scheib, 2005).

On the other hand, the above table 5.2 item 14 indicated that 17(40.5%) of respondents of students with VI replied strongly disagree, 7(16.7%) disagree, 2(4.8%) undecided, 10(23.8%) of them were agree and 6(14.3%) of them were strongly agree with suitable labelling systems of the premises signage (e.g. enlarged signs, signs in Braille or audio system etc). However, the respondents of learners without visual impairment replied 5(31.3%) strongly disagree, 2(12.5%) disagree, 2(12.5%) undecided, 3(18.8%) of them were agree and 4(25%) of them were strongly agree with this statement. The majority of respondent's SWVI responses disagree with suitable labelling systems of the premises signage for learners with visual impairments. Whereas responses of SWOVI were balanced from both disagree and agree part. This implies that there is lack of labelling systems of signage (e.g. enlarged signs, signs in Braille or audio system etc) for learners with visual impairments in Haramaya University.

It is clear that strengthening support services will enable inclusive education in HEIs to reduce barriers of learners with VI at all levels and is imperative in meeting the unique needs of students with VI (Department of Education, 2001). The types of support that should be considered are, academic (e.g., access to information and tutorial support), emotional (e.g., commitment from family and partners, or co-operation with fellow students), and practical (e.g., help with academic tasks, housework, space to study, facilities, time and comfortable working arrangements) (McNicol and Nankivell, 2001: Moreland and Carnwell, 2000).

Regarding with the item 15 of the above table 5.2, the result indicated that 9(21.4%) respondents of students with visual impairment replied strongly disagree, 12(28.6%) disagree, 2(4.8%) undecided, 13(31.0%) of them were agree and 6(14.3%) of them were strongly agree with software facility provided for students with visual impairment that improves the quality of writing (such as grammar and spell check, colour and highlighting)

in their library. Moreover, the respondents of learners without visual impairment replied 1(6.3%) strongly disagree, 7(43.8%) disagree, 2(12.5%) undecided, 6(37.5%) of them were agree and 0(0%) of them were strongly agree with this statement. In this statement the majority of respondents from both table replied disagree with software facility provided for students with visual impairment that improves the quality of writing.

This implies that there is lack of software facility provided that improves the quality of writing system in the library for students with visual impairment such as grammar and spell check, colour and highlighting. Beside to this with similar the above items observation was replied strongly disagree with materials that relevant with computer in their library.

In the view of Punani and Rawal (2000) emerging research suggests that technology promotes acquisition of literacy and provides more equal access to information required for employment.

Concerning the item 16 of the above table 5.2, results indicated that 13(31.0%) of respondents students with visual impairment replied strongly disagree, 9(21.4%) disagree, 3(7.1%) undecided, 13(31.0%) of them were agree and 4(9.5%) of them were strongly agree with suitable scanner / optical character recognition software for students with visual impairment that input of printed text to Braille computer. However, the respondents of learners without visual impairment replied 0(0%) strongly disagree, 8(50%) disagree, 0(0%) undecided, 4(25%) of them were agree and 4(25%) of them were strongly agree with the item. Majority of this respondents replied strongly disagree with the statement. But, from table 6 the amount of responses on both agree and disagree were balanced in this item.

The observation revealed that, the Braille printing machine connected to other accessories like the scanner and computer that emboss computer generated text as Braille on paper were not equipped in the university. This finding is contradictory to the responses students without visual impairment gave on the suitable scanner / optical character recognition software for students with visual impairment that input of printed text to Braille computer, since the Braille embossers works together with the scanner connected to a computer. This shows that optical character recognition software for students with visual impairment that

input of printed text to Braille computer (Braille embosser) was not equipped in this campus.

This finding support one made by Lynch *et.al* (2011) that lack of funding to equipped Braille embossers which are Braille printing machines meant that they had been unable to produce learning text books in Braille for over years for pupils with visual impairment in inclusive classroom. Lack of Brailed text books is considered one major barrier to inclusive education.

#### **4.4. Academic Challenges of SWVI**

Under this section result of academic challenges experienced by SWVI is presented. Questions were developed based on the legal policy to assess learners with visual impairment. Respondents of questionnaire were learners with visual impairment and sighted students. Besides, data was collected through interview from the teachers, head of department and special needs education officials' expert's respondents. In addition, observation was conducted to triangulate with data obtained through interviews and questionnaire. Data analysis was conducted through by comparing the suggestion of both SWVI and SWOVI on the same items presented in the below table, and even their differences.

**Table6.1: Questions related with some major academic challenge of students with visual impairment**

No	Items	Respondents																							
		Students with Visually Impaired												Students without Visually Impaired											
		SD		D	U		A		SA		Total		SD		D	U		A		SA		Total			
		F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%		
1	There is no better informed teachers in order to enhance academic performance of learner with visual impairment	10	23.8	10	23.8	-	-	12	28.6	10	23.8	42	100	1	6.3	4	25.0	1	6.3	6	37.5	4	25.0	16	100
2	There is no better behavior in order to enhance academic performance of learner with visual impairment	3	7.1	13	31.0	2	4.8	20	47.6	4	9.5	42	100	2	12.5	4	25.0	-	-	6	37.5	4	25.0	16	100
3	There is no better cooperative teaching in order to enhance academic performance of learner with visual impairment	3	7.1	17	40.5	-	-	16	38.1	6	14.3	42	100	-	-	5	31.3	2	12.5	5	31.3	4	25.0	16	100
4	There is no better change of attitudes of the teachers in order to enhance academic performance of learner with visual impairment	3	7.1	9	21.4	3	7.1	17	40.5	10	23.8	42	100	1	6.3	5	31.3	1	6.3	3	18.8	6	37.5	16	100
5	There is no better building infrastructure for LWVI for lack of environmentalaccessibility	5	11.9	13	31.0	2	4.8	15	35.7	7	16.7	42	100	3	18.8	4	25.0	-	-	9	56.3	-	-	16	100
6	Learner with visual impairment haven't more information on matters relating to the studies - information that is provided in an appropriate way in order to be accessible for learner with visual impairment	4	9.5	10	23.8	4	9.5	18	42.9	6	14.3	42	100	3	18.8	2	12.5	1	6.3	9	56.3	1	6.3	16	100
7	The method of teaching that teachers using in the class room are not manageable for LWVI for lack of trainings on SNE	8	19.0	13	31.0	2	4.8	12	28.6	7	16.7	42	100	1	6.3	4	25.0	-	-	7	43.8	4	25.0	16	100
8	There is no accessible environment for learners with visual impairment to easily travel around and go wherever they want to go	6	14.3	14	33.3	-	-	11	26.2	11	26.2	42	100	1	6.3	5	31.3	2	12.5	-	-	8	50.0	16	100

Regarding with the academic challenges of SWVI the above table 6.1 item 1 responding to the statement that, there is no better informed teachers in order to enhance academic performance of learner with visual impairment results, 10(23.8%) of respondents with visual impairment replied strongly disagree, 10(23.8%) disagree, 0(0%) undecided, 12(28.6%) were agree and 10(23.8%) of them were strongly agree. Similarly, from table 6.1 above the respondents of learner without visual impairment replied 1(6.3%) strongly disagree, 4(25%) disagree, 1(6.3%) undecided, 6(37.5%) were agree and 4(25%) of them were strongly agree with this item. This shows that the majority of respondents were agree with the statement of, no better informed teachers in order to enhance academic performance of learner with visual impairment. This implies that there is a lack of training teachers on special needs and inclusive education at Haramaya University.

In the evidence as indicated in above table 4 the demographic information of workers shows that the most of lecturers, head of department and special needs education experts were not trained on special needs education. Regarding to this finding revealed that the main issue to improve academic performance of learners with visual impairment is training of teachers on special needs and inclusive education and providing educational materials support.

Finding supported by Best and McCall (cited in Lynch et.al. (2011) in their review on inclusive educational practice in Kenya suggested that teachers present a particular challenge while teaching learner with visual impairment in inclusive settings. Therefore, teachers need training to enable them meet the needs of these pupils. To take Braille as a specific example, teachers require not only a detailed knowledge of the Braille codes but a clear understanding of techniques for the development of literacy touch. This issue highlights an important concern relating to the skills that teachers require to successfully supporting students with visual impairment in inclusive settings.

As depicted in the above table 6.1 item 2 results to the statement, there is no better behavior teachers in inclusive classroom in order to enhance academic performance of learner with visual impairment, 3(7.1%) of respondents with visual impairment replied strongly disagree, 13(31.0%) disagree, 2(4.8%) undecided, 20(47.6%) were agree and 4(9.5%) of them were strongly agree. Beside to this from the above table 6.1 item 2 results, 2(12.5%) of respondents without visual impairment replied strongly disagree, 4(25%) disagree, (%) undecided, 6(37.5%) were agree and 4(25%) of them were strongly agree with this statement. In this item

the majority of respondents replied agree with this statement that no better behavior teachers in inclusive classroom.

This show that teaching students with visual impairment were not require only support provision, it is also heave without having interpersonal relationship, and having experiences on special needs education. The use of teaching and having better behavior is the core in our education. Teaching and learning materials help the teacher in having better behavior and in explaining concepts easily to the visually impaired in inclusive settings. It also helps those students to remember and retain whatever they are taught.

However, this finding is not endorsed by UNESCO (2005) that many teachers and pupils in developing countries experience teaching and learning conditions. They cited limited teaching and learning materials, inadequate shelter and lack of skills to manage equipment.

On the other hand, as observed from the above table 6.1 items 3 in responding to the statement “There is no better cooperative teaching in order to enhance academic performance of learner with visual impairment”. 3(7.1%) of respondents with visual impairment replied strongly disagree, 17(40.5%) disagree, 0(0%) undecided, 16(38.1%) were agree and 6(14.3%) of them were strongly agree. Moreover, from the above table 6.1 item 3 results 0(0%) of respondents with visual impairment replied strongly disagreed, 5(31.3%) disagreed, 2(12.5%) undecided, 5(31.3%) were agreed and 4(25%) of them were strongly agreed. The majority respondents of students with and without visual impairment were replied agree with this statement. This shows that in the many fields’ students with visual impairment are learning, there is less cooperative teaching.

The findings revealed that tutors felt that since there were no adaptations in all the practical subjects, they lacked skills of assisting the students, thus they left them to depend on sighted students for explanations. In addition, sighted students played a big role in the success of the students with visual impairments, since most of the teaching/learning resources were not available in Braille.

Co-operative teaching (team teaching), co-operative learning (peer tutoring), individual planning, collaborative problem-solving and flexible instruction are the five approaches used in effective inclusive education (Meijer, 2001). In keeping with these propositions, Ashman (2010) advises HEIs to consider innovative instructional approaches like co-teaching and peer-mediated learning, in order to remove the barriers that students with VI face. Even, due

to teachers' inability to read Braille, students are not expected to complete homework and take notes in class, unlike their sighted peers (Louis, 2009).

Therefore; the content, method, teaching material, and other related activities, which are provided for students with disabilities, should be accessible and flexible. Curriculum must take into consideration the different abilities and needs of all students. It must be capable of being adapted and modified to meet the need of all children. Flexible time frames for work completion, differentiation of tasks, and flexibility for teachers and time for additional support are some of strategies to meet specific need of children (UNESCO, 2005). In addition to this, flexible teaching-learning methodology is also necessary to realize inclusion. Access to the curriculum is so much more than simply including a student with disability in a regular classroom. Further, the systematic way of classroom organization and the arrangement of teaching materials should be considerations that must be taken in to account during education of the disability group.

As depicted in the above table 6.1 item 4 responding to the statement "There is no better change of attitudes of the teachers in order to enhance academic performance of learner with visual impairment 3(7.1%) of respondents with visual impairment replied strongly disagree, 9(21.4%) disagree, 3(7.1%) undecided, 17(40.5%) were agree and 10(23.8%) of them were strongly agree. With regarding to the same item, 1(6.3%) of respondents without visual impairment replied strongly disagree, 5(31.3%) disagree, 1(6.3%) undecided, 3(18.8%) were agree and 6(37.5%) of them were strongly agree. The majority of respondents of students with and without visual impairment were replied agree with this statement. This implies that in the many fields there is lack of better attitudes of teachers and it shows less in understand the concepts of special needs education. The finding shows a positive attitude of teachers is give equal opportunity to learners with visual impairment in the regular classroom.

The findings were supported by Van Reusen *et al.* (2001) teachers who had not undertaken training regarding the inclusion of students with VI, might exhibit negative attitudes toward such inclusion, while increased training was associated with more positive attitudes toward the inclusion of students with VI. Training in the field of special education appears to enhance understanding and improve attitudes regarding inclusion. Introductory courses offered through teacher preparation program might sometimes be inadequate in preparing the general educator for successful inclusion.

According to Mugambi (2012) who found out that teachers are not confident enough with their level of training to enable them to teach students with visual impairments. This calls for in service courses to update their knowledge and make them gain confidence in carrying out their duties. In addition UNESCO (2001) adds that upgrading teacher's skills is a developmental process that goes beyond workshops and other in-service training activities. Teachers need time to develop confidence and coping strategies and do this in the context of continuous support in the classrooms.

On the other hand, in Table 6.1, item 5 respondents responding to the statement "There is no better building infrastructure for LWVI for lack of environmental accessibility", 5(11.9%) of respondents with visual impairment replied strongly disagree, 13(31%) disagree, 2(4.8%) undecided, 15(35.7%) were agree and 7(16,7%) of them were strongly agree with the statement. Similarly from the above table 6.1item5 results, 3(18.8%) of respondents without visual impairment replied strongly disagree, 4(25%) disagree, 0(0%) undecided, 9(56.3%) were agree and 0(0%) of them were strongly agree with the statement.

The results of this item shows as more respondent's responses agree with no better building infrastructure and accessible spaces for learners with visual impairments. This implies that many buildings and roads are not accessible for learners with visual impairments and also classes they were learning have no better space with full furniture. Besides to this the place of their dorms has no better accessibility of connection. Finding revealed that the better building infrastructure and accessible spaces in class, libraries and dorms were the one of educational facility for learners with visual impairments to enhancing their academic performance.

According to Mushoriwa (2001) that in the many developing countries due to large class size teachers are not able to give individualized attention. Teachers' inability to provide individualized attention to pupils with visual impairment in the regular classrooms can lead to poor performance of pupils with visual impairment in regular classroom. However in Haramaya University due to the narrow class space with disorder furniture the learners with visual impairment faced by many challenge and their attention can lost due to this challenges while they learning in classroom because they cannot get their place in simple ways or they require guide person.

Concerning the item 6 of the above table 6.1, respondents of learners with visually impaired replied 'Learner with visual impairment haven't more information on matters relating to the

studies - information that is provided in an appropriate way in order to be accessible for them in their learning process”, 4(9.5%) of respondents with visual impairment replied strongly disagree, 10(23.8%) disagree, 4(9.5%) undecided, 18(42.9%) were agree and 6(14.3%) of them were strongly agree. Besides to this from the above table 6.1item 6 results, 3(18.8%) of respondents without visual impairment replied strongly disagree, 2(12.5%) disagree, 1(6.3%) undecided, 9(56.3%) were agree and 1(6.3%) of them were strongly agree. With this item, Majority of respondents of learner with and without visual impairment responses agree with this statement. This means information that is provided from teachers to learner with visual impairment were less. In order to this learner with visual impairment could influence on matters relating to the studies with their academic performance.

Finding revealed that another problem pointed out was that many write information on the notice boards in the institutions that do not visited to students with visual impaired because of this they missed information. They ended up missing very important information such as attending public lectures, changes of rooms for lessons and important announcement that concerned them. Learners with visual impairments should also be taught to use certain aids that would help them to move independently.

Finding supported by Powell, 2003; Shepherd, 2001 stated that learning materials and information can be accessible to students with VI in many different ways, such as disk, tape, Braille, e-text and web sites, students can receive information, guidance and advice on their choice of support medium. In addition Powell (2003) suggests that the adapted materials should be located in regular libraries and study centres rather than in separate locations, because separate locations might marginalize the study and social interaction of students with VI with sighted peers. In addition, institutions could have a pool of appropriate equipment for students with VI (e.g., programmable calculators with speech synthesizers or Dictaphones). Another alternative could be for students with VI to acquire funding through an allowance scheme to buy equipment and pay for certain consumables (Shepherd, 2001). As depicted in the above table 6.1item 7 in responding to the statement “The method of teaching that teachers using in the class room are not manageable for LWVI for lack of trainings on SNE” 8(19%) of respondents with visual impairment replied strongly disagree, 13(31%) disagree, 2(4.8%) undecided, 12(28.6%) were agree and 7(16.7%) of them were strongly agree. However, from the above table 6.1item 7 results, 1(6.3%) of respondents without visual impairment replied strongly disagree, 4(25%) disagree, 0(0%) undecided, 7(43.8%) were agree and 4(25%) of them were

strongly agree with this statement. This shows that majority of respondents with visual impairment replied disagree but the majority of without visual impairment replied with this statement that the method of teaching is not manageable for learners with visual impairment to follow that teachers' teaching and collaborate with others. This implies that many of teachers were using manageable method of teaching for learners with visual impairment; however the idea of interview were different from that.

One of a head department said that,

*majority of lecturers in our university had no training in SNE and in their discussions with the researcher expressed the feeling that there was need for adaptation of the classes, proper arrangement of the seats in the classrooms, removal of stairs in the buildings and within the colleges they were learning and that they should be appropriate teaching aids as recommended worldwide, if learners with VI were to perform well in their academic work.*

The finding also revealed that Most of the lecturers should be trained in SNE so as to be able to teach students with visual impairments in manageable method of teaching in inclusive classrooms, parents and teachers must work collaboratively in planning the student's individualized education plan. Huebner (2000) supported the finding that parents often know their children better than anyone else. Therefore, parents can help teachers and others to learn about their student with visual impairment. Besides, parents provide vital information about their student to teachers.

Currently, higher education institutions require academic and technical staff members to make arrangements when planning and employing teaching and learning strategies which make the delivery of programs as inclusive as possible (Shepherd, 2001). It is important for academics to appreciate that the responsibility is a shared one, and academic staff should collaborate with colleagues who have expertise in disability and inclusion from their own as well as other institutions (Powell, 2003). In this way creativity and innovation initiated by staff members can be very important change agents for the inclusion of students with VI in higher education institutions (Powell, 2003). The issue of expertise is related to initial and continuing teacher education, leadership and management skills, as well as the availability of support staff with specific training in relation to visual impairment and inclusion (Kinsella & Senior, 2008).

On the other hand, in the 6.item 8 responding to the statement,“There is no accessible environment for learners with visual impairment to easily travel around and go wherever they want to go”.6(14.3%) of respondents with visual impairment replied strongly disagree, 14(33.3%) disagree, 0(0%) undecided, 11(26.2%) were agree and 11(26.2%) of them were strongly agree. Moreover, from the above table 6.item 8 results 1(6.3%) of respondents without visual impairment replied strongly disagree, 5(31.3%) disagree, 2(12.5%) undecided, 0(0%) were agree and 8(50%) of them were strongly agree with this item. Majority of respondents of learner with and without visual impairment agree with this statement. This indicated that there is lack of environmental accessibility for learners with visual impairment to easily travel around and go wherever they want to go.

From the finding it can be seen that the physical environment in most inclusive settings does not promote easy mobility. This may serve as a barrier to the mobility of learners with visual impairment in the inclusive settings as they are likely to bump into objects. The removal of the physical environment subsequently can enhance the overall education participation of students with visual impairment.

According to Bishop (1996), modification of the physical environment become paramount, if they have to participate in all the things other students without visual impairments participate in the higher education institution. As research findings show, next to attitudinal barrier, the most obvious impeding factor for persons with disabilities is environmental inaccessibility (Johnsen 2001). The educational environment itself can be a barrier for students with visual impairments if the environment is not designed for their specific needs (Hatlen, 2005).

**Table 6.2: Proceeded Questions related with some major academic challenge of students with visual impairment**

N o	Items	Respondents																							
		Students with Visually Impaired												Class representatives											
		S D		D	U		A		S A		Total		S D		D	U		A		S A		Total			
		F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%		
9	Learners with visual impairment are not getting available educational support system from their lecturers	7	16.7	10	23.8	-	-	18	42.9	7	16.7	42	100	2	12.5	3	18.8	1	6.3	9	56.3	1	6.3	16	100
10	Learners with visual impaired have difficulties when they study in the library due to the absence of screen reader	9	21.4	9	21.4	1	2.4	14	33.3	9	21.4	42	100	1	6.3	1	6.3	1	6.3	1	6.3	12	75.0	16	100
11	Learners with visual impaired have difficulties when they study in the library due to the absence of audio system	7	16.7	13	31.0	-	-	10	23.8	12	28.6	42	100	4	25.0	3	18.8	-	-	9	56.3	-	-	16	100
12	Learners with visual impaired have difficulties when they study in the library due to the absence of Braille printed	7	16.7	7	16.7	2	4.8	12	28.6	14	33.3	42	100	1	6.3	2	12.5	1	6.3	-	-	12	75.0	16	100
13	Learners with visual impaired have difficulties when they study in the library due to the absence of scanner	4	9.5	10	23.8	5	11.9	10	23.8	13	31.0	42	100	1	6.3	6	37.5	1	6.3	6	37.5	2	12.5	16	100
14	The method of teaching are not manageable for LWVI because of seating arrangement in classroom	7	16.7	13	31.0	2	4.8	14	33.3	6	14.3	42	100	4	25.0	2	12.5	1	6.3	9	56.3	-	-	16	100
15	There are malfunctions reported, such as, that there are no paving tiles for learners with visual impairments in inclusive classroom	8	19.0	11	26.2	2	4.8	15	35.7	6	14.3	42	100	1	6.3	3	18.8	-	-	12	75.0	-	-	16	100
16	The method of teaching are not manageable forLWVI with lack of collaborate staffs	11	26.2	10	23.8	3	7.1	12	28.6	6	14.3	42	100	3	18.8	4	25.0	-	-	4	25.0	5	31.3	16	100

As shows from 6.2 tables in the item 9 responding to the statement “Learners with visual impairment are not getting available educational support system from their lecturers.” 7(16, 7%) of respondents with visual impairment replied strongly disagree, 10(23.8%) disagree, 0(0%) undecided, 18(42.9%) were agree and 7(16, 7%) of them were strongly agree. With regarding to the same item, from the above table 6.2 item 9 results 2(12.5%) of respondents without visual impairment replied strongly disagree, 3(18.8%) disagree, 1(6.3%) undecided, 9(56.3%) were agree and 1(6.3%) of them were strongly agree with this item’s result. The majority respondents of learners with and without visual impairment were replied agree with this statement. This shows that educational support system given for Learners with visual impairment were less from many lecturers.

On the other hand as accepted from lecturers interview,

*Many lecturers supported learners with visual impairment by confirming that the students highly depended on their sighted peers in doing their assignments through group discussions; however there were no Braille books, large print and short note in each college in the university (lecturer of law 2020).*

Finding revealed that the teachers of students with visual impairments are responsible for providing specialized instruction and support services for these students, and this instruction should be adequate to compensate for the student’s lack of visual functioning.

According to Edwards and Lewis (1998) the flexibility method of teaching and assistive devices used by learners with visual impairment remove some barriers to learning for pupils with visual impairment. Learners with visual impairment become independent in learning. In addition, it opens up learning opportunities for pupils with visual impairment no matter their circumstances. Finally, it makes information available in the quickest manner as against the traditional method. Therefore, teachers’ knowledge about the use of assistive devices will enable teachers provide some form of assistance to learners with visual impairment in the regular classroom in the absence of the resource teacher.

As depicted in table 6.2 item 10 in responding to the statement “Learners with visual impaired have difficulties when they study in the library due to the absence of screen reader.” 9(21.4%) of

respondents with visual impairment replied strongly disagree, 9(21.4%) disagree, 1(2.4%) undecided, 14(33.3%) were agree and 9(21.4%) of them were strongly agree. Moreover, from the above table 6.2 item 10 results 1(6.3%) of respondents without visual impairment replied strongly disagree, 1(6.3%) disagree, 1(6.3%) undecided, 1(6.3%) were agree and 12(75%) of them were strongly agree with this statement. The majority of respondents of learners with and without visual impairment responses agree with this statement. This implies that there is the lack screen of reader in the libraries of students with visual impairment. Finding revealed that the education of learners with visual impairment was mainly focused on the availability instrument in the library of students with visual impairment.

The interview of special needs education experts reported that,

*In the lab they are using screen of reader, but there is the lack screen of reader in the libraries of students with visual impairment. If the assistance they received from the institution were made up such as; a guide, laptops, recorders, and Braille papers in the libraries it assist them in their education. They said that as some lecturers informed to us, the performance of students with visual impairment compared to that of their sighted peers, when they got better support and assistance from their sighted peers, availability instrument in their library and when the environment was conducive (special needs education experts 2020).*

Tilley, Bruce and Hallam (2007) assert that by using appropriate assistive technology; which refers to any product, device, equipment, services, strategies and practices that are applied to maintain, increase or improve the functioning of capabilities of individuals with disabilities libraries can improve information access and quality of life for large numbers of their patrons.

As shows from 6.2 table item 11 in responding to the statement “Learners with visual impaired have difficulties when they study in the library due to the absence of audio system.” 7(16.7%) of respondents with visual impairment replied strongly disagree, 13(31%) disagree, 0(0%) undecided, 10(23.8%) were agree and 12(28.6%) of them were strongly agree. Similarly, from the above table 6.2 item 11 results 4(25%) of respondents without visual impairment replied strongly disagree, 3(18.8%) disagree, 0(0%) undecided, 9(56.3%) were agree and 0(0%) of them were strongly agree. The majority of respondents of learners with and without visual impairment agree

with this statement. This implies that in the libraries of students with visual impairment audio system were not equipped.

Finding revealed that the education of learners with visual impairment was mainly focused on the availability instrument in the library of students with visual impairment.

According to interview from gender lecturers;

*In the university's colleges there is availability of audio recorder for students with visual impairment in their individual. But there is no better organized audio system material in their libraries that common for all learners with visual impairment (gender lecturers2020).*

The model requires universal access to libraries, achieved by the construction of ramps alongside stairs, installation of automatic doors, provision of information in Braille and large print, and availability of assistive technologies such as Closed Circuit Television (CCTV), Braille embossers, Screen magnification and JAWS (Shava 2008).

As shows from 6.2 table in the item 12 responding to the statement "Learners with visual impaired have difficulties when they study in the library due to the absence of Braille printed" 7(16.7%) of respondents with visual impairment replied strongly disagree, 7(16.7%) disagree, 2(4.8%) undecided, 12(28.6%) were agree and 14(33.3%) of them were strongly agree. Similarly, from the above table 6.2 item 12 results 1(6.3%) of respondents without visual impairment replied strongly disagree, 2(12.5%) disagree, 1(6.3%) undecided, 0(0%) were agree and 12(75%) of them were strongly agree with this item. The majority of respondents of learners with and without visual impairment agree with this statement. This implies that there is the lack Braille printed in the libraries of students with visual impairment. Evidently as it observed the libraries of students with visual impairment were not equipped with educational resources such as Braille printed, screen of reader, scanner, and audio system etc.

This finding support one made by Lynch et-al (2011) that lack of funding to which Braille printing machines are meant that they had been unable to produce student's text books in Braille for over years for pupils with visual impairment in inclusive learning. Lack of Brailed text books is considered one major barrier to inclusive education for pupils who are visually impaired.

As shows from 6.2 table In the item 13 responding to the statement “Learners with visual impaired have difficulties when they study in the library due to the absence of scanner” 4(9.5%) of respondents with visual impairment replied strongly disagree, 10(23.8%) disagree, 5(11.9%) undecided, 10(23.8%) were agree and 13(31%) of them were strongly agree. Beside to this, from the above table 6.2 item 13 results 1(6.3%) of respondents without visual impairment replied strongly disagree, 6(37.5%) disagree, 1(6.3%) undecided, 6(37.5%) were agree and 2(12.5%) of them were strongly agreed. The majority of respondents of learners with and without visual impairment agree with this statement. This implies that there is the lack scanner in the libraries of students with visual impairment.

In line with this statement, Babalola and Haliso (2011) recommend that libraries take advantage of advances in ICT to increase information access for people with visual impairments. In addition a broad range of assistive technologies such as Closed Circuit Television (CCTV), Braille embossers, Screen magnification and JAWS are now available to provide access to information in electronic databases and on the internet, thereby giving users with visual impairments opportunities equal to those of the sighted.

As shows from 6.2 table in the item 14 responding to the statement “The method of teaching are not manageable for learners with visual impairment to follow teachers ’teaching in inclusive classroom” 7(16.7%) of respondents with visual impairment replied strongly disagree, 13(31%) disagree, 2(4.8%) undecided, 14(33.3%) were agree and 6(14.3%) of them were strongly agree. However, from the above table 6.2 item 14 results 4(25%) of respondents with visual impairment replied strongly disagree, 2(12.5%) disagree, 1(6.3%) undecided, 9(56.5%) were agree and 0(0%) of them were strongly agree with this statement. In this item the respondents of learners with visual impairment responses in agree and disagree are equal. But the majority of respondents of learners without visual impairment replied agree. This implies that many of teachers are not use manageable method of teaching whereas half of them are using depending on their training and experiences on special needs education.

Evidently as above table 4 the demographic information of workers show most of lecturers, head of department and special needs education experts were not trained on special needs education.

According to Carmen, W. (2014) the role of the classroom teacher is to manage the classroom in a manner that meets the individual needs of each student in the class. Similarly, administrators and paraprofessionals, including transcribers, readers, tutors and counselors should be trained on how to assist students with VI to develop skills for independence,(Powney,2002)

As shows from 6.2 table in the item 15 responding to the statement “There are malfunctions reported, such as, that there are no paving tiles for learners with visual impairments.”8(19%) of respondents with visual impairment replied strongly disagree, 11(26.2%) disagree, 2(4.8%) undecided, 15(35.7%) were agree and 6(14.3%) of them were strongly agree. Accordingly, from the above table 6.2 item 15 results 1(6.3%) of respondents without visual impairment replied strongly disagree, 6(37.5%) disagree, 1(6.3%) undecided, 6(37.5%) were agree and 2(12.5%) of them were strongly agree. The majority of respondents of learners with and without visual impairment agree with this statement. This implies that there is the lack paving tiles or road arrangement for students with visual impairment as they easily move from dorm to class, lab and library and any way they want to go.

According to Bishop (1996), modification of the physical environment become paramount, if they have to participate in all the things other students without visual impairments participate in the school.

As research findings show, next to attitudinal barrier, the most obvious impeding factor for persons with disabilities is environmental inaccessibility (Johnsen 2001). As principals and teachers together reported and as it was observed, students with visual disabilities were precluded from co-curricular activities and some social events with in the primary schools due to aforementioned physical barriers. To reverse the situation, therefore, adaptations of teaching materials and modification of the physical environment become paramount; if they have to participate all the things other students without visual impairments participate in the school (Bishop, 1996).

Finally, in responding to the statement “The method of teaching are not manageable for LWVI with lack of collaborate staffs”. 11(26.2%) of respondents with visual impairment replied strongly disagree, 10(23.8%) disagree, 3(7.1%) undecided, 12(28.6%) were agree and 6(14.3%) of them were strongly agree. However, from the above table 6.2 item 16 results 3(18.8%) of respondents without visual impairment replied strongly disagree, 4(25%) disagree, 0(0%) undecided, 4(25%) were agree and

5(31.3%) of them were strongly agree. The majority of respondents with visual impairment replied disagree with this statement but majority respondents of learners without visual impairment were responses agree that the method of teaching is not manageable for learners with visual impairment to collaborate with staff members.

In addition, evidently the interview from special needs education experts said that;

*“We have no information about the student’s academic achievement our activities were focusing on provision of educational material and environmental arrangement (special needs education experts 2020).*

This shows that the collaboration of staff members or stake holders is less on the overcoming academic challenges of students with visual impairment.

According to Carmen, W. (2014) the role of the classroom teacher is to manage the classroom in a manner that meets the individual needs of each student in the class. This includes promoting learning and supplementing activities, coordinating and collaborating with support staff, using a variety of teaching approaches, and adapting instruction to include all students. The classroom teacher is in charge of each students overall academic program.

Moreover, it is crucial to focus on the role of teacher training programs in higher education institutions as it makes it possible to produce teachers who know about and are willing to address the diverse needs of students (Opertti, Brady and Duncombe, 2009). Similarly, administrators and paraprofessionals, including transcribers, readers, tutors and counselors should be trained on how to assist students with VI to develop skills for independence (Powney, 2002). Apart from staff development programs, the use of collaboration among professionals, policy makers, and organizations of students with impairments is critical to meet the unique educational needs of students with VI collectively (Mjiet *al.*, 2009; Opertti, Brady and Duncombe, 2009).

#### **4.5. Collaboration of Stakeholders to overcome the Academic Challenges of Students with VI**

Most interviewee suggests that relation development of staff members were done but it is very low on the issue of special needs education. For example the Braille embosser were equipped in this

campus, however they not using by this embosser because of lack of trainable as well as lack of motivation on the issue of special needs education. Even in some departments may be there is skilled person on the Braille embosser but in the cause of less motivation and relation on the special needs issue the equipotent is simple present in the special needs education office.

According to interview from special needs education expert, they have no information about the student's academic achievement, this means their activity were focusing only on provision of educational material and environmental arrangement for students with visual impairment. As they informed to researcher academic performance of those students with visual impairment were concerned their colleges as well as departments or their teachers in particularly. This shows that there is lack of working in collaboration among stakeholdersto overcome the academic challenges of students with VI.

Finding revealed that collaboration among stakeholders is most important to increasing motivation and positive attitudes on the issue of special needs education and to overcome the academic challenges of students with visual impairment.

According to D`Andrea (2012) it has become very important to allow students with VI to take advantage of choices available in terms of instructional strategies or multiple methods and tools for inclusive learning. In addition Co-operative teaching (team teaching), co-operative learning (peer tutoring), individual planning, collaborative problem-solving and flexible instruction are the five approaches used in effective inclusive education (Meijer, 2001). In keeping with these propositions, Ashman (2010) advises HEIs to consider innovative instructional approaches like co-teaching and peer-mediated learning, in order to remove the barriers that students with VI face.

Generally, as observed from two tables that shows support provision of students with visual impairment most respondents selected disagree part and also from the two table shows academic challenges of students with visual impairment again most respondents were selected agree part. These shows that these agree part on the academic challenges of students with visual impairment and disagree on the support provision of students with visual impairment are shows one direction. This implies that evidently students with visual impairment challenges in their academic performance, regarding to lack of availability education materials support, lack of trainable teachers to using flexible method of teaching. Finding revealed that it is very important to note that all the

respondents who participated in this research expressed the need of adaptations in all areas of academic and the modification of the buildings and the environment in general to accommodate students with VI. If all the findings presented in this study were successes, the academic challenges of learners with visual impairment in the Haramaya University would be improved.

Finding from related literature review supported that Teferi (2016) conducted study on the inclusion of students with visual impairment at Addis Ababa University, Ethiopia: challenges and prospects. Finding from his study revealed that since inclusive education was introduced in Ethiopia as a mandatory approach only in 2006, it is still in its infancy stage, especially in higher education institutions. As a result, students with VI are currently learning and living in these institutions with little or no support from decision-makers and practitioners, because there are no well-organized support systems in place. This, in turn, causes a variety of challenging situations to students with VI for them to be successful in their higher education studies. He recommended as it is essential to focus on the importance of training staff members from a social model of disability perspective. If this is not done, too many students will not realize their God-given potential.

## **5. SUMMARY, CONCLUSION AND RECOMMENDATIONS**

In this last chapter, the researcher would like to state a summary of the study along with some concluding remarks on the findings and recommendations. This study deals with the academic challenges and support provision of students with visual impairment in higher education institution at Harames University. The recommendations are useful to make timely interventions by the selected study institution in order to enhance the academic performance of students with visual impairment.

### **5.1. Summary**

The findings of this study were organized in three objectives. The findings of these objectives were discussed as follows:

#### **5.1.1 The Academic Challenges of Students with Visual Impairment**

From the finding it can be seen that Students with Visual Impairment were faced by many Challenges such as inaccessibility of the environment in most inclusive settings that those students does not promote easily travel around and go wherever they want to go. This may serve as a barrier to the mobility of learners with visual impairment in the inclusive settings as they are likely to bump into objects. In addition most of lecturers, head of department and special needs education experts were not trained on special needs education.

Regarding to this finding revealed that the main issue to improve academic performance of learners with visual impairment is training of teachers on special needs and inclusive education and providing educational materials to learners with visual impairment. Besides to this lack of training and experiences on special needs education has more impacts in changing behavior, positive attitudes, adapting materials and giving flexible method of teaching to improve academic performance of learners with visual impairment. As revealed from this finding the lack of all mentioned above may the main cause of academic challenges for learners with visual impairment.

### **5.1.2 The support provided for students with VI**

From the findings, the special needs education experts interviewed agreed that although the materials were provided, however it were not enough for all students. The findings revealed that both lab and library in the institution were not well equipped with resources for students with visual impairment such as Braille course books and other books for further readings, audio recorders, magnifies, Braille machines(Braille printer), scanners, screen readers so that they could learn effectively which made it difficult for them to enjoy the library services this affected them more when they were expected to write their research projects, assignments and revisions at end of the semester examinations.

### **5.1.3 Responsibility of Stakeholders that working in Collaboration to Overcome the Academic Challenges of Students with VI.**

According to interview from special needs education experts; they have no information about the student's academic achievement, this means their activity were focusing only on provision of educational material and environmental arrangement for students with visual impairment. As they informed to researcher academic performance of those students with visual impairment were concerned their colleges as well as departments or their teachers in particularly. Finding revealed that there is lack of working in collaborationamongstakeholders to overcome the academic challenges of students with VI.

## **5.2. Conclusion**

The purpose of this study was to assess the academic challenges and support provision of students with visual impairment in higher education institution at Harames University. Hence, based on the findings of the study, the following conclusions are drawn:

The study indicated that the technical support when those students are learning classroom were less meets with their needs this means some teachers use visual teaching with the power point (e.g. maps and picture) and using pronounce when they comparing two or more things, for example they said, *while this is increase this is decrease, which one is more important this or this?* And students use only audio recorder with seating arrangements' no other available materials such as Braille, large print. When they were taking exam other sighed students were read to them that learning

different department from those students, this had also its own impacts, for example some students cannot write with correct spell due to this they miss some blank spaces and said I wrote it. On the other hand this shows lack of training teachers on special needs education and adapting learning materials.

This study indicated that, there were lack of flexible method of teaching, (e, g Attendance requirements, availability of programmed in various study modes (e.g. full-time, part-time, open learning mode, online), choice of modules and/or study elements), and environmental accessibility (indoor and outdoor arrangement) may improve the academic challenges of students with visual impairment.

The library in the institution was not well equipped with adequate services for learners with visual impairment. Besides, the librarian didn't show the necessary cooperation to them. From this one can say that unsatisfactory library service could bring negative impacts on academic performance of learners with visual impairment.

As showed from the lab in the institution was not well equipped with resources for students with visual impairment such as Braille course books and other books for further readings, audio recorders, magnifies, Braille machines (Braille printer), scanners, screen readers so that they could learn effectively which made it difficult for them to enjoy the library services this affected them more when they were expected to write their research projects, assignments and revisions at end of the semester examinations.

Lack of competence, training and support for teachers to develop their own skills, and development of integrated education should be attainable by institution. From this can conclude that lack of awareness and skills on teachers could bring negative impact on students' academic achievement.

They do not have much of a relationship among the all staff members of the university on the issue of special needs. From this one conclude that many of the staff members didn't play attention to provide smooth relationship with those students.

### 5.3. Recommendations

Depending on the findings and conclusions drawn, the following recommendations were made with the view that they would help to overcome the academic challenges of students with visual impairment in the higher education institution at Haramaya University.

The study indicated that the technical support when those students are learning classroom were less meets with their needs this means some teachers use visual teaching with the power point (e.g. maps and picture) and using pronounce when they comparing two or more things, for example they said, *while this is increase this is decrease, which one is more important this or this?* And students use only audio recorder with seating arrangements' no other available materials such as Braille, large print. When they were taking exam other sighed students were read to them that learning different department from those students, this had also its own impacts, for example some students cannot write with correct spell due to this they miss some blank spaces and said I wrote it.

On the other hand this shows lack of training teachers on special needs education and adapting learning materials. The institution should be consider and provide training to those stakeholders on technical support as to be meet with the learners needs and also the removal of the physical environment subsequently can enhance the overall education participation of students with visual impairment.

The libraries should be well equipped with Braille course books and other books for further readings. There was a need to provide each VI student with an assistive device such as recorders, magnifies, Braille machines and laptops so that they could learn effectively.

The lab in the institution should well equipped with resources for students with visual impairment such as Braille course books and other books for further readings, audio recorders, magnifies, Braille machines (Braille printer), scanners, screen readers so that they could learn effectively which made it difficult for them to enjoy the library services this affected them more when they were expected to write their research projects, assignments and revisions at end of the semester examinations.

Findings revealed that all lecturers who responded to questionnaire in research recommended that there was a need for all lecturers to be trained in SNE and there should be some short courses

organized for them to be taught how to read and write Braille and this could allow them to be able to mark their students' work and give them feedback on time without having to rely on the resource room personnel. There was an arguent need to adapt the curriculum, provision of teaching/learning resources that accommodate students with VI. The libraries should be well equipped with Braille course books and other books for further readings. There was a need to provide each VI student with an assistive device such as recorders, magnifies, Braille machines and laptops so that they could learn effectively. The lecturers felt that there was a need for employment of qualified technicians to repair the above mentioned materials on time when they broke down. Lecturers also felt that if classes were well organized with enough space between the desks they would be able to give individual attention to all learners. Buildings within the colleges should be adapted to allow easy accessibility for these students.

To provide satisfactory library service, the concerned bodies should prepare workshop, seminar, and orientation etc. for Braille librarians, in particular to acquaint them with the necessary techniques and methods of serving for SWVI. To avoid inadequate relevant and up to date materials such as Braille type writer, talking books, tape recorders, cassettes, Braille books, magazines, newspapers. These could be secured from Blind Associations. Embassies, British council, other humanitarian agencies found either in the country or abroad. Besides, means should be found out to increase the number of voluntary reader either from school or outside.

Therefore, lack of competence, training and support for teachers to develop their own skills, and lack of awareness may challenge teachers' to meet the need of students with visual impairment and development of inclusive education and also impacts on academic performance of students with VI. Hence, the studied institution should arrange professional development trainings to teachers.

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## **APPENDIX – A**

### **HARAMAYA UNIVERSITY**

#### **Postgraduate Program Directorate**

#### **Department of Special Needs and Inclusive Education**

##### **(Questionnaire for learners with visual impairments)**

Dear participants, the purpose of this questionnaire is to examine the academic challenges and support provision of students with visual impairment in Higher Education Institution at Haramaya University. Hence, you are kindly requested to respond to each item carefully and thoughtfully. Please, that the quality of the finding is dependent on the response you provide to each item genuinely. All the items raised here are equally important to attain the objectives of the study. Therefore, all response will be kept confidential and used only for the purpose of this research.

##### **General direction:**

- **You are not requested to write your name.**
- **Read the statements carefully.**

You are requested to show the extent of your agreement and disagreement on each statement by making one of the given options in a 5 point scale; strongly agree, agree, undecided, disagree and strongly disagree. Respondents are asked to place tick (√) mark on the space to show their level of agreement with each statement and briefly explain by filling the blank space provided. Giving clear and dependable feedback is highly important for the success of this study.

Please complete the questionnaire by responding to all questions. Information that you give will be kept confidential and only be used for the purpose of this study to improve academic of students with visual impairments in the higher education institutions.

**Section A; (Personal information).**

1. Age:

18yrs- 20yrs       21yrs-25yrs       26yrs-30yr       31yrs-35yrs

2. Sex:      Male       Female

3. Year of study:      2nd year       3rd year

4. Department:

SNIEAFa  romo      Gend       Law      

5. Age of onset;      Congenital       Acquired

6. Severe Level      Partial/ Low vision       Total blind

**Section B; Questions regarding to some major academic challenges and support provision of students with visual impairment**

**Instruction:** based on the specific statement indicated in the table below. Please tick where appropriate (✓) mark on the space to show their level of agreement with each statement that **SA = Strongly Agree, A= Agree, U = Undecided, D = Disagree and SD = Strongly Disagree.**

NO	Items	SA	A	U	D	SD
<b>A</b>	<b>Questions related to support provision for students with visual impairment</b>					
1	There is suitable provision of books and notes for learners with visual impairment					
2	There is availability of free technical aids / devices for students with visual impairment					
3	There is better access in classes for students with visual impairment					
4	There is better access in labs for students with visual impairment					
5	There is better access in libraries for students with visual impairment					
6	There is appropriate Screen reader equipment software in your computer labs at your institution					
7	There is appropriate scanner equipment software in your computer labs in your institution					
8	There is appropriate Braille printer equipment software in your computer labs at your institution					
9	There is appropriate Screen reader equipment software in your libraries at your institution					
10	There is appropriate scanner equipment software in your libraries at your institution					
11	There is appropriate Braille printer equipment software in your libraries at your institution					
12	There is technical support when you are learning classroom that meets their needs					
13	There is appropriate software that reads what is on the screen scanning / optical character recognition					
14	There are suitable labeling systems of the premises signage (e.g. enlarged signs, signs in Braille or audio system, outside the offices / secretariats / rooms, etc)					
15	There is software facility provided for students with visual impairment that improves the quality of writing (such as grammar and spell check, color and highlighting)					
16	There is suitable scanner / optical character recognition software for students with visual impairment that input of printed text to computer					
<b>NO</b>	<b>Items</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
<b>B</b>	<b>Questions related to academic challenges of students with visual impairment</b>					

1	There is no better informed teachers in order to enhance academic performance of learner with visual impairment					
2	There is no better behavior in order to enhance academic performance of learner with visual impairment					
3	There is no better cooperative teaching in order to enhance academic performance of learner with visual impairment					
4	There is no better change of attitudes of the teachers in order to enhance academic performance of learner with visual impairment					
5	There is no better building infrastructure for LWVI for lack of environmental accessibility					
6	Learner with visual impairment haven't more information on matters relating to the studies - information that is provided in an appropriate way in order to be accessible for learner with visual impairment					
7	The method of teaching are not manageable for learners with visual impairment to follow that teachers' teaching and collaborate with others					
8	There is no accessible environment for learners with visual impairment to easily travel around and go wherever they want to go					
9	Learners with visual impairment are not getting available educational support system from their lecturers					
10	Learners with visual impaired have difficulties when they study in the library due to the absence of screen reader					
11	Learners with visual impaired have difficulties when they study in the library due to the absence of audio system					
12	Learners with visual impaired have difficulties when they study in the library due to the absence of Braille printed					
13	Learners with visual impaired have difficulties when they study in the library due to the absence of scanner					
14	The method of teaching are not manageable for learners with visual impairment to follow teachers' teaching					
15	There are malfunctions reported, such as, that there are no paving tiles for learners with visual impairments					
16	The method of teaching are not manageable for learners with visual impairment to collaborate with others					

## APPENDIX – B

### HARAMAYA UNIVERSITY

#### Postgraduate Program Directorate

#### Department of Special Needs and Inclusive Education

##### (Questionnaire for class representative)

Dear participants, the purpose of this questionnaire is to examine the academic challenges and support provision of students with visual impairment in Higher Education Institution at Haramaya University. Hence, you are kindly requested to respond to each item carefully and thoughtfully. Please, that the quality of the finding is depending on the response you provide to each item genuinely. All the items raised here are equally important to attain the objectives of the study. Therefore, all response will be kept confidential and used only for the purpose of this research.

##### **General direction:**

- **You are not requested to write your name.**
- **Read the statements carefully.**

You are requested to show the extent of your agreement and disagreement on each statement by making one of the given options in a 5 point scale; strongly agree, agree, undecided, disagree and strongly disagree. Respondents are asked to place tick (√) mark on the space to show their level of agreement with each statement and briefly explain by filling the blank space provided. Giving clear and dependable feedback is highly important for the success of this study.

Please complete the questionnaire by responding to all questions. Information that you give will be kept confidential and will only be used for the purpose of this study to improve academic of students with visual impairments in the higher education institutions.

##### **Section A; (Personal information):**

1. Age: 18yrs- 20yrs  21yrs-25yrs  26yrs-30yrs  31yrs-35yrs
2. Sex: Male  Female

3. Year of study:      2nd year        3rd year   

4. Department:

SNIE        AFan/Oromo        Gender        Law   

**Section B; Questions regarding to some major academic challenges and support provision of students with visual impairment**

**Direction:** For each of the following statement, please, indicate your response by putting a tick mark where appropriate (✓) in the given space. **5. Strongly agree    4. Agree    3. Undecided    2. Disagree    1. Strongly disagree**

Table 10 Questions regarding to some major academic challenges and support provision for SWVI

NO	Items	SA	A	U	D	SD
A	Questions related to support provision for students with visual impairment					
1	There is suitable provision of books and notes for learners with visual impairment					
2	There is availability of free technical aids / devices for students with visual impairment					
3	There is better access in classes for students with visual impairment					
4	There is better access in labs for students with visual impairment					
5	There is better access in libraries for students with visual impairment					
6	There is appropriate screen reader equipment software in their computer labs at your institution					
7	There is appropriate scanner equipment software in their computer labs at your institution					
8	There is appropriate Braille printer equipment software in their computer labs at your institution					
9	There is appropriate Screen reader equipment software in libraries at your institution					
10	There is appropriate scanner equipment software in libraries at your institution					
11	There is appropriate Braille printer equipment software in libraries at your institution					
12	There is technical support when learners with visual impairment are learning classroom that meets their needs					
13	There is appropriate software that reads what is on the screen scanning / optical character recognition					
14	There are suitable labeling systems of the premises signage (e.g. enlarged signs, signs in Braille or audio system, outside the offices / secretariats / rooms, etc)					
15	There is software facility provided for learners with visual impairment that improves the quality of writing (such as grammar and spell check, color and highlighting)					

16	There is suitable scanner / optical character recognition software for them that input of printed text to computer					
----	--	--	--	--	--	--

NO	Items	SA	A	U	D	SD
<b>B</b>	<b>Questions related to academic challenges of students with visual impairment</b>					
1	There is no better informed teachers in order to enhance academic performance of learner with visual impairment					
2	There is no better behavior in order to enhance academic performance of learner with visual impairment					
3	There is no better cooperative teaching in order to enhance academic performance of learner with visual impairment					
4	There is no better change of attitudes of the teachers in order to enhance academic performance of learner with visual impairment					
5	There is no better building infrastructure and accessible spaces for learners with visual impairments					
6	Learner with visual impairment haven't more information on matters relating to the studies - information that is provided in an appropriate way in order to be accessible for learner with visual impairment					
7	The method of teaching that teachers using in the class room are not manageable for LWVI for lack of trainings on SNE					
8	There is no accessible environment for learners with visual impairment to easily travel around and go wherever they want to go					
9	Learners with visual impairment are not getting available educational support system from their lecturers					
10	Learners with visual impaired have difficulties when they study in the library due to the absence of screen reader					
11	Learners with visual impaired have difficulties when they study in the library due to the absence of audio system					
12	Learners with visual impaired have difficulties when they study in the library due to the absence of Braille printed					
13	Learners with visual impaired have difficulties when they study in the library due to the absence of scanner					
14	The method of teaching are not manageable for learners with visual impairment to follow teachers' teaching					
15	There are malfunctions reported, such as, that there are no paving tiles for people with visual impairments					
16	The method of teaching are not manageable for learners with visual impairment to collaborate with others					

## APPENDIX – C

### HARAMAYA UNIVERSITY

#### Postgraduate Program Directorate

#### Department of Special Needs and Inclusive Education

##### (Interview for Lecturers)

Dear participants, the purpose of this questionnaire is to examine the academic challenges and support provision of students with visual impairment in Higher Education Institution at Haramaya University. Hence, you are kindly requested to respond to each item carefully and thoughtfully. Please, that the quality of the finding is dependent on the response you provide to each item genuinely. All the items raised here are equally important to attain the objectives of the study. Therefore, all response will be kept confidential and used only for the purpose of this research.

The information that you give will be kept confidential and will be used for the purpose of this study to improve academic of students with visual impairments in the higher education institutions.

#### **Section A; (Personal information):**

1. Sex:    Male        Female   

2. Teaching experience

-5 years        6-10 years        11-15 years        +15 years   

2. Area of specialization:

SNIE        AF an/Oromo        Gender        Law

3. What level of training do you have on the special needs education?

Certificate  diploma  Degree  master degree and above

1. What kind of support do learners with visual impairment need in the University?
  - Do learners with visual impairment easily travel around and go wherever they want to go?
2. How did learners with visual impairment get support in learning skills such as Braille, orientation and mobility?
  - Do you feel these skills are sufficiently helping learners with visual impairment to learn independently?
3. What kind of learning materials and resources did learners with visual impairment need?
  - Did they get all needed materials and resources?
4. What did learners with visual impairment master well and not so well in study?
5. How do you explain the availability of individual curriculums for learners with visual impairment?
  - How did they follow the same curriculum as the others?
6. How did learners with visual impairment follow their teachers' during teaching learning process?
  - How do you explain working with collaboration with each other's and with non disabled students?
7. Did the help or support they got really help them with all the difficulties they had?
8. Can you think about some more examples of help or support they got is very important to them?
9. What are challenges do you feel that learners with visual impairments encounter in the inclusive classroom?
10. What kind of support do learners with visual impairment get during the exam?

## APPENDIX – D

### HARAMAYA UNIVERSITY

#### Postgraduate Program Directorate

#### Department of Special Needs and Inclusive Education

##### (Interview guide for head of department)

Dear participants, the purpose of this questionnaire is to examine the academic challenges and support provision of students with visual impairment in Higher Education Institution at Haramaya University. Hence, you are kindly requested to respond to each item carefully and thoughtfully. Please, that the quality of the finding is dependent on the response you provide to each item genuinely. All the items raised here are equally important to attain the objectives of the study. Therefore, all response will be kept confidential and used only for the purpose of this research.

The information that you give will be kept confidential and will be used for the purpose of this study to improve academic of students with visual impairments in the higher education institutions.

##### **Section A; (Personal information):**

1. Sex:    Male        Female   

2. Working experience on special needs education?

-5 years     6-10 years        11-15 years        15 years   

2. Area of specialization:

SNIE     AF an/Oromo     Gender     Law

3. What level of training do you have on the special needs education?

Certificate  diploma  Degree  master degree and above

1. What kind of support do learners with visual impairment need in the University?

- Do learners with visual impairment easily travel around and go wherever they want to go?
2. How did learners with visual impairment get support in learning skills such as Braille, orientation and mobility?
    - Do you feel these skills are sufficiently helping learners with visual impairment to learn independently?
  3. What kind of learning materials and resources did learners with visual impairment need?
    - Did they get all needed materials and resources?
  4. What did learners with visual impairment master well and not so well in study?
  5. How do you explain the availability of individual curriculums for learners with visual impairment?
    - How did they follow the same curriculum as the others?
  6. How did learners with visual impairment follow their teachers' during teaching learning process?
    - How do you explain working with collaboration with each other's and with non disabled students?
  7. Did the help or support they got really help them with all the difficulties they had?
  8. Can you think about some more examples of help or support they got is very important to them?
  9. What are challenges do you feel that learners with visual impairments encounter in the inclusive classroom?
  10. What kind of support do learners with visual impairment get during the exam?

## APPENDIX – E

### HARAMAYA UNIVERSITY

#### Postgraduate Program Directorate

#### Department of Special Needs and Inclusive Education

##### (Interview guide for special needs education experts)

Dear participants, the purpose of this questionnaire is to examine the academic challenges and support provision of students with visual impairment in Higher Education Institution at Haramaya University. Hence, you are kindly requested to respond to each item carefully and thoughtfully. Please, that the quality of the finding is dependent on the response you provide to each item genuinely. All the items raised here are equally important to attain the objectives of the study. Therefore, all response will be kept confidential and used only for the purpose of this research.

The information that you give will be kept confidential and will be used for the purpose of this study to improve academic of students with visual impairments in the higher education institutions.

#### Section A; (Personal information):

1. Sex: Male  Female

2. Working experience on special needs education?

-5 years  6-10 years  11-15 years  15 years

2. Area of specialization:

SNIE  AF an/Oromo  Gender  Law  another field

3. What level of training do you have on the special needs education?

Certificate  diploma  Degree  Master degree and above

1. How do you coordinate and provide support for students with visual impairment exclusively from non disabled?
2. How do you explain the collaboration among responsible stakeholders in order to coordinate and provide support for students with visual impairment?
  - In what way your office working with departments and lecturers?
3. How do you explain the availability of qualified staff for coordinate and provide support for students with visual impairment?
4. How do you explain the responsibility of your office in order to coordinate and support provide for students with visual impairment?
5. What activities are planned and implemented in your office to enhance the academic performance of learner with visual impairment?
6. What do you consider as the major achievements of learner with visual impairment?
7. What are the major challenges encountered when you coordinating and providing support for learner with visual impairment?

## APPENDIX – F

### HARAMAYA UNIVERSITY

#### Postgraduate Program Directorate

#### Department of Special Needs and Inclusive Education

#### (Observation schedule check list of Teacher's teaching method& physical environment)

The purpose of this Observation is to check how the answer of the other instruments' are accurate, that to examine the academic challenges and support provision of students with visual impairment in Higher Education Institution at Haramaya University. This information will be used for the purpose of this study to improve academic of students with visual impairments in the higher education institutions.

**Table 11 Observation schedule check list regarding to teaching method & physical environment**

**1= not at all    2= poor    3= medium    4= good    5= very good**

No	Teaching method	Rating scale				
		1	2	3	4	5
1	Extra time allowance					
2	Sound projection					
3	The use of teaching materials e.g. visual and audio devices and tactile materials					
4	Encouraging of the learning devices					
5	Adapting written texts					
	<b>Physical environment observed</b>					
6	Safe moving ground					
7	Availability sanitation/ water, toilet etc./					
8	Availability of seating arrangement					