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List of Abbreviations and Acronyms

ADB – Asian Development Bank

AT - Assistive Technology

ICF - International Classification of Functioning, Disability and Health

DfES – Development for Education and Skills

EFA – Education For All

EMoE – Ethiopian Ministry of Education

ESDP – Education Sector Development Program

FDRE – Federal democratic Republic of Ethiopia

HE – Higher Education

HEA – Higher Education Academy

HEI – Higher Education Institution

ICT – Information Communication Technology

JAWS - Job Access With Speech

NMHCCF - National Mental Health Consumer & Carer Forum

OECD – Organization for Economic Co-operation and Development

PPCT - Process-Person-Context-Time

SENDA – Special Educational Needs and Disability Act

UDL – Universal Design for Learning

UNESCO – United Nations Educational, Scientific and Cultural Organization

UNICEF – United Nations Children's Fund

UNISA – University of South Africa

SVI - Students with Visual Impairments

WHO – World Health Organization

CHAPTER ONE
INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

This study is about the inclusive higher education system in Ethiopia. With the expansion of education in Ethiopia, the number of students with visual impairments (SVI) at higher education institutions is increasing. Mekelle University, one of the regional universities in the country, for example, had 24 blind students in the 2010/2011 academic year when the study was initiated. When we speak of inclusive education, however, it is important to include not only accessibility to educational institutions but also the quality of the educational experiences which the SVI are provided (UNESCO 2009). The curriculum of higher education institutions has to be equally accessible and relevant to all students including those with visual impairments. This includes the curriculum content, the instructional approaches used to convey the content, the curricular materials, as well as the assessment mechanisms used (Acedo, Amadio & Opertti 2008). This study investigates the extent to which the curricula of two public universities in Ethiopia were accessible and relevant to SVI, primarily from the perspectives of the students themselves.

1.2 Background to the study

The number of persons with disabilities constitutes a significant proportion of the population of developing countries (UNICEF 2007) including Ethiopia. According to the baseline survey of 1995, reported by Tirusew (2005), about 2.75% (1.5 million) of the Ethiopian population had disabilities, and 30% (about 0.5 million) of them were visually impaired. This section of the population is reported to have been denied equal access to education. The gravity of this situation is underscored in the Global Monitoring Report on Education For All (EFA) which states that "children with disabilities are only half as likely to be in school as their non-disabled peers" (UNESCO 2007: 48). As Lewis (2009) claims, the majority of children with visual impairments in Ethiopia do not get access to education and many of those who get the opportunity to be enrolled in schools are forced to drop out because of various problems and challenges they face

in the system. Therefore, addressing the educational needs of disabled persons in general and that of SVI in particular is an issue that requires urgent attention of any education system.

Starting from the early 1990s onwards, a new approach towards the education of students with disabilities and other marginalized groups known as inclusive education has been gaining ground. Inclusive education is based on the principle that "ordinary schools should accommodate all children, regardless of their physical, intellectual, emotional, social, linguistic or other conditions" (UNESCO 1994: 6). This principle was adopted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) at the 1994 Salamanca World Conference on Special Needs Education in Spain (UNESCO 1994). Six years later, in a World Education Forum held in Dakar, national governments reaffirmed their commitment to design and implement policies that promote inclusive education (UNESCO 2000). As a result of this, countries have put the idea of inclusive education as a priority in their political agendas and have taken different legal and political measures towards its implementation.

Although many developing countries have recognized inclusive education as a desirable form of education for individuals with disabilities and adopted inclusion at a policy level, it is not satisfactorily implemented in most countries (Acedo, Omadio & Opertti 2008; Lewis 2009; Haihambo 2010; UNESCO 2006, in ADB 2010). Their curricula are often neither sufficiently flexible nor inclusive to meet the needs of students with disabilities and instructors are not well prepared to handle inclusive classrooms effectively. Various researchers have found out that most students with disabilities at the tertiary level of education, including those with visual impairments, receive no special support while they take their courses (Eleweke & Rodda 2000; ADB 2010).

In order to understand inclusive curriculum, first we need to describe the general concept of curriculum although educational literature does not provide us with a universally accepted definition. In this regard, Print (1993) writes that educators in the field have failed to agree on an appropriate definition of the concept because of differences in perceptions of what curriculum should be. Thus, some educators have defined curriculum in terms of a plan for students' learning (Oliva 1992; Saylor, Alexander & Lewis 1981). Others have equated curriculum with planned learning experiences (Eisner 1979; Hass 1987); and still other educators have used

curriculum to refer to the intended learning outcomes (Wiles & Bondi 1989; Popham & Baker 1970). Glatthorn, Boschee & Whitehead (2006: 5) provide a more comprehensive definition:

> The Curriculum is the plans [sic] made for guiding learning in schools, usually represented in retrievable documents of several levels of generality, and the actualization of those plans in the classroom, as experienced by the learners and as recorded by an observer; those experiences take place in a learning environment which also influences what is learned.

This study adopts the definition that has been provided by Print (1993: 9), which is similar to that of Glatthorn *et al.* (2006), in its incorporation of both the plans for learning and teaching as well as the actualization of those plans. Thus, for the purposes of this study, curriculum means "all the planned learning opportunities offered to learners by the educational institution and the experiences learners encounter when the curriculum is implemented".

The plan that is designed to provide learning opportunities to learners includes the following key curriculum elements: learning objectives, content, instructional strategies, assessment mechanisms and teaching and learning resources. These elements are the aspects of the curriculum where modifications and adaptations can be made so as to make it more inclusive to all learners in a classroom (Powell 2003; UNESCO 1999; Acedo *et al.* 2008; Kearney 2009). Hence, these areas are the main focal points in this investigation.

UNESCO (2001a) makes distinctions between curriculum adaptations and curriculum modifications. The 2001 document states that curriculum adaptation is a change that is made within the context of the mainstream curriculum where teaching will be individualized by providing relevant learning materials and using differentiated instructional approaches. Curriculum modification refers to a change in the curriculum made by adding or substituting a course or course content so as to meet individual needs.

If inclusive education policy is to be successfully implemented, first and foremost there has to be a change in the curriculum in a way that will address the needs of all students in the classroom. To this end, the curriculum should be designed in a way that it can be accessible to any group of students. As Byers (cited in Rose 2006) suggests, the curriculum must provide opportunities for effective learning for all students including those with special needs. This may require a different

or greater emphasis on certain aspects of the curriculum so as to address the needs of certain groups of students. This can be achieved best if the curriculum is flexible enough to allow schools and classroom instructors to make adaptations to it. UNESCO (2003:16), based on the results of research on different inclusive education practices, has identified the following features of an inclusive curriculum:

- It has broad common goals defined for all, including the knowledge, skills and values to be acquired.
- It has a flexible structure to facilitate responding to the diversity and providing diverse opportunities for practice and performance in terms of content, methods and level of participation.
- It contains learning assessment based on students' individual progress.
- It acknowledges the cultural, religious and linguistic diversity of learners.
- It is based on content, knowledge and skills that are relevant to learners' context.

Since we focus on inclusive curriculum at the higher education level and its relevance specifically for learners with visual impairment, we now turn to the definition of visual impairment as used in this study. Different definitions are provided for visual impairment by different bodies and scholars (UNESCO 2001b; Candido 2008; Jones, Minogue, Oppewal, Cook, & Broadwell 2006; McKenzie 2009). Educationally, visual impairment is classified as moderate, severe or profound (Mnyanyi 2008). This classification is based on the level of special support students require in order to learn in inclusive classrooms. The sight problems of those students with moderate visual disability can be almost entirely corrected with the help of visual devices such as eyeglasses. In the case of students with severe visual disability, only slight corrections can be made in their problems with visual devices; however they can still use vision as their primary channel for learning (Douglas & McLinden 2005). A student with a profound visual disability cannot depend on his/her eyes during the educational process; his/her principal channels of learning are touch and hearing (Mnyanyi 2008). In the context of this study, visual impairment refers to those students with profound visual disability and hence cannot depend on their eyes for learning.

Students with visual impairments are admitted and registered at the same institutions of higher education as those without disabilities despite the different problems and challenges they face. In a traditional higher education classroom where lecturing is a predominant instructional strategy, a large amount of information is delivered visually through the use of blackboards, whiteboards, transparencies and power point slides. In such a situation, a student with visual impairment may be at a significant disadvantage academically if adjustments are not made to make the curriculum more accessible. Powell (2003) states that if students with visual impairments are to participate fully in the teaching and learning process, among many other considerations, certain adaptations and modifications have to be made to the regular curriculum.

Different surveys indicate that the number of students with disabilities, including those with visual impairments who are enrolled in higher education institutions, is on the rise (Ethiopian Ministry of Education, EMoE, 2010). A World Vision Report of 2007 shows that there were around 250 blind students in the HEIs of Ethiopia (Lewis 2009). In recent years, the Ethiopian government has undertaken some legal and political measures that recognize the rights of persons with disabilities to education. For instance, its Education and Training Policy of 1994 recognized the special needs of students with disabilities (EMoE 1994). The EMoE has developed a Special Needs Education National Strategy in 2006 to ensure access and quality education for all. Furthermore, inclusive education was endorsed in the Education Sector Development Program III (ESDP III) of 2005/2006 – 2010/2011, (EMoE 2005). In the ESDP IV document of 2010/2011 – 2014/2015, barriers to inclusive education were highlighted and strategies were outlined in its implementation (EMoE 2010).

However, little has been accomplished regarding the quality of instruction that students with disabilities get. Tirusew (2005) stated that the problems and needs of students with disabilities were not recognized or attended to. The main barriers, in many countries, according to a UNESCO Report (2007) are:

- lack of knowledge about diversity,
- inflexibility of the curriculum,
- insufficient preparation of instructors and education leaders,
- rigid and poor teaching methods,

- inconvenient learning environments,
- lack of need assessment processes, and
- inadequate assessment procedures.

This means that if there is to be any actual progress towards full inclusion, it is mandatory that the actual learning experiences of the participants be investigated. According to Roy (cited in Powel 2003:78), "Visually impaired students should be listened to: they can speak directly from their own experiences, their learning strategies employed at school, college and in daily life".

Most of the research on inclusive education has focused on primary and secondary levels (Hanley-Maxwell 2006; Bourke 2008; Kearney 2009). The limited research on inclusive education focusing on tertiary education is criticized as having been confined to institutional and policy-making issues which disregard many variables that affect the nature and quality of the provision of education to learners with disabilities (Hadjikakou & Hartas 2009; Healey 2009).

In light of these circumstances, it is highly imperative that the actual learning experiences of the students with visual impairments in higher education classrooms be investigated. For that reason, this study seeks to address aspects of this need by exploring the accessibility of the university curricula to students with visual impairments.

1.3 Significance of the study

The researcher did not come across any studies that intensively explore the learning experiences of students with disabilities in HEIs of Ethiopia. Therefore, the current research intends to fill in this gap by providing tangible data derived primarily from the voices of the students themselves. It is hoped that this research will assist educational managers in HEIs of the country to become aware of the unequal treatment to which students with visual impairments are subjected leading to appropriate actions to mitigate the challenges. Similarly, the results of this study are expected to help instructors to recognize the challenges of students with visual impairments, learn and re-examine the inclusiveness of their instructional practices and, as a result, consider more appropriate pedagogical approaches.

It is also possible that the students themselves are not fully aware that their rights to educational opportunity and quality are equal to their non-disabled peers. It is the belief of the researcher that if disabled learners had been aware of such imperatives, they would have exerted pressure on the universities' management and on their instructors demanding equal treatment. Therefore, it is hoped that the results of this study will also be informative to students with visual impairments, and to students with other types of impairment, regarding their full range of educational rights. This, in turn, may lead to increased and sustained advocacy on their behalf and the realization of rights to equal educational opportunity.

Finally, it is the belief of the researcher that the study will contribute to the existing body of literature in the area of inclusive education and serve as a springboard for further more comprehensive research.

1.4 Statement of the problem and research questions

Since the turn of the 21st century, Ethiopia has witnessed a fast and tremendous expansion in higher education. The number of newly opened universities has steadily increased and the size of students' enrolment has grown every year. Similarly, the number of students with visual impairments who join higher education institutions (HEIs) has also increased.

This expansion, however, has overstretched the resources of HEIs to address provisions related to quality. There has been a shortage of well qualified and experienced instructors. There has also been a serious shortage of very basic facilities for the learning and teaching process. Classrooms were overcrowded with too many students.

In this situation it is hard to envisage that the educational needs of students with disabilities would be catered for. Based on his observations, the researcher was of the opinion that the quality of the learning opportunities students with sensory impairments were provided in these institutions was far from being equal with those who did not have impairments. Students with visual impairments were provided with minimal support to make their learning experiences relevant and effective. Of note is that instructors were not given any training on how to make instruction inclusive for students with visual impairments; nor were the instructors aware of

either the full range of difficulties that face these students or their special responsibilities for addressing these difficulties. In addition, the researcher felt that HEIs in the country do not have clearly stated guidelines on how to make instructional processes inclusive for the diverse needs in the classroom and there is no way in which instructors will be made accountable for the effectiveness of their instruction in relation to students with special needs.

This being the case, empirical research is needed to examine the realities of the classroom situation that will be crucial in informing educational managers and educators so that they can develop effective inclusive instructional practices.

This research is a qualitative study that investigates the curriculum experiences of the SVI in HEIs. The **main question** that this study addressed is: "**How do students with visual impairments in Ethiopian higher education institutions experience the curricula?**"

The specific questions that this study has attempted to answer are:

- What are the views of SVI about the inclusiveness of the objectives, content and assessment strategies of curricula in the HEIs?
- How do SVI experience pedagogy in their classrooms?

1.5 Objectives of the study

For the effective development of an inclusive education system in higher education, it is crucial to have an in-depth understanding of the perceptions of the SVI on the existing instructional practices in HEIs. The **main objective** of this study was, therefore:

- **To investigate the curriculum experiences of SVI in Ethiopian HEIs**.

The specific objectives of the study were:

- To determine the appropriateness of the curriculum objectives and contents to SVI.
- To establish the views of SVI towards their curriculum experiences
- To specify and describe the main challenges SVI face in their interaction with the curricula
- To assess the appropriateness of the mechanisms employed to assess the learning of SVI

1.6 Research design and methodology

A detailed description of the research design and methodology employed in this study is presented in chapter four. Therefore, this section briefly describes a short summary of the research design and the procedures to be followed.

This research focuses on investigating the curriculum experiences of students with visual impairments. This type of investigation requires data collected from the personal accounts of the participants of the study. Therefore, the research approach to be used in this study is qualitative (Stake 2010). Another reason for using this approach is the low prevalence rate of SVI in HEIs which makes it difficult to reach statistically valid conclusions if quantitative methods are used, which is the goal of this type of research.

The population of this study includes all students with profound visual impairments, hence students who do not depend on their eyes for learning (Mnyanyi 2008), in the two HEIs where the study is conducted. The two HEIs were selected on the basis of their proximity to the investigator as well as the number of students with profound visual impairments they enrolled. From each institution, 10 SVI were selected to participate in the study based on the purposive sampling technique. In addition, five instructors who have SVI in their classes were selected to participate in the study based on the snowball sampling technique. All heads of departments/schools and college deans with SVI enrolled as well as coordinators of disability/students' services centers were also involved in the study.

Since the primary objective of this research is to investigate and describe the self-declared experiences of the participants of the study, the primary data collection method used was interview. Thus, individual interviews were conducted with SVI, instructors with SVI in their classes, department/school heads, college deans and coordinators of disability/students' services centers. The interviews were conducted using the Ethiopian official language, Amharic, which was audio-taped and transcribed verbatim to English. In addition to the interviews, data were collected through observations on the situations (classrooms and libraries) where students are supposed to have much of their interactions with the curriculum so as to have a full understanding of the phenomena under investigation.

In this research, a strategy known as typological analysis was applied that starts by identifying some general categories under which the whole data of the study are classified (LeCompte & Preissle 1993, in Hatch 2002). In this study, the major curriculum elements serve as initial categories under which the totality of the data in relation to the curriculum experiences of students with visual impairments are analyzed. These categories were later enriched once the data analysis was started based on the emergent codes.

1.7 Definition of key concepts

Accessible curriculum: This concept is used in the literature in reference to a curriculum which allows flexibility in order that instructors can make reasonable adjustments to meet the educational needs of individual learners in the classroom. The elements of curriculum where these adjustments can be made include contents, methods of delivery, and assessment mechanisms (Teachability 2000; UNESCO 2005; UNESCO 2009).

Accessible curriculum in the context of this research refers to an instructional situation where all possible adaptations and modifications are made to maximize the learning experience of SVI in higher education.

Assistive technology: This concept is used to describe the "devices and services that lessen or remove barriers faced by persons with disabilities" (Encyclopedia of Education 2002: 149). Similarly, Stodden, Whelley, Chang and Harding (2001: 190) define this concept as any device that "enhances the capacity of a person to function in his or her environment". Garner (2009) describes this concept in terms of a mechanism of using technology to make the learning environment more accessible to students with special needs.

In the context of this study, it refers to the devices that can be used to facilitate the learning of SVI such as Braille, tape recorders and note-takers.

Bi-directional interactions: According to Bronfenbrenner's bio-ecological systems theory, the term bio-directional interactions is used to refer to the relationship that exists between the

developing individual and his/her environment and ecology. In this regard, Smith (2011: 2) writes that "individuals are active in their development through selective patterns of attention, action and responses with people, objects and symbols from within their environment". This bi-directionality also refers to the fact that the growing individual will influence his/her environment as much as he/she will be influenced by the environment.

Curriculum: Various educators have defined curriculum in different ways. Some of these definitions limit the meaning of curriculum to certain aspects of the learning and teaching process, whereas others are more inclusive of the different instructional elements. Among the broader definitions are those that are provided by Eisner (1979), Print (1993) and Skilbeck (1984) which encompass the planning elements of the teaching and learning process as well as the implementation of those plans. Print (Ibid: 9), for instance, defines curriculum as "all the planned learning opportunities offered to learners by the educational institution and the experiences learners encounter when the curriculum is implemented".

Schiro (1978: 24-25) provides another perspective on curriculum conceptualization claiming that the following three viewpoints are used by many curriculum specialists to understand the concept: "curriculum as object, curriculum as interaction, or curriculum as intent". Curriculum as object refers to the different curricular materials such as textbooks, syllabi, activity cards, or program of studies. Curriculum as interaction is meant to include "all of the planned learning experiences students encounter within the school, a series of activities in which students participate …" The set of intended learning outcomes a school plans and tries to achieve in its students refers to the notion of 'curriculum as intent'.

Curriculum in this research refers to all the instructional plans that are intended to bring about students' learning as well as the actualization of these plans. It is a composite whole including the objectives of the program, the contents of learning, the teaching and learning methodologies, students' learning experiences, the different materials that are identified and used to enrich the teaching and learning process, and the different mechanisms that are used to monitor and check students' learning.

Curriculum modification and curriculum adaptation: The concepts are described in the educational literature differently. In two widely cited sources, UNESCO (2001a) and Koga and Hall (2004), however, we find somehow similar definitions. Thus, curriculum modification is described as a wider concept to refer to "continuum of a wide range of educational components" (Koga & Hall 2004). It may include a change or a substitution of course content or a new course altogether to address the needs of individual learners (UNESCO 2001b). Curriculum adaptation, on the other hand, is a form of modification where changes are made in the methods of instruction, assessment mechanisms and instructional materials in order to create conducive learning environments for all learners (Ibid; Koga & Hall 2004).

In the context of the current study curriculum modification and curriculum adaptations are used on the basis of the distinctions described above in terms of the alterations that can be made on the curricula of higher education institutions to make them relevant and effective for SVI.

Disability: As the World Bank has suggested, "when individuals with different levels of functioning encounter barriers to health services, education, employment, public services, and infrastructure, they are disabled….. [D]isability is thus an interaction between human functioning and an environment which does not account for different levels of functioning" (UNESCO 2004: 12). The WHO International Classification (2001) defined disability as the outcome of the interaction between a person with an impairment (long-term/permanent loss of physical, mental or sensory function) and the personal and environmental and other barriers he/she may face, and focuses on the implications of impairment for functioning in a variety of contexts and for a range of purposes.

The above description is based on the social model of disability. Since this model is one of the underlying theories of this research, disability is used to refer to a situation where SVI are denied by the education system the opportunity to develop themselves to their full potential.

Exclusion: Although exclusion does have varieties of meanings, in the context of inclusive education it refers to "Those temporary or longer lasting pressures which get in the way of full participation. This might result from difficulties in relationships or with what is taught, as well as from feelings of not being valued" (Booth 2002: 2). Kearney (2009) supports this definition

explaining that exclusion has the opposite meaning of inclusion; where there is an education system which is not inclusive, there is exclusion.

In this study, exclusion also refers to a situation where SVI do not get equal opportunity to participate in the mainstream curriculum. It has the same meaning as marginalization and therefore the two are used interchangeably.

Impairment: Disabled Persons International (cited in Peters 2003: 12) defines impairment as "the loss or limitation of physical, mental or sensory function on a long term or permanent basis". Booth (2002: 6) gives a similar definition: "a long term limitation of physical, intellectual or sensory function".

Likewise, impairment in this study is used for a situation where students have lost their sensory function, particularly their sense of vision, and have difficulty to effectively use the curriculum unless appropriate adaptations and modifications are made.

Inclusion and inclusive education: Literature has described concepts of inclusion and inclusive education in the same way. UNESCO (2003: 7) defines inclusion as:

> a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion within and from education. It involves changes and modifications in content, approaches, structures and strategies, with a common vision which covers all children of the appropriate age range and a conviction that it is the responsibility of the regular system to educate all children.

Ainscow, Booth and Dyson (2006: 5) describe inclusion as an 'approach to education' that is "concerned with all learners and with overcoming barriers to all forms of marginalization, exclusion and underachievement". Similarly, inclusive education is defined as "a process that involves the transformation of schools and other centers of learning to cater for all children … and to provide learning opportunities for all youth and adults as well" (UNESCO 2009: 4).

Therefore, in this study inclusion and inclusive education are used interchangeably in reference to an instructional process where all possible accommodations are made so that SVI will have the opportunity for increased participation and ultimately enhance their learning.

Medical model of disability: This view which equates disability with impairment, holds the belief that the individual person's physical or mental problems are the causes of disablement and, therefore, the solution lies in restoring the 'normal functioning' of the physical or mental body by medical personnel (Albert 2004; Carson 2009). Similarly, Kearney (2009) states that the social model views disability as an individual deficit; in order to cure this disability, the change has to be made on the disabled person and not in the environment or the society.

In this research, the medical model of disability is used in reference to a situation where the disabling barriers of SVI in HEIs are perceived to reside in the individual students' sensory limitations. Therefore, the students are required to fit into the university system rather than making all possible adjustments in the system to meet the needs of those students.

Social model of disability: This concept refers to a perspective towards disability that holds the view that disability is a result of the limitations imposed by social, cultural, economic, and environmental barriers (Ainscow & Booth 2002; Carson 2009; UNICEF 2007). Singal (2007: 9) describes this perspective towards disability as a "social outcome of a physical, sensory and/or mental impairment". Albert (2004) further elaborates this perspective writing that disability is a 'socio-political issue' concerned with 'discrimination and exclusion' and the solution to this problem mainly focuses on the removal of the disabling barriers.

In the context of this study, the social model of disability is used to refer to the institutional and environmental factors that prevent SVI in HEIs from fully participating in the learning process so as to develop their potential to its maximum. It specifically focuses on the disabling barriers that may exist in the curriculum objectives and contents, the instructional process, instructional resources and the assessment mechanism.

Visual impairment: This can be generally defined as any degree of vision loss that affects an individual's ability to perform the tasks of daily life, caused by a visual system that is not working properly or not formed correctly" (Holbrook & Koenig 2000: 321). It can range from minor sight problems such as short or long sightedness to total blindness (Salisbury 2008; Garner 2009).

In this study, however, visual impairment is used in reference to a situation where the student is not in a position to use vision for learning purposes. It refers to students who are either blind or their vision is so low that they cannot depend on it for the purpose of learning.

1.8 Delimitations

If inclusive education is to be a reality, there is a need for making a wide range of reforms and adjustments in the education system, including "curricula, organizational arrangements, teaching strategies, resource cases, and partnership with their communities" (UNESCO 1994: 12). Due to this, a comprehensive study in the area of inclusive education requires the collection of data from a multiplicity of sources, including, but not limited to, the students themselves, the institutional management body, the instructors, student support service. This study, however, is delimited to the investigation of the learning experiences of students with visual impairments. Relevant data are collected from the students themselves, their instructors, college deans and disability/students' services center coordinators through individual interviews. In addition, observations are conducted in the major venues where SVI are expected to be actively engaged in a learning process.

Apart from its focus on the academic processes, this study did not investigate any other issue that would have an effect on the academic and social life of the SVI. It does not address questions as to whether the infrastructure of the HEIs is user-friendly to those students or not; nor does it explore their problems of socialization.

Finally, the study is confined to public universities that offer undergraduate programs. Private higher education institutions are not considered and no data are collected in relation to post graduate programs.

1.9 Chapter divisions of the study

This thesis is organized into six chapters as follows:

Chapter One: This chapter starts describing the overall situation of SVI attending higher education institutions which serves as a background of the study. This is followed by a

description of the significance of the study, and then the problem statement which is an investigation of the learning experiences of the subjects of the study during their stay in their respective universities. Based on this, the basic question the study tries to answer as well as the aims and objectives of the study are described. This chapter also includes a short description of the key concepts that are used in the study as well as its delimitation.

Chapter Two: In this chapter, related literature that informs and supports the objectives of the study are explored. This focuses on approaches of organizing higher education curricula in ways that will make them more relevant and appropriate to the learning needs of SVI.

Chapter Three: In the third chapter, the theoretical frames that underpin the research, including theories of inclusion, theories of disability and bio-ecological systems theory are discussed.

Chapter Four: The fourth chapter provides detailed critical illumination on qualitative research design which is selected as the appropriate methodology for this research project. It explores the methods and procedures that were used to conduct the research, including the design of the study, population of the study, research participants and their selection process, instruments and procedures of data collection, data analysis techniques, as well as issues of validity, reliability and ethical considerations.

Chapter Five: In the fifth chapter, discussions of the learning experiences of SVI in Ethiopian HEIs are reported as the results of the study.

Chapter Six: The final chapter consists of summaries and conclusions of the study and recommendations as to what should be done to make the curricula of Ethiopian HEIs more inclusive to the learning needs of SVI.

1.10 Concluding remarks

In conclusion, Chapter One has given a general overview of what the research is all about and the methodologies followed. It started by describing the background leading up to the need to conduct research on the learning experiences of SVI in HEIs of the country. This was followed by a description of the significance of conducting the study, statement of the problem, basic

research questions and objectives of the study. Further on, the methodology followed in conducting the study was briefly outlined. Finally, the major concepts used in the study were defined in this chapter, the study demarcated and the chapters of the thesis outlined. The following chapter reviews literature relevant to the current study.

CHAPTER TWO

LITERTURE REVIEW

2.1 Introduction

The main purpose of this study is to investigate the learning experiences of students with visual impairments in the HEIs of Ethiopia. Starting from the last decade of the 20th century, there have been many developments in the area of higher education throughout the world, which have also greatly affected the education of students with disabilities. The wave of these developments has also been felt in Ethiopia. In this chapter, literature related to some of those developments in policies and practices of higher education that have had an influence on the learning of students with disabilities are reviewed. The first part of the chapter reviews literature on the higher education system that has major implications to inclusive education. It begins with a brief review of some of the major trends in the global HE system, followed by a brief description of inclusive HE and, finally, an overview of the development of Ethiopian HE. The second part of the literature review deals with the accessibility of HE curriculum, which is the central focus of the study. Literature regarding conceptions of curriculum is briefly reviewed. Possible curriculum accommodations for students with disabilities in general and SVI in particular based on experiences from different HE systems are then synthesized. Finally, the learning experiences of students with disabilities from different HEIs as evidenced from different research literature are reviewed.

2.2 The higher education system

This section discusses three themes that have major implications for inclusive curriculum practices in the HEIs of Ethiopia. First, some major trends in the higher education system are highlighted. Then, inclusive education pertaining to higher education is discussed. Finally, the historical development of HE in Ethiopia and its current status, especially with regard to inclusion of students with disabilities, is briefly reviewed.

2.2.1 Current trends in HE that have implications for the curriculum

Starting from the last decade of the 20th century, the global HE system underwent many changes that have had a profound effect on the curricula (Bridges 2000; Dezure 2002). These changes were implemented in response to pressures and criticisms from different stakeholders in the society as well as due to other developments in the socio-economic arena. Employers criticized the adequacy of the skills of new graduates to perform their assigned tasks (Ashwin 2006: 8; Barnett 2011: 4). These graduates were also reported to have disengaged themselves from civic life of the society (Dezure 2002). As a result, different stakeholders including government agencies, state boards and professional associations called for increased accountability for HEIs. There were also new conceptions in relation to learning and teaching based on new research findings. This included a shift of emphasis from "what instructors do to what students learn" (Ibid: 2). In addition, new issues emerged that needed to be addressed by the curriculum. For example, student populations became diversified and their needs could not be met through the traditional approaches and Information Communication Technology (ICT) now occupied a key role in the process of teaching and learning. Thus this section briefly reviews existing literature in relation to those changes in the higher education system in order to provide a clear understanding of the context in which inclusive education is implemented in HEIs.

i. Massification of higher education

Starting from the 1980s there has been a huge expansion of higher education which was manifested in a rapid increase in the number of students joining HEIs and the establishment of many new universities (Altbach, Reisberg & Rumbley 2009: 6). In the Global Educational Digest (2009: 10) it was reported that the increase of student population in HEIs has been particularly intense since the turn of the current century with 51.7 million new enrolments around the world in just seven years. This report further shows that Africa has had the highest average regional growth rate that reached 10% in the years 2000-2005.

This trend in HE expansion is highly evident in the Ethiopian situation as well. In the five year period from 2006/07 – 2010/11 the number of students enrolled in undergraduate programs increased from 203,399 to 447,693 with an average annual growth rate of 21.8% (EMoE 2011:

60). The number of degree-offering HEIs in 2000 was only two. In ten years' time the number of HEIs increased to 22 and there are nine additional universities under construction with a total enrolment capacity of 121,500. These universities are expected to be fully functional (some of them have already started accepting students at a limited scale) by the academic year 2014/15 (EMoE 2010: 66). These data clearly show the tremendous expansion Ethiopia is experiencing in the HE sector.

However, these developments have serious implications for the quality of education in general and the provisions for students with disabilities in particular. In this regard, Ashwin (2006: 4) asserts that with the expansion of students in the British HE system, the amount of resources available to support learning and teaching had considerably decreased in the last quarter of the 20th Century. Similarly, Altbach *et al*. (2009: 19) also observe that the massification in HE has resulted in the decline of the average qualification levels of instructors in those institutions. Thus, many of the instructors in HEIs of developing countries are said to possess only a bachelor's degree and a significant number of others are employed part-time. In this regard The World Bank (2002: 58) reports that:

> Many universities operate with overcrowded and deteriorating physical facilities, limited and obsolete library resources, insufficient equipment and instructional materials, outdated curricula, unqualified teaching staff, poorly prepared secondary students, and an absence of academic rigor and systematic evaluation of performance.

Similarly, in the national education sector plan, ESDP IV (EMoE 2010: 63), it was reported that one of the challenges which the Ethiopian HE sector has faced is the fact that the increase in enrolments was more rapid than the increase in qualified teaching staff and that this situation has put "serious constraints on working conditions and the quality of education". It was further reported that the academic staff was very young with only a small number of PhD holders. This definitely will have a serious impact on the quality of education which HEIs of the country offer. A university with such academic staff cannot be expected to fully address, in addition, the learning needs of students with disabilities.

ii. New goals of higher education

Ashwin (2006: 8), based on his studies on the British HE system, argues that the increasing spending on HE has resulted in the increased interference in HEIs and, thus, has led to a change in the goals of those institutions. Recognizing the key role HE can play in the country's economic growth, the British government has also issued a White Paper that places more value on the vocational nature of HE. Thus, this document states that (DfES 2003: 10):

> In a fast-changing and increasingly competitive world, the role of higher education in equipping the labour force with appropriate and relevant skills, in stimulating innovation and supporting productivity and in enriching the quality of life is central.

Similarly, in a review of tertiary education the Organization for Economic Co-operation and Development (OECD) has reported that:

> The widespread recognition that higher education is a major driver of economic competitiveness in an increasingly knowledge-driven global economy has made high-quality tertiary education more important than ever before. The imperative for countries is to raise higher-level employment skills, to sustain a globally competitive research base and to improve knowledge dissemination to the benefit of society (Henard 2010: 24).

One central theme in the literature that is reported to have guided the educational goals of HEIs is 'employability'. Kneale (2009: 100), claiming that 'employability' has multiple definitions, explains that for some it is concerned with skills and for others it refers to an activity through which learners are prepared for long term employment. Knight and Yorke (2004: 36) describe employability as "a set of achievements, understanding and personal attributes that make individuals more likely to gain employment and be successful in their chosen occupations". This refers to key skills that graduates are expected to develop in their university education which will help them to perform well in their work place and in life.

However, there is disagreement as to what should constitute employable 'key skills' and different countries seem to have produced their own lists (Kneale 2009: 104-106; Knight & Yorke 2004: 24-26). A committee established to study the British HE system identified the following 'key skills' to be developed on university graduates so as to be successful in their lives (Bridges 2000):

- communication skills;
- numeracy;
- the use of information technology; and
- learning how to learn.

Billett and Henderson (2011: 1), recognizing that university graduates need to possess capacities that will help them to have a smooth transition to their professional practice, categorize these capacities into "conceptual, procedural and dispositional" knowledge. Conceptual knowledge consists of "concepts, fact, propositions and the richly interlinked associations among them"; procedural knowledge refers to the skills necessary to do things as well as "the processes of thinking and acting"; and dispositional knowledge comprises "interests and beliefs, which not only energise the use and development of concepts and procedures …, but also shape the direction, intensity, and degree of their enactment". The authors further reiterate that in order to realize this new type of knowledge, HEIs are required to have a type of curriculum organization and pedagogical practice different from the traditional one.

Kouwenhoven (n.d.: 126-127) calls the curriculum that focuses on the development of these employable skills competency-based and he categorizes them into domain-specific and generic. Domain specific competencies refer to the "knowledge, skills and attitudes within one specific content domain related to the profession". Generic competencies are those that are "needed in all content domains and can be utilized in new professional situations".

Barnett, Parry, and Coate (2001, cited in Barnett 2011: 5-6) list some defining characteristics of the emerging curriculum that should be developed in response to employers' needs by comparing it with the traditional curriculum. The emerging curriculum:

- focuses on knowhow as compared to know that;
- focuses on oral communication as compared to written communication;
- is action orientated rather than theory oriented;
- considers knowledge as a product rather than a process;
- is task based as compared to knowledge based; and
- focuses on experiential learning rather than proposition-based learning.

This emphasis on building employable skills brings another issue into the curriculum scene. The development of these skills would no longer be confined to a university's premises and instructors. It would require the placement of students in different prospective employing organizations where they will be engaged in activities to develop their work-related experiences (Bridges 2000; Billett & Henderson 2011; Fell & Wray 2006; Knight & Yorke 2004; Tennant, McMullen & Kaczynski 2010). This is known as work-based learning (Knight & Yorke 2004: 104) or learning from experience (Bridges 2000: 47). Boud (2006: 26-27) outlines the characteristics of work-based learning that have direct implications on the curriculum.

- A partnership between an external organization and an educational institution is specifically established to foster learning.
- Learners negotiate learning plans approved by representatives of both the educational institution and the organization. Different learners follow quite different pathways.
- The programme followed derives from the needs of the workplace and of the learner rather than being controlled or framed by the disciplinary or professional curriculum.
- The starting point and educational level of the programme is established after a process of recognition of current competencies and identification of the learning in which they wish to engage.
- Learning projects are undertaken in the workplace. These are oriented to the challenges of work and the future needs of the learner and the organization.
- The educational institution assesses the learning outcomes of the negotiated programmes with respect to a framework of standards and levels.

Research conducted on the benefits of work-based learning show that it has helped learners to develop some generic skills as well as their self-confidence and, as a result, increased their employability (Little & Harvey 2006, cited in Hewitt & Smith 2006). Skill (2003, cited in Fell & Wray 2006: 66-167) reiterates the importance of work-based learning in facilitating access to employment for students with disabilities and suggests the potential benefits of such experiences which include the possibility to:

- improve and strengthen their skills and knowledge;
- develop interpersonal skills;

- teach 'employability' skills;
- find out how their disability affects them;
- demonstrate to employers what they, as disabled persons, can do and so encourage them to be more pro-active about employing disabled people;
- explore career options by 'trying out' different areas of work; and
- gain the practical experience of securing a job.

Fell and Wray (2006: 167) further argue that work placement enables students with disabilities to examine the impact their impairment will have in particular work settings which, in turn, will help them to determine what kind of adjustments they will have to make when they are employed.

Universities of the Western World have been practicing competency-based HE for a couple of decades now. Lately, developing countries including those in sub-Saharan Africa have also realized the gap between their HE curricula and the know-how required for the new job market and, therefore, have begun to introduce competency-based curricula in their HEIs (Kouwenhoven n.d.). Ethiopian legal documents in relation to HE also have included provisions that refer to the development of employable skills. The HE proclamation of 2009, for example, declares that:

> Curricular design, delivery, and assessment of learning outcomes in any institution shall aim at enabling the learner to acquire pertinent scientific knowledge, independent thinking skills, communication skills and professional values that together prepare him/her [*sic*] to become a competent professional (Article 21, Number 1).

Similarly the ESDP-IV (EMoE 2010: 64) has stated "improved employability through high quality higher education and relevant professional mix" as one of the expected program outcomes of the HE sector.

Different researchers (Adams & Holland 2006: 10-11; Stodden *et al.* 2001: 191) have come up with the finding that an increase in the level of education has proved to be more beneficial to students with disabilities than to students without disabilities in terms of creating employment opportunities. This may lead us to infer that the current focus of HEIs on employable skills will definitely increase students with disabilities' opportunities of employment. This situation on the

other hand will require HEIs to make all possible accommodation for students with disabilities so that they will have appropriate learning experiences towards the development of those employable skills including their work-based training.

An examination of the literature in this area has revealed that there were attempts by many HEIs of the West to widen the participation of students with disabilities in fieldwork related learning experiences (Hall, Healey & Harrison 2002). Different manuals have suggested strategies on how to make accommodation on fieldwork related activities for students with disabilities (Healey *et al.* 2001; The Higher Education Academy 2006). On the other hand, there are institutions that have preferred to exempt students with disabilities from courses that involve practical activities, including fieldwork, instead of making reasonable adjustments to the curriculum (Hall *et al.* 2002: 224). This situation will lead to the conclusion that HEIs, both in the developed as well as in the developing world, are at different levels in terms of appropriately addressing the educational needs of students with disabilities. If students with disabilities are to achieve and benefit from the new goals of HE, it is a requirement that HEIs should develop a new perspective on making proper accommodation in order to address their learning needs. The traditional ways of allowing certain assistive technologies to be used in the classroom cannot be expected to work for the effective preparation of students with disabilities for their future careers.

iii. Accountability and enhancing quality of education

With the increase of the amount of public funding injected into HE, there is a corresponding pressure on HEIs to assure and maintain the quality of education they offer. These pressures have originated from different sources and stakeholders including government agencies and employers. One of the major concerns raised by these stakeholders is the quality and performance of HEIs (D'Andrea & Gosling 2005; Leveille 2005). In this regard, Leveille (Ibid: 6) emphasizes the increasing debate on the accountability of higher education caused by the decline of public resources and the sense that HEIs are well prepared to meet the needs of the 21st century. Employers at this time are looking for new graduates who are proficient in a combination of skills and knowledge that can enable them to succeed in a global environment. The central issue in this respect is curriculum. Institutions are expected to be accountable through the establishment of curriculum standards which they are required to meet. They are

required to define their expectations of students' learning and provide evidence of success in meeting these goals (American Council of Education 2004: 10).

In HEIs of many countries accountability is measured in terms of the access and completion rates of students. Issues of access and success in HE are especially important in relation to students with disabilities. In certain countries, Australia for example, the enrolment rates of students with disabilities, as well as their retention and success, are included as factors to be considered in the funding of HEIs (Crosling, Thomas & Heagney 2009: 1; Midwestern Higher Education Compact 2009: 3).

The issue of accountability in HEIs calls for demanding processes of quality assurance through which all aspects of the teaching-learning relationship are required to be recorded, evidenced and scrutinized. This has led HEIs to embark on changes on the teaching and learning process so as to enhance quality of education. The central outcome of the quality activities is improving the learning experiences of all students (D'Andrea & Gosling 2005) including those with disabilities. This requires instructors and all other concerned staff of HEIs to take all possible measures to meet the needs of students with disabilities.

iv. Addressing student diversity

With the massification of higher education, the composition of students who are entering HEIs is also becoming increasingly diverse, including students with different types of disabilities. These diverse students may come to the university, as Tennant *et al*. (2010: 85-86) note, "with different levels of preparation for traditional styles of university study…. They may have different expectations and concerns, ask different questions, bring different perspectives and experiences to the classroom and respond differently to classroom activities". This diversity and these differences, although it may prove to be a big challenge to educators, should not be considered a problem. Rather, creating an inclusive classroom atmosphere should enrich the learning experiences of all students (Ibid).

However, as Altbach *et al*. (2009: 39) report, accommodating diverse student populations is creating new tensions between HEIs and societies. Universities are reported to be under-budgeted and cannot fully meet the learning needs of diverse students, including those with

disabilities, as well as improve their completion rates. Thus, HEIs are required to make all possible curriculum accommodations to the diversity of learners joining their premises within limited available resources.

According to Crosling *et al.* (2009: 167), the quality of students' learning experiences, student retention and success are becoming increasingly challenging issues with the increase in the diversity of the student population. These authors explain their claim with the argument that traditional modes of teaching and learning may not be as effective now as they were in previous times when the student population was more homogenous. Thus, to address the students' diversity, the methods of teaching and learning should be designed to be more relevant to students' needs, interests, and previous experiences. Accordingly, the use of more active learning strategies is recommended as a successful approach to address this diversity.

More comprehensively, the authors (Ibid: 169-170) suggest the development of a student responsive curriculum that encourages a closer engagement between the students and their university experience and learning. In this regard, the following strategies were identified in which the curriculum could be developed in response to students' needs. These strategies are:

- Introduction of alternative learning, teaching and assessment approaches
- Development of more relevant curricular content and tasks to make it better related to students' lives and future plans
- More effective induction processes to increase transparency and fill gaps that students have in their knowledge
- Integration of study skills into the core teaching

These strategies, if properly implemented, are effective mechanisms of helping all learners of HEIs in all situations, including those with different types of impairments, to be successful in their learning. More importantly, they do not require resources which are far beyond the capacity of HEIs, even in the developing world like Ethiopia. What is needed is the awareness and commitment of the institutions and their staff.

v. Information communication technology

The great advances in Information Communication Technology (ICT) in the new century has immense implications for HE curriculum. ICT has helped to expand access and improve the quality of instruction and learning. It is increasingly becoming a part of the HEIs infrastructure which is influencing what and how students learn (Altbach *et al.* 2009: 129; The World Bank 2002). Bridges (2000: 48-49) explains some possible effects of the new technology on HE curricula as follows:

- The availability of a large amount of data on the web and its accelerated delivery systems will lead to the replacement of a curriculum that was based on the transmission of an established knowledge to a one that 'supports its distillation, analysis, ordering and manipulation'. In this type of curriculum learners will take the responsibility to critically read a material and assess its reliability.
- The increasing use of multimedia resources in the curriculum.

The increasing role of ICT in HE curriculum can have both positive as well as negative implications for the participation of students with disabilities in the instructional process. If proper consideration is made by HEIs, ICT can be a useful resource to make proper accommodation to the learning needs of students with disabilities. Stodden (n.d.) asserts that the use of technology in education is more beneficial to students with disabilities than it is to those without disabilities. For example, blind students can have access to print material through the use of computers which otherwise could have only been possible with the support of others.

Burgstahler (2002, cited in Stodden n.d.: 11) lists some ways in which technology could be beneficial to students with disabilities. This includes the following: maximizing their independence in academic tasks; participating in classroom discussions; gaining access to the full range of educational options; succeeding in work-based learning experiences; mastering academic tasks that they cannot master otherwise; and entering high-tech career fields. Similarly, Sloan, Stone and Stratford (2006: 130) explain that ICT can enhance the learning of students with disabilities by removing or reducing barriers resulting from the physical environment as well as the teaching strategies utilized by supporting independent learning, facilitating communication with their instructors and peers, and helping in the flexibility of assessment mechanisms. On the other hand, if necessary arrangements are not made to make it accessible for

all students, ICT can also further disadvantage students with disabilities (The World Bank 2002: 15).

vi. A learner-centred teaching and learning process

There has been a growing discourse in international literature favouring the centrality of the learner in the teaching and learning process as opposed to earlier notions that position the instructor at the centre. The learner-centred approach to learning gives recognition to the knowledge and experiences of students and their different styles of learning. This perspective is also important; currently, it has been recognized that it is the actual learning experiences of the learners and the way they make meaning of what they learn that determine their learning outcomes (Boud 2006: 28; Thomas 2008: 70). In other words, good teaching will be evidenced more by what students learn than what instructors do. This is because "Learning requires opportunities for practice and exploration, space for thinking or reflecting 'in your head' and for interaction with others, and learning from and with peers and experts" (Fry, Ketteridge & Marshall 2009: 22).

When we speak about the centrality of the learner, we are not only referring to a class of students as a collective entity but also to each learner as an individual. Every individual learner is unique with his/her own educational needs. Therefore, unless educational systems and educators are able to address the educational needs of individual students, it is impossible to speak about learner-centred education. This could imply that the educational needs of students with disabilities should also be taken care of. They have to be helped to develop their potential to the utmost possible extent by providing them with appropriate learning experiences. They should also be given training that helps them "to recognize their needs, utilize alternative learning strategies, appropriately advocate for their needs" (Izzo *et al.* 2001: 8), and ultimately take responsibility for their own learning.

vii. Assessing students' learning

Many educators agree about the importance of assessment in students' learning, writing that it has a greater influence on how and what students learn than any other single factor including teaching. Assessment informs students about what they should emphasize in order to be

successful in their studies and serves as a basis for feedback (Knight & York 2004: 120-121; Norton 2007). Tennant *et al.* (2010: 93) further reiterate that "assessment is a significant lever for change and improvement in students' learning experiences in higher education". Despite this, many educators including Mclnnis (2006: 40-42) and Norton (2007: 93) claim that assessment of students in HE has been treated as an additional task separate from the curriculum design process; it is considered only after decisions are made on the selection and organization of curriculum content and learning experiences. Assessment, however, should be an integral part of the curriculum design process and, as Norton (2007: 93) further argues, once what students should have learned at the end of a certain course, program or unit has been decided, the next concomitant question that should be asked is how to determine whether students have actually learned the material. Therefore, especially considering the changing context of learning and teaching in HE where students are to be prepared for the workplace with the development of generic skills beyond subject knowledge and technical competencies, there is a need to rethink the approaches of assessment of students' learning.

Similarly, Nicole and Macfarlane-Dick (2006: 215) stress the importance of formative assessment and feedback for students' self-regulated learning and claim that the changes in formative assessment and feedback are too slow in relation to the shift in the conceptions of learning and teaching. They write that students were not given enough responsibility in the assessment processes as compared to other aspects of learning and teaching.

Tennant *et al.* (2010: 93) discuss the new situation calling for a change in the assessment practices of HE. The new situation can be summarized as follows:

- The increased student population in HEIs has created pressure for cost effective assessment.
- The increasing diversity of the student population has forced universities to reassess accepted ideas about what can be expected from students and has force them to provide greater support for students from diverse backgrounds to achieve assessment standards.
- Demand from stakeholders that education be relevant to working life and for universities to produce 'work-ready' graduates has contributed to a focus on

assessment of generic skills as well as disciplinary content and greater attention to 'authentic assessment'.

- Increased concern with accountability and quality assurance has seen greater institutional interest and intervention in assessment practice and standards.
- The transforming effect of information and communication technologies presents new possibilities for assessment.

Norton (2009: 132) claims that assessment is the most controversial issue in today's HE. It is reported to be the area in which educators have the most divided opinions and the area with which students are least satisfied. This is especially true with regard to students with disabilities who have expressed their dissatisfaction in different research. Some of the problems that students with disabilities face in present assessment practices are caused by the environment where the assessment takes place, the modes of assessment used, and "terminal, written, once-off, summative examination" (Hanafin *et al.* 2007: 439). Many assessment practices are reported to have focused on measuring what students have learned (in other words summative assessment) rather than on improving students' learning (or formative assessment). In addition, Hodgson (2006: 46) criticizes the traditional forms of assessment as requiring little critical or creative thinking from learners and calls for assessment approaches that offer students "the opportunity to acquire the skills and understanding that will assist them to operate effectively in a diverse, constantly changing, and information rich, orientated world."

It is now believed that assessment and feedback are key instruments for enhancing students' learning. In this regard, Hodgson (2006: 37) argues that the way students experience and approach assessment may negatively or positively influence their learning outcomes. Therefore, if assessment is to effectively play this role there is a need of making changes in the way we assess our students. Thus, Birenbaum *et al.* (2005: 3-4) strongly call for a paradigm shift in assessment practices so that they can address the needs of students in a complex and globalized society. Hodgson (2006) suggests a move towards a participative form of assessment where learners will be involved and share a responsibility in the assessment process. The author claims that this is important in that it provides students an opportunity to get learning experiences that

ultimately will help them to be "employees who are intellectually confident and able to take responsibility for their personal development of knowledge and skills" (Ibid: 34).

In this regard, different assessment mechanisms are suggested to give students greater responsibility for their own learning. These include, among some others: self-assessment, peer assessment, portfolio assessment, authentic assessment and workplace-based assessment (Tennant *et al.* 2010). There have been different research studies conducted to assess the effectiveness of such alternative assessment mechanisms. For example, research was conducted in England with the objective of creating an Alternative Assessment Toolkit where students were inclusively assessed by different methods of assessment based on their preferences. The result of the study indicated that using alternative methods of assessment benefit all students including those with no disabilities since all students included in the research gained an overall improvement of five percent in marks (Waterfield, West & Parker 2006: 91). This finding is not surprising since students learn in different ways and, therefore, need different ways of demonstrating what they have learned.

viii. Professional development of instructors

It is widely believed that, at any level of education, the role of instructors in facilitating students' learning is vital. As we have seen in the earlier paragraphs, the new wave of changes in higher education has led to corresponding changes in the objectives and organization of curriculum as well as in teaching and assessment practices. In the same vein, these changes have created challenges and pressures on HE instructors that require them to think critically about their teaching practices. Teaching needs to respond to widening students' diversity, including students with different types of impairments, as well as to prepare students for the world of work. In this changing and complex environment, therefore, the professional development of HE instructors is becoming vital throughout the world. A report written in the early 1990s about British higher education (Elton & Partington, cited in Skelton 2005: 130) emphasized the necessity of developing the professional competence of instructors as follows:

> University instructors have not been trained as teachers. Hence they tend to teach in a manner similar to that in which they were taught – a very conservative process. Training is therefore needed not only to improve instructors' current performance, but to enable

them to respond to changing circumstances, which will require of them substantial changes in role.

The responsibility of HE instructors is further complicated with their roles of meeting the learning needs of students with disabilities. If students with disabilities are to fully participate in the teaching and learning process, instructors need to have an understanding of the needs of students with different disabilities and gain the skills to facilitate the learning needs of those students (D'Andrea & Gosling 2005; Wolanin & Steele 2004). In this regard, D'Andrea and Gosling (2005: 64) reiterate that HE instructors should be equipped with key pedagogical skills through specialized training for "the days of the gifted amateur have gone."

There are different strategies that HEIs could use to continually develop the professional capacity of their academic staff, including peer review, induction, monitoring, and offering specialized courses. Instructors can also develop professionally through less formal strategies such as "professionals working with each other, talking to each other and investigating their own work" (Ibid: 21). Howes, Davies and Fox (2009) also provide a comprehensive list of strategies that can be used for professional development of instructors in relation to facilitating inclusion of students with disabilities.

In the HEIs of Ethiopia, there are instructors' professional development programs like the Induction and the Higher Diploma Program where content in relation to the teaching and learning of students with disabilities can be addressed. This and other strategies can also be adopted in order to address the issue.

2.2.2 Inclusive higher education

Before we examine the literature on inclusive higher education, it is imperative to describe the concept of inclusive education. Inclusive education is a very broad concept and different authorities in the literature have come up with different definitions. They do not agree on the components and scope of inclusion. As the concept of inclusive education will be extensively treated in the third chapter, the explanation provided by UNESCO (2005:14-15), as summarized in the following paragraph, will be used here.

Inclusive education refers to a process and situation where the diversity of learners' needs is addressed through increasing their participation in the learning process and reducing exclusion from and within education. It is an approach that focuses on transforming an education system in a way that it will respond to students' diversity. Inclusion focuses on teaching and learning with the emphasis on the development of learning and teaching strategies that will benefit all learners. It is a process and practice that should be followed at all levels of the education system including higher education.

Higher education is the level of education in which individual citizens will be prepared for their future professional careers. The knowledge and skills that students develop in HE and the degrees with which they will be awarded will be the means by which they will obtain employment. Based on empirical evidence, Stodden *et al.* (2001: 191), write that "when the level of education increases for persons with disabilities, the level and quality of employment rise even more dramatically than for people without disabilities". Therefore, improving students with disabilities' access to HE is an issue that requires urgent government attention.

With the massification of higher education the student population in such institutions is becoming diversified. Students with different types of disabilities are gaining access to HEIs. Especially in developed countries, governments have developed policies that allow disabled people better participation. As Adams and Brown (2006: 2) state, the increase of student numbers in HEIs and the measures undertaken to improve student support systems in these institutions have causal relationships. For example, the improvement of support services in the UK HEIs has led to the increase of the total number of students who disclosed their disabilities from 4.33 percent of the total student population to 5.39 per cent between the years 2000/01 and 2003/04.

However, gaining access to HEIs is not sufficient for students with impairments. There are a number of new challenges that students with disabilities face in HEIs which will create barriers from fully participating in their educational endeavours. Adams and Brown (2006: 15), based on different survey results, explain some key problems that students with disabilities face in their transition to HE which can be summarized as follows. Firstly, adjusting to living away from close family members and friends, although a problem for all students, is a more serious

challenge for students with disabilities since they may not get the type of support they were provided by their family members or other assistants in the new environment. Secondly, students with disabilities may find it difficult to adapt themselves to the new learning styles they may face in HE. Third, taking responsibility for organizing their equipment and support arrangements, which in previous educational levels was done by the educational institutions or the students' families, poses another challenge for students with disabilities.

Therefore, it is a requirement for any HEI that all possible measures are taken to ensure that students with impairments get opportunities equal to their non-disabled peers so that they can benefit from their HE experiences. Different types of adjustments and provisions have to be made by institutions to make the social and academic life of students with impairments easier.

2.2.3 Higher education in Ethiopia: Brief historical overview and current status

For centuries before the establishment of Western type institutions of higher education in Ethiopia, the country had a well-organized indigenous higher education system that was based in the Orthodox Church. Secular Western type higher education in Ethiopia was initiated in 1950 with the establishment of the University College of Addis Ababa. For two decades after the establishment of this institution, however, higher education did not experience significant development and was in need of major reforms. By 1970 there was still only one university and a few junior technical colleges with a total enrolment of 4500 in a country with a population at that time of 34 million. Accordingly, the gross enrolment ratio was only 0.2% which was among the lowest in the world. This problem was coupled with a very large wastage rate of nearly 40% due to the elitist orientation of the system at the time (Saint 2004: 84; Teshome 2005: 1).

By the time reform was recognized as needed in the system, a major political change happened in the country. In 1974, the monarchy was overthrown by a military coup and a dictatorship was established which claimed to be a socialist government. The nearly two-decade rule of this military dictatorship was characterized by political instability and economic decline. It concentrated its efforts on consolidating its power and winning the many armed conflicts waged at the time. It did not have either the will or the capacity to develop the higher education system

of the country. Due to this, as Teshome (2005: 2) states, there was "lack of clear direction, vision and commitment for the development of higher education in the country".

Ethiopia's higher education system gained new hope with the establishment of a new political system after the elimination of the military dictatorship in 1991. The new government initiated a number of legal and practical measures to improve the system. In 1994, a New Education and Training Policy was promulgated that attempts to define the country's educational goals and outlining the strategies for their attainment. In 1997, a 20 year indicative plan known as Education Sector Development Program (ESDP) was launched which was to provide a policy and implementation framework for the development of the education sector.

In spite of these initiatives by the new government, during the last decade of the 20th century, HE in Ethiopia did not show major progress either qualitatively or quantitatively. In 2000, there were only two universities and seventeen junior colleges that offered education at a diploma level with a total student population of only 31,000. The attention and efforts of the government at this time were more focused on primary education. This can be shown in the priorities given to primary education in the first phase of the Education Sector Development Program (ESDP I), leaving HE to the background (EMoE 1997). This is probably because of the influence of the then prevailing attitudes of the international community and especially that of the donor organizations like the World Bank regarding the roles and purposes of higher education in a country's development. During the 1980s and 1990s, African HE was neglected by both African governments and international organizations because of the incorrect belief that it has little role to play in the economic development and poverty reduction of a country. World Bank's spending on higher education was greatly reduced which severely affected the sub sector (Bloom *et al.* 2006: 6).

During the 1990s, Africans began to critically re-examine their HE systems. They started realizing the key role HE can play in the individual and societal development. Key donor governments and international organizations like the WB and UNESCO also began to shift their priorities towards HE. They began to appreciate the role of tertiary education in the economic growth and poverty alleviation efforts of developing countries. Thus, in 1998, UNESCO organized a World Conference on Higher Education with the theme 'Higher Education in the Twenty-first: Vision and Action'. In the preamble of the report that came out of this conference,

the importance of HE is stated as "the unprecedented demand for and a great diversification in higher education, as well as an increased awareness of its vital importance for socio-cultural and economic development" (UNESCO 1998: par.1). The WB in collaboration with UNESCO organized a task force to study the future of tertiary institutions in developing countries and published a series of documents that recognize the importance of HE in the socioeconomic development of countries (Bloom *et al.* 2006).

In response to this change in global thinking, Ethiopia started taking concrete measures aimed at changing its HE system. In 2003, the first Higher Education Proclamation was ratified which served as a foundation for major reform of the education system (Teshome 2005). Thus this proclamation, among other things, encouraged the establishment of private HEIs, established a national quality assurance and relevance agency, increased the share of budget to the HE subsector (FDRE 2003). ESDP II, the policy document which covered the period starting in 2002/03, also gave considerable attention to this subsector by stating the intention to double undergraduate enrolments and quadruple graduate enrolments within a three year period (EMoE 2001). As a result of these measures, the HE subsector began to show drastic changes, especially in terms of student enrolment and the expansion of HEIs. Thus the total number of enrolment in HEIs increased from 42,132 in 1996/97 to 192,165 in 2004/05 in both public and private institutions. This huge increase of 356% can be considered a dramatic development, although the gross enrolment rate was still very low (1.5%) and far behind the 3% average for sub-Saharan countries of Africa. The number of public universities also increased to eight during this period, with an intake capacity of nearly 32,000 for undergraduate studies (EMoE 2005: 12).

During the ESDP III period (2005/2006 - 2009/10), the government vigorously continued its efforts of expanding and improving the HE system. Therefore, at the end of this planning period, the number of public universities grew to twenty-two with a significant increase in their intake capacity; the overall enrolment reached 319,217 with a gross enrolment rate of 5.3% as compared to the African average at that time of 6%. One of the priority areas stipulated in ESDP III was the expansion of postgraduate education with the prime purpose of developing the capacity of HEIs' teaching staff. Thus the total enrolment of postgraduate programs by 2009/10 reached 10,125 although this figure is far below what was planned (EMoE 2010: 62). It was also

during this period that the Higher Education Proclamation of 2003 was revised to include an article with the provision that HEIs should establish for physically challenged students (FDRE 2009).

After the end of ESDP III, ESDP IV was launched which would last from 2010/11 – 2014/15. In addition to issues related to the increase of HE enrolment and the establishment of nine additional universities, ESDP IV outlined different strategies to improve the quality of education in these institutions. One important provision was related to inclusive education. This document appreciated the past problems and challenges in the development of inclusive education and outlined strategies to improve the situation. Targets were set to achieve at the end of the planning period an increase in the enrolment of students with special needs at the different levels of education, for HE the target being 946 (EMoE 2010: 67).

2.3 Accessibility of HE curriculum

For inclusive education to be a reality, curriculum is the central focus where appropriate interventions should be made. Therefore, in any academic discourse related to inclusive education, there will be discussions on curriculum policies and practices. Thus, in this section, literature on curriculum issues that might help to clarify the education of students with disabilities is reviewed. First, the concept 'curriculum' is explained from different perspectives. This is followed by a review of policies and guidelines developed by different institutions and educators on the accommodation of students with disabilities in HEIs. Finally, research literature, both international and regional, on the learning experiences of students with disabilities in HEIs is synthesized.

2.3.1 Conceptions of curriculum

In order to explain the status of a HE system, or any level of education, having a good understanding of the curriculum is of utmost importance. However, as different literatures reveal, there is no uniform conceptualization of curriculum. It is an amorphous concept that has been used with several meanings and defined in different ways. The term 'curriculum' has its origins in Latin and literally means 'race course'. When applied to education, this refers to a course or plan for learning (Taba 1962: 11). This meaning of curriculum is, of course, short and simplistic

and it excludes many elements of teaching and learning. The first person who provided an expanded version of this definition was John Dewey who, in the early 20th century, included learners' experience (Kridel 2010). Later on Bobbit (1918: 42) further expanded this definition, still recognizing the importance of the learners' experiences. Bobbitt defines curriculum as a "series of things which children and youth must do and experience by way of developing abilities to do things that will make up the affairs of adult life; and to be in all respects of what adults should be".

Ever since Bobbit's definition, educators have been trying to determine a further or more precise definition of curriculum. Instead of converging towards an agreed meaning and definition of the concept, these efforts, as Schiro (1978: 24) claims, resulted in the formulation of more new definitions, "more debate over the concept, and further criticisms of other inadequate definitions". Some possible reasons as to why educators couldn't come up with a universal definition for curriculum can be forwarded. One of these is the increasing demands of societies on the education system (Khan 2007: 1). In addition, as Schiro (1978: 4) writes, such a wide concept as curriculum is difficult to define in a single statement with all its dimensions included.

The way curriculum was defined is also different depending on the perspective of those who define the concept. It can be based on the work context of those who define it. Thus, the way a curriculum evaluator defines curriculum may differ from that of a curriculum developer or a curriculum implementer (Kridel 2010; Schiro 1978: 26-27).

Some educators have tried to analyse these multiplicities of definitions into categories. One of these is Oliva (1982) who wrote that some definitions focus on the intention or purpose of the curriculum, other definitions are concerned with the context of curriculum implementation, and still others give emphasis to the instructional strategies or terminal objectives. A typical example of the 'purpose' aspect of curriculum definition is that of Popham and Baker (1970: 48) who wrote that the concept refers to "all planned learning outcomes for which the school is responsible". With regard to the context of implementation, Shaver and Berlack (1968) have defined curriculum as "situations and activities arranged and brought into play by the instructor to effect student learning". Krug's definition (1957, cited in Khan 2007: 3) of curriculum as "all the means of instruction used by the school to provide opportunities for student learning

experiences leading to desired learning outcomes" perhaps serves as an example for Oliva's third category of curriculum definitions.

Glatthorn *et al.* (2005: 3) also suggest that there are prescriptive, descriptive and a combination of both ways of defining curriculum and provides with a list of exemplary definitions. Prescriptive definitions of curriculum refer to the body of knowledge and experiences that is planned in advance to be implemented by the classroom instructor. It may include the objectives, content, instructional strategies, and assessment mechanisms. A good example of this type of definition might be that of Block (1998, cited in Glatthorn *et al.* 2005: 5) which reads as follows: "Curriculum is a prescribed body of knowledge and methods by which it might be communicated". Descriptive definitions of curriculum, on the other hand, consider the actual learning experiences in the classroom such as the one provided by Tanner and Tanner (1995, cited in Glatthorn *et al.* Ibid) as follows: "The reconstruction of knowledge and experience that enables the learner to grow in exercising intelligent control of subsequent knowledge and experience". Further on, Glatthorn *et al.* (Ibid) provide their own definition which they claim to include both prescriptive and descriptive aspects of the concept:

> The curriculum is the plans made for guiding learning in the schools, usually represented in retrievable documents of several levels of generality, and the actualization of those plans in the classroom, as experienced by the learners and as recorded by an observer; those experiences take place in a learning environment that also influences what is learned.

Khan (2007: 3) writes that the meanings attached to the different curriculum definitions might be classified under one or more of the following categories: curriculum as subjects or subject matter curriculum as objectives, curriculum as program, and curriculum as personal experience of the learner.

Apart from these differences in definitions, educationalists make distinctions between different types of curriculum with varied labels. One of these distinctions is concerned with what is commonly called the 'hidden curriculum' and the 'official curriculum'. Hidden curriculum refers to what students learn from their individual observations of how the school operates as well as from different materials, but something which is not overtly planned to be offered to learners as instructional content (Kelly 2004: 5; Mckernan 2008: 36).

Another distinction is made between the planned curriculum, the implemented or actualized curriculum and the experienced or learned curriculum. The planned curriculum refers to what has officially been put in syllabi or any other educational plans to be implemented in the classroom. The implemented curriculum, on the other hand, is what students are made to experience by the instructor who is responsible for implementing the curriculum which sometimes differs from the planned one. The change in the behaviours of learners in terms of their knowledge, skills and attitudes as a result of their exposure to different experiences is what is called the learned or experienced curriculum (Akker 2003: 3; Su 2012: 154).

These diverse definitions and classifications, however, are not totally different from one another. However narrow or broad they might be, they all focus on the teaching and learning process and students' learning. From these definitions, the following elements of curriculum can be identified:

- The plan for offering learning to students that may be embodied in different documents such as textbooks, curriculum guides, or lesson plans.
- The educational objectives, contents, instructional strategies, assessment mechanisms and instructional materials that are used in the classroom to bring about students' learning.
- The experiences to which students are exposed and the actual learning they get from the teaching and learning process.

As pointed out earlier, the central theme which these definitions address is the learning experience of the students. In addition, Kridel (2010) argues that the issue of divergence in defining curriculum should not be considered an urgent issue seeking solution; rather, it should be taken as an inevitable situation to be acknowledged, considering the complexity of the curriculum field.

2.3.2 Curriculum accommodations for students with disabilities in HEIs

Ensuring the accessibility of the curriculum requires an understanding of the learners' needs and implementing all necessary adjustments in the curriculum so as to address those needs. In order to make the curriculum of any educational levels accessible to students with disabilities, many scholars argue, some modifications have to be made in the curriculum. Many universities of the

western world have also developed institutional policies as well as explicit strategies for making reasonable adjustments in their curriculum so as to make it more accessible to diverse learners (Gravestock n.d.; Healey *et al.* 2006; Herrington 2002; Shepherd 2006; Teachability Project 2000; The Quality Assurance Agency for Higher Education 2010).

D'Andrea (2003, cited in Gravestock n.d.: 15) provides a framework for developing an inclusive curriculum which can be of use for any educational level.

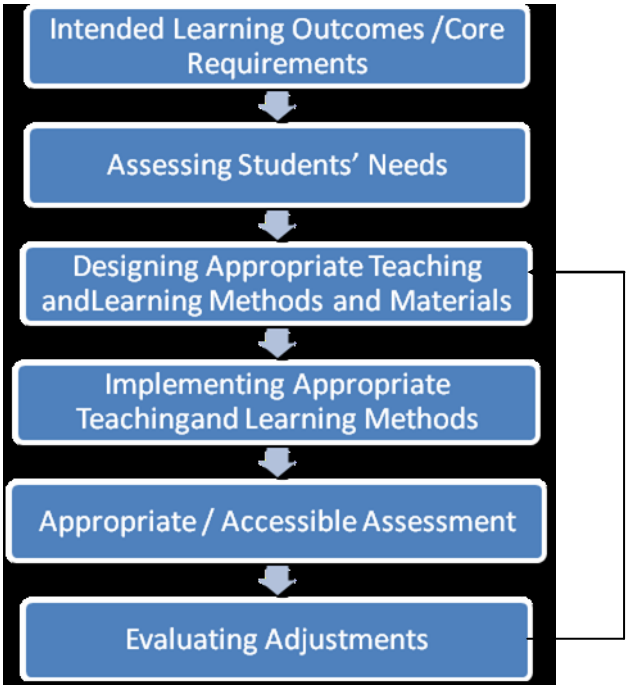


*Figure 1: Framework for developing an inclusive curriculum (*D'Andrea 2003, cited in Gravestock n.d.: 15**)**

Thus according to this framework, the first thing that should be done towards developing an inclusive curriculum is to determine the course's core requirements and consider their accessibility to students with disabilities. Once you have determined a course's core requirements, one can easily identify the possible strategies that can be used with students with disabilities to address these requirements. The second step is concerned with the identification of the individual needs of students with disabilities through private discussions with students concerned on what could be arranged to facilitate their full participation in the learning process (Gravestock n.d.:16-21).

The third and fourth steps of this model require instructors to design and implement teaching and learning methods and materials appropriate for diverse students in their classrooms (Ibid: 23, 32). Inclusive curriculum requires instructors who differentiate their instruction in a way that all students, including those with disabilities, will have multiple options for obtaining and processing information. Differentiated instruction requires instructors to use flexible approaches of teaching and learning and adjust their presentation styles in accordance with the needs of students, rather than the students adapting themselves to the curriculum. Differentiated instruction is based on the premise that instructional approaches should vary and be adapted in relation to individual and diverse students in classrooms (Tomlinson 2003).

Different manuals and guidelines (Beech 2005; Davis 2003; Gravestock n.d.; Herrington 2002; Ministry of Education 2009; Rodrigues 2007; Shepherd 2006; Wolanin & Steele 2004) have suggested different strategies that can be used by instructors for making the instructional process accessible to SVI. The following are some of these strategies:

- making sure that what is visually displayed is verbally explained;
- providing students in advance with a printed outline of what is going to be presented;
- allowing students to take notes on their Braille, electronic Braille note taker, computer, or using a cassette recorder.
- making students touch tactile items being presented either during or before presentations;
- providing Braille text for all materials that SVI will need; and
- making sure that all directions are clearly communicated to SVI.

Similarly, Wolanin and Steele (2004: 38-39) have provided the following guidelines for adapting teaching strategies and the learning environment for students with visual impairments:

- Agree adaptations with the student and, in small group situations such as tutorials, with the group itself: for example, initial consistency in seating location to assist a blind student to recognize group members' voices, group members initially agreeing to give their first name before speaking.
- Provide material of a lecture or tutorial in advance in the student's preferred format, in print, disk or Braille.

- Encourage students with visual impairments to use 'paper/pen' substitutes such as tape recorders or laptops during lectures.
- Give thought to verbal and non-verbal communication, trying to eliminate background noise, speaking clearly, and avoiding inaccessible gestures such as a nod of the head and expressions such as 'it's over there'.
- Allow students with visual impairments additional time, if required, for assignments and examinations/assessments.
- Substitute courses that do not pose disability-related barriers.
- Lengthen the time of degree completion.

These strategies and guidelines are crucial in the effective implementation of inclusive education in HEIs. Therefore, the current research would have to examine the extent these strategies are applied in the classrooms of the universities selected as case studies.

As has been indicated in the previous guidelines, providing different types of technology, commonly known as assistive technology, for students with disabilities that assist them in their learning is one important intervention towards making the curriculum more accessible. Assistive technology refers to a range of equipment that enables students with disabilities to interact with information. Sometimes this technology is referred to as 'access technology', 'enabling technology' and 'adaptive technology'. Many researchers and educators (Hanafin *et al.* 2007; Hooker 2007; Zhou *et al.* 2011) write about the benefits of assistive technology in enhancing students with disabilities' abilities to perform to the best of their potential. Koganuramath and Choukimath (2009), based on experiences in India, also write of the importance of establishing a learning resource centre for students with visual impairments equipped with such assistive technologies as a crucial step forward towards the attainment of inclusive education and eventual integration into the society as whole.

Different educators and HEIs (Koganuramath & Choukimath 2009; Salisbury 2008; Shepherd 2006) have provided suggestions on the types of assistive technology that can be used in relation to SVI. They include the following:

- **Screen reader software**: - This technology helps SVI to access information displayed on computer screens by speaking aloud through computer screens.
- **Scanners**: - This is software that helps to change print text into a digital text so that it could be read by a screen reader.
- **Braille displays**: - This is a lightweight electromechanical device that is attached to a keyboard of a standard computer which presents the information on a computer as Braille.
- **Braille note-takers**: - These are portable devices through which text can be entered, edited and read back via speech or Braille and printed on Braille and on ink.

According to D'Andrea's model (2003), the last step that instructors are expected to address before evaluations are conducted on all the adjustments implemented in the curriculum is making sure that the assessment mechanisms are accessible to all students (Gravestock n.d.: 43). With regard to the modification of assessment strategies that could be made in response to the needs of SVI, Shepherd (2006: 50) argues that SVI could have been disadvantaged in some of the activities during the teaching and learning process and if the assessment instruments also are biased towards activities that favour sighted students, such as by making considerable use of graphics, they would be doubly disadvantaged. Therefore, as the same author further suggests, the forms of assessment to be used in university classrooms should enable SVI to reveal the full range of learning they have achieved. In situations where modifications are made in the learning outcomes, contents or learning activities, a corresponding variation has to be used in the assessment process as well (Ibid).

Salisbury (2008: 40-41) describes the following strategies that could be considered in summative assessments for SVI:

- **Modifying assessments**: - This should enable SVI to have full access to the assessment without giving them any unfair advantage.
- **Others' support**: - SVI may need the support of others in certain assessment activities which they cannot do independently. For instance, they may require readers and scribes in written examinations; they may also need others' assistance in practical activities such as using equipment, locating materials, drawing and measuring.

- **Time allowances**: - SVI should be given additional time to complete their assessments to be decided by the individual instructor based on the purpose and nature of the assessment.
- **Alternative methods of assessment**: - In certain situations where formal methods of assessment may not be appropriate for SVI, the instructor should assess them using non-formal methods such as class work, portfolios, or oral presentations.

As Roy (2003: 41) claims, students with visual impairments have the capacity to access and succeed in almost all HE curriculum areas; visual impairment should not have any significant negative effect on the level of attainment of students. Similarly, Jones and Hopkins (cited in Roy 2003: 52) justify the idea with the following quotation from Skill (1997): 'Many disabled people have successfully studied science and engineering at undergraduate and post-graduate levels and are now pursuing rewarding careers. Modern technology, flexibility and creative approaches have opened doors, which previously appeared to be locked shut.' In spite of this, certain subject areas have tended to attract more SVI than others. The author further reiterates that some subject areas pose certain specific challenges to SVI and their instructors and underlines the need for overcoming them. Thus, considering the remarkable developments in the area of modern information communication technology that can help to facilitate students learning, it would not be very difficult to overcome these challenges if there is the commitment from the institutions to address the educational needs of SVI. It would suffice to remember that people with very serious impairments like Helen Keller have achieved what may seem to be totally impossible by overcoming the challenges.

There are different ways through which the teaching and learning could be adapted to the needs of SVI so that they can get access to information and learning. Some of these, as Roy (2003: 43) lists, include the use of discs, tape, Braille, e-text, accessible web sites, and tactile diagrams. The author further stresses that students with visual impairments should be consulted regarding their choice of the media for learning. Other studies have also expressed the need for the involvement of students with disabilities in the decisions of what provisions should be made in order to make appropriate and reasonable adjustments in the curriculum (Redpath *et al.* 2012: 14; Vickerman & Blundell 2010: 27).

Many educators, including Hadjikakou and Hartas (2008: 111), Madriaga, Hanson, Heaton, Kay, Newitt and Walker (2010: 651-52) and Roy (2003: 44-45), indicate that providing information to students with visual impairments in accessible formats is neither sufficient nor fair if they are to learn in an equitable manner with those who have no impairments. This implies for the need of considering the amount of time students with visual impairments require for different learning activities. SVI need more time to study, to do projects and assignments, and to complete tests.

Roy (2003: 45) argues that HEIs should invest in the provision of assistive technology for students with visual impairments. He further recommends that libraries and other study centres should be equipped with computers with appropriate software for SVI and that support staff in such centres should be well trained in the ways of providing necessary support for SVI.

Roy (2003: 47-48) also reiterates that, in spite of concerns by instructors, students with visual impairments can participate in courses that include practical activities such as laboratory work. He suggests some strategies of how to involve SVI in practical classes. One strategy is that SVI should be given enough time for preparation such as by providing them background reading on the planned activity and the nature of any equipment to be used. The author further explains how to proceed with the activity, writing that:

> ... procedures or skills demonstrated in their entirety should then be broken down into their constituent parts, so that each can be explained, demonstrated and worked through. … Blind students should, where appropriate, be encouraged to feel different stages in a demonstration (Ibid).

Therefore, from the different institutional manuals and educators' suggestions, it can be concluded that students with visual impairments, in order to engage fully in the learning and teaching process, require accommodation in the curriculum such as the following:

- flexible teaching;
- appropriate seating arrangements;
- adaptations to school policies and procedures;
- access in all areas of the curriculum through specialist aids and assistive technologies;
- access to alternative or augmented forms of communication;
- provision of tactile or kinaesthetic materials;

- time allowances; and
- alternative assessments.

For these accommodations to be realized in HEIs, it is necessary that all concerned bodies have the awareness and commitment to addressing the rights of students with visual impairments, and all students with disabilities in general. It is also important to clearly understand that it is the full right of students with disabilities to get education in the same way that their non-disabled peers do.

2.3.3 Learning experiences of students with disabilities in HEIs

Since the policy and practice of inclusive education is a recent phenomenon, little research exists in the area, especially with regard to the learning experiences of students with disabilities in HE. Research literature that the current researcher could come across in his search has predominantly been conducted in the developed world. This is not surprising considering the relatively longer experiences in inclusive education as well as the rich research tradition in countries of the west. Therefore, in this brief review of related literature, first research outputs in the area at an international level will be examined followed by an examination of research conducted in sub-Saharan Africa.

i. Global perspectives of students with disabilities

Students with disabilities in HEIs have a variety of experiences in the learning and teaching process. According to the words of Healey *et al.* (2006: 4), "Some encounter significant barriers, others are not aware of any; some find the support they receive highly praiseworthy, others find it does not meet their needs". There are differences between students with disabilities' experiences in different institutions because of the differences in the level of provision and support they get in their respective universities. Students with different types of disabilities differ in the way they experience the curriculum. Even students with the same type of disabilities do not have the same type of experience.

In many of the research studies (Fuller *et al.* 2008; Healey *et al.* 2006: 39; Sachs & Schreuer 2011; Vickerman & Blundell 2010: 28) that investigated the learning experiences of students with disabilities in HE, it was reported that students with disabilities, for the most part, have

similar experiences to students without disabilities. For instance, Madriaga *et al.* (2010: 654), in a study they conducted to compare the learning and assessment experiences of disabled and non-students with disabilities, found out that their difference of experiences in both learning and assessment were negligible. The quantitative data showed evidence that both disabled and non-students with disabilities have somewhat similar negative attitudes towards receiving feedback on academic work or progress from instructors and tended to share negative sentiments towards their engagement with instructors and teaching practices. The findings of the qualitative part of the study also showed very little differences of learning and assessment experiences between the two groups of students.

In certain areas of the teaching and learning process, it was found out that students with disabilities have experienced less difficulty than their non-disabled peers. In the study of Healey *et al.* (2006: 39-40), for example, students with disabilities expressed less difficulty in knowing the standard of work expected in group work and oral presentations. The authors further comment that this difference might be due to the relatively less significance students with disabilities give to the difficulties in these areas rather than a real difference in difficulties between the two groups of students.

However, as Healey *et al.* (2006: 39) write, the nature and level of difficulties students with disabilities experience were more severe than those of their non-disabled peers. Some of the barriers were reported to have a serious impact on the learning experiences of students with disabilities.

Holloway (2001) has produced a widely cited research report on students with disabilities' learning experiences in the higher education institutions of UK. This research reported on students with disabilities' experiences regarding departmental provisions, accessibility of the library, examination arrangements, and support they get from their instructors. In general, students in this study spoke of both positive and negative experiences, with the negative experiences reported to be related to limited understanding of students with disabilities' needs and the lack of effective systems of support at the departmental level. The research further found out that support the departments were providing to students with disabilities tended to be based on the perception that disability is an individual problem and hence requires an individualized

response. A similar study conducted in England and Scotland (Tinklin, Riddell & Wilson 2004: 655) came up with the same finding declaring that "the emphasis in provision for students with disabilities remains too much on providing disabled students with individual support to get round institutional barriers, rather than on more fundamental institutional change". This situation led Holloway (2001: 608) to conclude that "it was the practice arising from the medical model that prevailed and determined the students' experience". Thus, in spite of the fact that the social model has gained acceptance as a policy base in countries all over the world, the legacy of the medical model seems to influence the practice of HEIs. The research included a report about the inconsistency in policy and practice across departments recommending that "a central policy, central co-ordination, and monitoring of departmental practice with regard to disabled students" should be developed (Ibid). Researchers in other contexts (Barnard-Brak, Lechtenberger & Lan 2010: 418; Fuller *et al.* 2008; Shevlin, Kelly & Mcneela 2004: 21) similarly reported that instructors across different departments differ in their willingness to adjust their instruction on the basis of students' needs.

Another study conducted by Fuller *et al.* (2008) came up with the conclusion that most of the adjustments made in the HEIs were "formulaic" and included the provision of some facilities such as laptops, instructors giving their lecture notes to students, and giving extra time allowances during examinations. A study conducted in Ireland by Shevlin *et al.* (2004: 21) came to a similar conclusion that support to students with disabilities was "generally conceived as the provision of assistive personnel and technology". Here, also, students with disabilities have expressed the difficulty they have in the use of such resources, claiming that they were given little support and training in how to utilize the materials (Hanafin *et al.* 2006: 441; Marshak *et al.* 2010: 168).

With regard to the students with disabilities' relations with their instructors, however, research findings showed that, in general, instructors were reported to be "sympathetic and supportive" except in situations where they had little awareness or specific knowledge about the disability and available support. The negative experiences of students with disabilities resulting from instructors' lack of awareness are also reported in research conducted by Fuller, Bradley and Healey (2004: 465) who wrote that students with disabilities had to go through "frustrating

incidences" in order to inform instructors about their impairments and their need for reasonable adjustments in the instructional process. This problem seems to have persisted, for in a study conducted some years later (Fuller *et al.* 2008), students with disabilities reported that they had to continually negotiate with their individual instructors in order to get reasonable adjustments in the instructional process. Wolanin and Steele (2004: 41-42) also reported similar problems faced by students with disabilities seeking academic adjustments in American HEIs.

Tinklin *et al.* (2004: 652), based on quantitative data collected from eight British universities, came to the conclusion that the area of teaching and learning made little advance in terms of reasonable adjustments as compared to other areas such as admissions, examinations, assessment and student support. The same problem was identified by Wolanin and Steele (2004: 41) in the USA in a report they have prepared for policy makers when they identify "faculty attitudes and the academic culture as the major barrier to successful accommodations for students with disabilities in higher education". Tinklin *et al.* (2004: 652) further observe that, from the perspective of the disability officers, the difficulty in influencing the academic staff to make all necessary accommodations was the cause of this problem since the academic staff considers such an order coming from the support staff as an intrusion into their exclusive domain. On the part of the instructors, problems such as mounting pressure and increasing workloads, as well as concerns on the lowering of academic standards when making those adjustments, were voiced as causes for the existing situation. Wolanin and Steele (2004: 41) corroborate this idea writing that: "Faculty see themselves as both creators and guardians of academic standards and values. External intrusions into the curriculum and into classroom practice are seen as violations of these academic norms and as threats to academic freedom". This resistance of faculty to making reasonable accommodations for students with disabilities might have been caused by a combination of factors depending on each specific context. In general, however, little awareness of instructors about their responsibilities for the learning of all students and knowledge of how to make accommodations – or willingness to do so - can be a cause of the problem.

In a study conducted by Madriaga and Goodley (2010: 120), there was evidence that suggested a need for a drastic change in the traditional university lecture. One research participant expressed his disgust at the current practice and the need for change in the following way:

> Get rid of the lecturer. Find somebody who can actually teach. What does the lecturer do? He just stands in the front and goes blah, blah, blah and that's it. A lot of them just stand in the front and have this spiel for an hour. 'There you are. I shared my knowledge. Go away. Read the books. Then, come back to me with an assignment or whatever'.

The research of Fuller *et al.* (2004: 461) also came up with students with disabilities' voices regarding the particular challenges they have encountered during classroom instruction. These include:

- instructors talking too quickly before they had time to comprehend the contents;
- instructors continuing to speak while facing away from the class;
- difficulty of listening and taking notes at the same time; and
- difficulty of participating and interacting in the class because of their inability to see or hear the instructor or other students, or because of their frustration caused by the quick pace of the discussion.

Madriaga *et al.* (2010: 653) similarly reported that these particular negative experiences of students with disabilities have persisted in addition to other barriers to learning, including difficulties in hearing their instructors and receiving learning materials in appropriate formats. Thus, the current research will have to look into whether such challenges are also experienced by SVI who participated in the study.

Much researches conducted in this area has associated the problems students with disabilities face in their relations with their instructors with lack of knowledge about their legal obligations for making reasonable adjustments and the skills of how to make such adjustments. Based on this, researchers and students with disabilities alike recommend that academic staff should be provided with appropriate training if they are to make all necessary accommodation to students with disabilities (Holloway 2001: 614; Katsiyannis *et al.* 2009: 42; Redpath *et al.* 2012: 14; Vickerman, & Blundell 2010: 28; Wolanin & Steele 2004: 44). The fact that many university staff were reported to have been concerned about lowering academic standards and giving unfair

advantage to students with disabilities as compared to their non-disabled peers (Riddell *et al.* 2007: 627; Wolanin & Steele 2004: 41-42) is evidence of their awareness problems.

In research conducted by Jacklin *et al.* (2007: 43) on certain UK universities, the majority of students with disabilities who responded to questionnaires expressed overall satisfaction with their learning experiences. From those who reported their dissatisfaction with their learning experiences, the majority said that there were some barriers to learning that were related to their specific impairments. In a follow up interview, one of the research participants who had visual impairment expressed his frustration in the following way (Ibid: 33-34):

> I found everything has been done in power point – you probably know I'm totally blind – and that isn't a problem in itself but you find the handouts are condensed onto 6 slides on one piece of A4 so I couldn't even scan them because the scanner can't cope with that to get into a text format. All these are very simple things that if I'd have sat down with the lecturer beforehand, and said what do you do? How do you present it? Half an hour or an hour's chat would have made a massive difference.

In many studies related to students with disabilities' HE experiences, there was evidence that showed that students with disabilities face more serious problems in adjusting themselves to the new styles of learning and teaching when they entered HEIs as compared to their non-disabled peers (Adams & Proctor 2010: 191; Fuller *et al.* 2004; Marshak, Van Wieren, Ferrell, Swiss & Dugan 2010: 168). In this regard, Jacklin *et al.* (2007: 39) quote the words of one research participant as follows:

> I didn't think it would be this hard. I'm finding it a lot harder than I thought it would be in terms of transition of how you're supposed to learn and how you're supposed to … keep yourself going with all your studies and that kind of thing. I find it quite strange how, not really cut off but you're not spoon fed in terms of your education here, but it's quite a sudden change which I wasn't really prepared for….I didn't expect finding my learning difficulties being as difficult a problem. It's never been this big a problem to me before. But then again I never had to learn like this before.

Therefore, the researchers recommend that the first-year university curriculum should focus on "learning how to learn in HE" which they say would help all students. Biggs (2003, cited in Allan and Clarke 2007: 65) proposes three levels of skills for students joining HE so as to be independent learners – "generic study skills, study skills related to specific content, and meta-cognitive learning skills". Generic study skills are described as, for example, time management,

presentation skills, referencing, and note taking. Skills such as reading for meaning, summarizing main ideas from readings, and composing essays were reported to be skills related to specific contents. Gaining meta-cognitive skills was reported to help learners manage themselves in new contexts. They include skills such as problem solving, learning independently of instructors, self-evaluation, self-monitoring, and learning from feedback.

On the contrary, a study conducted in Ireland (Shevlin *et al.* 2004: 24) came up with the evidence that the experiences of students with disabilities in the first year of university were much better than in the years ahead. As students progressed into advanced courses, students with disabilities could not get the necessary support and enthusiasm from their instructors. The problems students with disabilities face during their first year of university experience is undeniable considering the new learning and social environment in which they pursue their education. However, students with disabilities might face more difficulties as they pursue advanced courses, difficulties that are different in nature from what they have faced during the first year.

One very important resource centre in HEIs where students are expected to access to a wide range of academic information and enrich their learning experiences is the library. In many of the studies that investigated the experiences of students with disabilities, however, there was evidence that libraries were not organized in such a way that they would satisfy the needs of those students. Libraries posed difficulties of accessibility for students with physical disabilities and did not have accessible resources, for example, in Braille and electronic formats. It was also reported that students with disabilities always have to negotiate and explain to the concerned bodies in order that their needs be met (Athanasios, Konstantisnos, Doxa & Eleni n.d.; Holloway 2001: 402-03).

One curriculum area where few improvements are reported in much of the research (Fuller *et al.* 2008; Healey *et al.* 2006: 40; Vickerman & Blundell 2010: 28), in terms of making adjustments to accommodate students with disabilities, is assessment. Although research (Blundell 2010; Craddock & Mathias 2009: 132; Madriaga *et al.* 2010: 654) has established that both students with and without disabilities have negative experiences in assessment, the modes of assessment used in HEIs were found to be more restrictive for students with disabilities (Blundell 2010;

Vickerman & Blundell 2010: 28). In some studies (Fuller *et al.* 2004: 308; Redpath *et al.* 2012: 15-16), it was reported that many students with disabilities used to select courses based on the means of assessment to be utilized. In this regard, Fuller *et al.* (Ibid) write:

> Students were eager to choose courses in which learning and assessment required little written work, or few or no examinations, and which had a substantial practical element or which was information technology based, so that, for example, voice-recognition software could be used.

This demonstrates further the uneasiness examinations create in students with disabilities. Waterfield and West (2008: 91) underline that if students with disabilities were provided with choices of how they should be assessed, it would have the effect that would greatly improve their learning experiences as well as their academic performance.

In some instances, students with disabilities reported positive assessment-related experiences. In the study of Fuller *et al.* (2004: 464), for example, one student with disability reported satisfaction about the variety of assessment mechanisms used in a certain course as follows:

> The assessments of some of them [modules], they are really good and they vary. Like anatomy I did last semester and you have a skills test, an examination and a portfolio to hand in and it's good that they break it all up and I really enjoyed that module and everything that they said in the lectures related and it was really helpful.

In spite of the challenges students with disabilities have faced related to their impairment, different research (Department for Innovation, Universities and Skills 2009: 30; Fuller *et al.* 2008: 3; Jacklin *et al.* 2007: 32) has found that the majority of these students were generally happy with their experiences in HEIs. This could be for different reasons. Jacklin *et al.* (Ibid), for example, relate the positive experiences of students with disabilities to their enjoyment of the courses and their feeling of achievement from their studies. Vickerman and Blundell (2010: 10) attribute the positive experiences students with disabilities have largely to the "attitudes, experiences and personal knowledge" of some members of the teaching staff. Still others (Sachs & Schreuer 2011) associate the satisfaction of students with a comparison of their situation to those students with disabilities who did not get the opportunity to join HEIs.

ii. Sub-Saharan African perspectives of students with disabilities

The researcher couldn't find much research that investigates the learning experiences of students with disabilities in higher education in sub-Saharan Africa. The existing literature, however, has reported similar experiences, although more severe in terms of learning barriers for students with disabilities. Problems related to flexibility of the curriculum are reported to be the most serious barriers that students with disabilities find in their way as they try to fully participate in the learning and teaching process. Based on the evidence in South African HEIs, Howell and Lazarus (2003: 64) report that, "the energy, the emotional resources and the levels of stress involved in dealing with the overwhelming range of barriers that confront [students with disabilities] are extremely undermining and place them at an ongoing disadvantage to other students".

Howell (2006: 166), based on evidence from South Africa, reports that students with disabilities in HEIs are denied access to certain courses if those courses involve some practical activities, which are believed to pose difficulty to those students because of their impairments. The same is true in Ethiopian HEIs and could also be the same in other sub-Saharan African countries, considering their levels of development. In the developed world, however, it has been shown that students with any type of disability can learn and succeed in any field of study if appropriate adjustment is made in the curriculum (Jones & Hopkins, cited in Powel 2003: 58).

The denial of students with disabilities of their rights to enrol in any course they prefer because of their impairments also shows that, although governments have recognized inclusive education as a viable policy which is based on the social model of disability, in practice the traditional medical model is still dictating the activities of HEIs in this area. This dominance of the medical discourse of disability is further supported by the way HEIs are addressing the learning needs of students with disabilities in their systems. The problems of students with disabilities in HEIs are attributed more to the lack of assistive technology rather than limited attention to the inclusiveness of the teaching and learning process in the classroom (Howell 2006: 168).

In the existing studies focusing on the HEIs of sub-Saharan Africa, there is ample evidence of the dissatisfaction students with disabilities have experienced in the teaching and learning processes. In the study of Moswela and Mukhopadhyay (2011: 313) conducted in Botswana,

students with disabilities said that their instructors were not ready to accommodate students with disabilities' needs. One student with visual impairment, for example, reported:

> When I told one of my lecturers that I can't see, he did not understand what I was talking about. He did not pay any attention to my concern and continued to teach the same way that he was teaching for the entire semester. I find it very difficult to keep up with the pace. It took me long time to adjust with the pace of learning in this University. I came from a senior secondary school where people there knew how to deal with people like me who have visual problem.

In a study conducted by Haihambo (2010: 279), students with disabilities in Namibian higher education institutions expressed their dissatisfaction in most of their encounters with their instructors. In the words of one student with disability:

> Our lecturers just treat us the same. When one performs below average, they don't even make an effort to find out why. No one tries to help you. They don't even motivate you. They don't even acknowledge that you have a disability and will therefore be faced by attitudes that will pull you down all the time. The majority don't have any consideration what so ever for your special needs…

One research participant, for example, expressed the challenges faced from the academics in the following statements (Haihambo 2010: 302):

> …Starting school with not even a single piece of paper, not even a course outline, was weird. I soon got a [tape] recorder, but it was not always efficient, and lecturers would not give you a chance to set it up. That's when I realized that unlike at school lecturers do not spend time on greetings. They get straight to business. So I was always battling between leaving the tape and just listen, or try to record from wherever I could. Even when you are recording, many lecturers move around in the room, sometimes going too far away from the tape. When they leave, they don't even say "I am gone". You just have to rely on the movement in class to know the lecture is over.

Students with disabilities also explained problems regarding how fast instructors talked without giving any consideration to whether students are following their presentations.

Students with visual impairments also voiced the difficulties they face as a result of the absence or shortage of available curricular materials such as Braille. In the words of one student (Haihambo 2010: 293):

> Unavailability of Braille material put visually impaired students at a disadvantage. In an academic institution, you cannot have people read for you. How many times was I late

with assignments, not because I'm visually impaired, but because there's no material? More needs to be done to increase access.

Similar problems related to the acute shortage of appropriate resources for students with disabilities are voiced in research conducted in other countries of sub-Saharan Africa (Howell & Lazarus 2003; Matshedisho 2007; Moswela & Mukhopadhyay 2011).

With regard to policies that support the full inclusion of students with disabilities in HEIs, three major problems are raised in the research literatures that refer to the region. One problem is that there is lack of coherent policy and legal framework regarding students with disabilities' rights and entitlements. According to Matshedisho (2007: 695), whereas in the developed countries like the USA, UK and Canada, students with disabilities in HEIs have specific legal rights that can be used to enforce all necessary accommodation, in South Africa, on the other hand, support services for students with disabilities were "perceived as an optional and benevolent gesture". A similar situation is expected in other countries of the region which have fewer resources than South Africa. The second problem is that, although there are some policy initiatives that outline provisions for students with disabilities, there was a gap between the policy and its implementation. According to one research participant, "It is very well having nice policies but if you don't carry them out then there isn't much point in having them" (Holloway 2001: 610). The third problem is that students with disabilities themselves are not consulted when developing policies and, as a result, have many drawbacks. One research participant has said, in this regard: "When these policies are crafted, only the big bosses get involved. They do not come here and ask us; what is it that you ask? Where should we improve? They write things which date 14 years back" (Moswela & Mukhopadhyay 2011: 316).

Thus, a review of research literature on the learning experiences of students with disabilities in HEIs showed that those experiences were quite varied across institutions, between students with different types of disabilities, and even among students within the same type of disabilities. It is also established that, although all students do have some negative experiences during their university studies, the problems students with disabilities face are more severe in nature and level. In addition, some disability-related barriers were identified. The lack of systemic support and attitudinal barriers of university instructors were found to be the major causes of the

problems students with disabilities encounter during their university studies. In general, there have been some improvements in HEIs of the developed world in terms of legal and resource provisions for students with disabilities. In developing countries, and particularly in sub-Saharan Africa, the difficulties which students with disabilities in HEIs face are many and very severe because of lack of appropriate resources and enforcement of institutional policies.

iii. Linking the knots on students with disabilities' learning experiences

This section has synthesized the research literature on the learning experiences of students with disabilities in HEIs with the purpose of illustrating the extent to which inclusive education is being realized. Inclusive education is not about giving special privilege to students with disabilities. Nor is it about compromising academic standards in order to help those students. It is about giving them their due rights. It is about leveling the field for those who have previously been disadvantaged so that they get an equal opportunity as they experience the curriculum.

This notion is based on the social model of disability. This model makes distinctions between 'impairment' and 'disability' where disability is seen as a product of the social context and environment to which the individual belongs. It places all the disabling barriers students with impairments face in education on the society. Therefore, the proponents of this model argue that, if inclusion is to be a reality, the society should take full responsibility to remove these barriers. The reviewed literature has shown that, in spite of the global recognition of the social model as a policy base in relation to educational interventions, the practice of HEIs in relation of students with disabilities is more in line with the discredited medical model of disability. Therefore, if inclusive education is to be a reality, HEIs need to fully endorse the social model of disability both in their policy and practice. They have to remove all structural and environmental barriers from the learning situation, so that students with disabilities can get equal opportunities to learn and succeed in their studies.

The reviewed literature has further revealed that the learning experiences of students with disabilities vary from country to country and between different types of disabilities, as well as between students with the same of disability in different institutions. This is mainly because of the differences in provisions they get from their HEIs to address their learning needs. Thus, for students with disabilities to be successful and have positive learning experiences during their

university years, the reviewed literature has made it evident that accommodations are mandatory in the following curriculum areas:

- provision of assistive technology;
- instructors' use of accessible pedagogy;
- availability of curricular materials in accessible formats; and
- use of alternative assessment techniques.

Therefore, investigations of the views of students with visual impairments about the extent to which these curriculum elements are addressed in their institutions is critical in order to fully understand their learning experiences.

Furthermore, from the different voices of students with disabilities, it has been established that the instructors, and what they do in the classroom, are what make the difference in regard to helping students with disabilities to have a positive learning experience and be effective learners. The key stumbling blocks to instructors' efforts in creating more inclusive learning environments are related to their awareness of the rights of students with disabilities and their own responsibilities in addressing these rights, as well as their commitment and skills in how to make proper accommodations. Therefore, investigating the awareness, commitment and skills of the teaching staff is one area that will help to understand the causes and magnitude of the barriers to learning to which SVI are subjected.

In a nutshell, what happens in the classroom and other learning environments in HEIs is what is going to determine the learning experiences of students with disabilities and ultimately their learning. Perhaps the best theoretical framework that can be of help in understanding and interpreting the learning environment of HEIs and the learning experiences of students with disabilities is Bronfebrenner's bio-ecological model of human development (Bronfenbrenner & Morris, 2006). This theory posits that the different ecological systems in which an individual lives and the interaction among these systems is what determines the development of the individual. (This theory is discussed in a detailed manner in the next chapter.) Therefore, Bronfebrenner's bio-ecological theory served as a lens to understand the learning environment and consequent learning experiences of SVI in HEIs where this research is conducted.

2.4 Concluding remarks

This chapter has reviewed literature related to the major issue under investigation, i.e. the learning experiences of SVI in HEIs. On the basis of the reviewed literature, the following ideas can be forwarded as the conclusions of the review.

The reviewed literature has revealed that there have been new developments in the HE system in the past two decades which have had both positive and negative effects on the education of students with disabilities. The massification of HE, which was evinced by the vast expansion of HEIs and the massive enrolment of students, was one of the phenomenal developments in HE in the past two decades. Although this development has provided students with disabilities a better opportunity to join HE, the reviewed literature has confirmed that this huge expansion of HE has overstretched their capacity, in many cases, to give due attention to the quality of education. Especially developing countries like Ethiopia were left in a situation where they could not fully provide their HEIs with adequate resources to enhance the quality of teaching and learning. Therefore, in this situation it is difficult to imagine that HEIs of Ethiopia are in a position to realize inclusive education and fully address the learning needs of students with disabilities.

The literature has further affirmed that inclusive education with regards to students with disabilities is based on the social model of disability. This model takes into account the idea that the problems students with disabilities face in their learning is caused by social and environmental barriers rather than by their physical or sensory impairments. Therefore, the solution to these problems lies on the removal of these barriers by making certain adjustments to the environment.

The literature has further revealed that although inclusive education, which is also endorsed by UNESCO, has received wide-spread acceptance as a policy base, in practice much remains yet to be realized. Much of the effort seems to be focused on the provision of limited materials to support students with disabilities' learning by way of supplementing their 'deficiencies' because of their impairments. Thus it seems safe to conclude that the medical model of disability is still having a significant influence on the practice of HEIs.

Different research (Fuller *et al.* 2008; Healey *et al.* 2006; Sachs & Schreuer 2011; Vickerman & Blundell 2010) has shown that the type of learning experiences students with disabilities have is, for the most part, similar with that of students without disabilities. Therefore, creating an inclusive environment in the classroom is not just helping the students with disabilities, but also improving the effectiveness of the overall education system. In addition to these common barriers, however, there are certain disability-related barriers that have the effect of negatively influencing the learning experiences of students with disabilities. The problems students with disabilities face in HEIs can be generalized as curriculum inaccessibility, poor provision of facilities, and poor attitudes and skills of instructors.

The literature has further confirmed that institutionalized and systemic support for students with disabilities is more effective than support provided by individuals in a haphazard manner. UNESCO (2005: 16), in relation to this, asserts that inclusion "involves improving inputs, processes and environments to foster learning both at the level of the learner in his/ her learning environment as well as at the level of the system which supports the learning experience". To this effect, institutions need to have binding legal frameworks on the types and procedures of accommodation to be provided for students with disabilities and establish system to enforce them.

Although the overall situation of students with disabilities across all institutions and countries has some similarities, there are also differences in terms of what students with disabilities experience from country to country, institution to institution, and even among students with different types of disabilities within a single institution. Therefore, the availability of a considerable number of research studies on the learning experiences of students with disabilities in HEIs of the Western world doesn't imply that the area is fully researched. The limited literature the researcher could come across in relation to the learning experiences of students with disabilities in HEIs of sub-Saharan Africa has also revealed that, except for the increased severity of the problems they face due to the acute shortage of resources, students with disabilities in sub-Saharan Africa have similar experiences with those in the developed world. However, HEIs in sub-Saharan Africa, for the most part, do not have coherent policies and legal frameworks to enforce all necessary accommodation for students with disabilities.

The following chapter elaborates the major conceptual and theoretical frameworks that underpin the study.

CHAPTER THREE
THEORETICAL FRAMEWORK

3.1 Introduction

This chapter is intended to place the study within the most relevant theoretical frameworks and models. Although there might be several theories that would be useful to an investigation related to the learning of students with disabilities, three theories are selected which the researcher believes are most relevant for examining and understanding the learning experiences of SVI in HEIs. First, the major conceptions in relation to disability are discussed with a particular focus on the biopsychosocial model. This is followed by discussions on the theory of inclusion and more specifically on inclusive curriculum. Finally, the bio-ecological theory, the major theory that underpins the research, is discussed. The understanding we have of disablement will determine policy and practice regarding students with disabilities. Institutional policies, curriculum and instructional practices will determine the learning experiences of students with disabilities in a university environment (the ecology) and ultimately their learning and growth. The relationship between the three theories in relation to the current research can be diagrammatically depicted as follows:

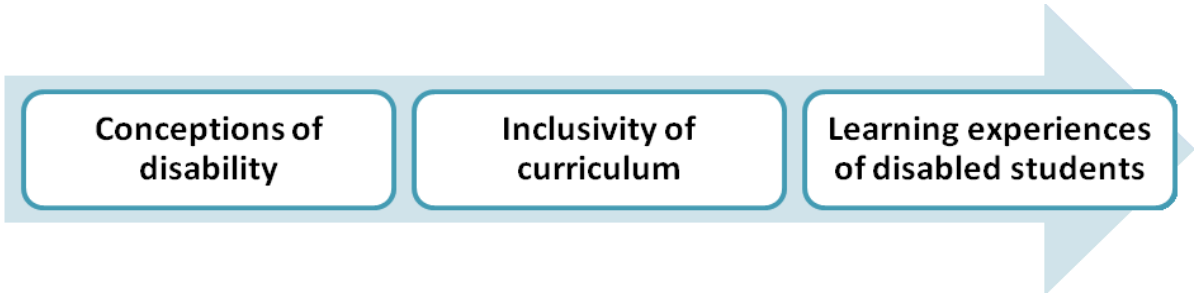


Figure 2 Relationship between theories

3.2 Theories of disability

Defining disability is complex and controversial. For a number of decades there has been a prolonged discourse on what is meant by disability, what the disabling factors are, and on the solutions to disability problems. As a consequence different models/theories have been

developed. From among these different theories of disability the medical model and the social model stand out as the most prominent models.

The medical model was developed as a replacement to the traditional beliefs that an individual's physical or mental problems were caused by a curse or were a punishment. The medical model (also called the individual/personal tragedy model) was developed by medical institutions and personnel who maintained that the meaning of disability is associated with the physical or psychological impairments an individual has and the cure, therefore, should also be an appropriate medical intervention (Kuno 2008: 80; Waddell, & Aylward 2010: 10). In this model, disability can be defined as "any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner, or within the range, considered normal for a human being" (Kuno 2008: 84). The medical model equates disability with impairment and is distinguished by three defining characteristics:

- Disability is viewed to be a personal problem located mainly within the individual.
- The person's health condition is assumed to be the cause of disability.
- The primary response to disability is considered to be a medical intervention (Ustun 1998: 4; Kuno 2008: 83).

The medical model of disability has received criticism and outright rejection by the disabled persons themselves. These criticisms were focused on its failure to consider the social context within which disability operates. This model was condemned as a deficient model both for its prime focus on impairment and for its disregard of the disabling cultural and environmental barriers (Hemingway 2007: 3; Ustun 1998: 4). Waddell and Aylward (2010: 11-12) further explains the criticisms, writing that, because of its emphasis on biology and disregard for psychosocial dimensions, the medical model fails to consider the unique personal attributes and subjective experiences of the person with an impairment in explaining disability.

Eventually, the activists of the disability movement developed their own model which considered disability as a form of social discrimination and oppression. According to this model, disability is totally and exclusively a socio-political issue (Kuno 2008: 85; Lang 2001: 2; Ustun 1998: 84-85; Waddell & Aylward 2010: 13). The proponents of this model strongly argue that

disability is the result of the limitations imposed on people with impairments by the social, cultural and environmental barriers and not the result of their impairments. It is asserted that society is responsible for the existence of disability either by creating these barriers or failing to remove them (Albert 2004: 3; Lang 2001: 4). In this regard, Oliver (2004: 21), a renowned disability activist who coined the phrase 'social model', explains that:

> ... the social model of disability is about nothing more complicated than a clear focus on the economic, environmental and cultural barriers encountered by people who are viewed by others as having some form of impairment – whether physical, sensory or intellectual.

According to the social model, the removal of these environmental barriers requires social intervention that focuses not on individuals but on the society as whole. Society should take collective responsibility for making all necessary modifications in the environment so as to make possible the full participation of disabled people in all areas of social life (Kuno 2008: 86; Waddell & Aylward 2010: 14).

The proponents of the social model make distinctions between impairment and disability. While impairment is a biological and functional attribute, disability refers to the experiences individuals have as a result of the social and environmental barriers they face in society (Hemingway 2007: 4; Waddell & Aylward 2010: 14). Thus, disability is a "socio-cultural rather than a biological construct" (Lang 2001: 4).

In spite of its widespread acceptance, primarily by disabled persons themselves, the social model has been subject to criticisms. One criticism was that this model ignores the problems of impairment and therefore ignores the medical interventions that are necessary for some disabled people. It is argued that the removal of social and environmental barriers cannot fully solve the problems of disabled persons because of the complexity and severity of certain types of impairments (French 1993 & Thomas 1999, in Barnes: 19; Lang 2001: 19; Waddell & Aylward 2010: 14). In this regard, Crow (1996, cited in Lang 2001: 23) argues that:

> ... impairment such as pain or chronic illness may curtail an individual's activities so much that the restriction of the outside world becomes irrelevant ... for many disabled people personal struggles relating to impairment will remain even when disabling barriers no longer exist.

Another criticism is that the social model is advocated by disabled people in developed countries whose basic needs for assistive devices and health care have already been provided for. Therefore, they are fighting for their social rights. According to this argument, this does not apply in developing countries where lack of assistive equipment is the most critical problem (Albert 2001: 6).

There are some critics who claim that the social model of disability has served its purpose in attracting attention to the social and environmental problems of disabled persons and therefore is no longer important. In this regard, Barnes (2012: 12) explains that the social model was initially developed with the purpose of diverting the focus away from the functional limitations of disabled people and onto the environmental disabling barriers so that appropriate policies and practices to facilitate their eradication could be generated. Shakespeare and Watson (1997, cited in Barnes 2012: 19), who were previously proponents of the social model, also argue that this model is an outdated ideology since the disability/impairment division upon which the model is based is difficult to sustain, claiming that impairment has some role to play in disablement. They reiterate that the focus of the social model on removing disabling barriers is unrealistic.

Oliver (2004: 8-9) identifies five main criticisms of the social model that have been made within the discipline: that the social model ignores or is unable to deal adequately with the realities of impairment; that it ignores our subjective experiences of the 'pain' of both impairment and disability; that it is unable to incorporate other social divisions, such as ethnicity, age, gender, sexuality; that it cannot be used in order to describe the way that disabled people are socially positioned as "other"; and that it is inadequate as a social theory of disability. Feminist writers have stated that the social model over-emphasizes socio-structural barriers and ignores personal and experiential aspects of disability (Reeve 2004). Morris (1991, cited in Cameron 2008: 15), for instance, has suggested that "there is a tendency within the social model to deny the experiences of our own bodies".

In response to these criticisms, some scholars have tried to expand the social model in a way that would help for a full understanding of the concept of disability (Cameron 2008: 15). One of these is the modified social model which has tried to integrate the medical and social models. The World Health Organization (WHO), which was responsible for the development of the

medical model, now developed this new modified model, known as the biopsychosocial model. This model sees the problems of disabled people from biological, individual and social perspectives (Kuno 2008: 87; WHO 2001: 20). According to this model, disability is created as a result of the interaction of individual and contextual factors, and is not created solely either by impairments or by the social environment (Schneider 2006: 9; Waddell & Aylward 2010: 22). Thus, according to Schneider (2006: 8), "one must look at both the individual and the environment if one is to describe a person's experience of disability accurately and comprehensively". In justification of this model, Waddell and Aylward (2010: 22) argue that human beings are biopsychosocial by nature with "an integrated whole of body and mind in a social being" and therefore any disability model should be comprehensive to reflect this human nature.

The biopsychosocial model has received support from certain disability organizations. The Australian National Mental Health Consumer and Carer Forum (NMHCCF) (2011), for example, has shown its acceptance of this model by adopting the name *psychosocial* model in reference to people living with severe mental health conditions. According to this model, disability is the result of a complex interaction between the functional limitations of individuals with severe mental health conditions and the environment in which they live. WHO (2001) also claims that many disability organizations and disabled people have contributed for the development of the new International Classification of Functioning, Disability and Health (ICF), which is the basis of the biopsychosocial model. UNESCO (2009: 103), in one of its publications, has acknowledged the contribution of the functional limitations of the individual to disablement as follows:

> Disability is the outcome of complex interactions between the functional limitations arising from a person's physical, intellectual, or mental condition and the social and physical environment. It has multiple dimensions and is far more than an individual health or medical problem.

However, this new blended model also is not without criticism. The major criticism is that, in spite of the attempt to synthesize the two polarized models, medicalization still seems to stand out as an underlying principle of this new model which, it is claimed, is clearly visible in its name – biopsychosocial (Barnes 2012: 16; Kuno 2008: 88).

The researcher, however, acknowledges the limitations of the social model in fully explaining the experiences of students with disabilities. He is of the opinion that students with impairments will not have the same type of learning experiences even in situations where all possible accommodations are made and all social and environmental barriers are removed. For example, a student with visual impairment's learning experiences will be influenced by a number of visual phenomenon in spite of every effort his/her instructors, and the institution at large, make to create a user-friendly learning environment. In addition, the social model is aligned with the bio-ecological theory which underpins the current research, since it views disability as the result of the interaction between the characteristics of the individual and contextual influences in which he/she operates. Therefore, in spite of the criticisms it faces, the researcher is of the opinion that the biopsychosocial model serves well for disability-related research and other social interventions. He has thus adopted it for his current research.

3.3 Theory of inclusion

Inclusion has remained a very complex concept with different dimensions that have proved to be difficult to define. Thus there is no single, agreed-upon definition of inclusion (Giangreco, Carter, Doyle & Suter 2010: 248). UNESCO (2005: 13) defines inclusion as a "process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion within and from education". Inclusive education focuses on transforming education systems in a way that they can address the needs of diverse learners. It emphasizes giving equal opportunity for students with disabilities to participate in education. Similarly, Ainscow (1999: 218) defines inclusion as a "process of increasing the participation of pupils in, and reducing their exclusion from, the cultures, curricula and communities of their local schools". He further stresses that inclusive education should focus on the elimination of barriers that hinder learning and participation of all students.

According to UNESCO (2005: 16), there are four major elements in the conceptualization of inclusive education. These are the following:

- Inclusion is a process. It has to be seen as a never-ending search to find better ways of responding to diversity.
- Inclusion is concerned with the identification and removal of barriers.
- Inclusion is about the presence, participation and achievement of all students.
- Inclusion involves a particular emphasis on those groups of learners who may be at risk of marginalization, exclusion or underachievement.

Inclusion starts with the recognition and appreciation of differences that exist in a classroom and an educational institution in general. These differences are valued and are considered an important input to the teaching and learning process rather that a problem. Instructors are expected to respect and build on those differences in developing inclusive approaches to teaching and learning (Booth & Ainscow 2002: 3-4).

Inclusive education can be viewed from a broader social justice perspective. UNESCO (2001: 16) asserts that inclusive education is a human rights issue. Different UN conventions starting from the Universal Declaration of Human Rights (1949) have acknowledged education as a human right. The World Conference on Education for All (1990) and the United Standard Rules on the Equalization of Opportunities for Persons with Disabilities (1993) reaffirmed education as a basic right for all peoples while acknowledging the exclusion of some members of the society from education. Thus inclusive education was a response to the quest for strategies to address this basic right of students with disabilities.

The underlying rationale behind inclusive education is that students with disabilities will learn best and develop important social skills that are necessary for their future lives if they are educated in an environment where they would have been taught if they had not been disabled. This would mean that they will learn with their non-disabled peers with necessary support provided to facilitate their participation in all activities. Jackson, Ryndak and Wehmeyer (2008-09: 180) emphasize this idea by writing:

> It is within the context in which all children of a particular age participate that developmental growth is most likely to occur, and that approximations to the standing patterns of behavior in those contexts – including academic, social and interpersonal behaviors – is what defines growth.

This is consistent with the ecological systems theory of human development which underpins the current research.

At the heart of the move towards inclusive education lies curriculum. If education is to serve all learners on an equitable basis, the curriculum has to be flexible enough to allow for necessary modifications and adaptations to meet the needs of individual students. These modifications and adaptations of the curriculum are to be made during its design phase as well as during its implementation to make it meaningful, relevant and accessible to all students (Hockings 2010: 1; UNESCO 2005: 25-26).

3.3.1 Models of inclusive curriculum

When we speak of inclusive curriculum as a primary manifestation of inclusive education, there are two models that have been in use in relation to its implementation. These are the accommodation model and Universal Design for Learning (UDL) model.

i. The accommodation model

The accommodation model has been widely used for a long time to make the curriculum accessible for students with disabilities. There is inconsistency in the use of the concept of accommodation in relation to curriculum across different educators and institutions. Especially there is ambiguity in the use of the concept in relation to other similar concepts such as modification and adaptation. In some cases, for instance, accommodation is used as an umbrella concept that encompasses modification (MOE, 2009: 2). There are also situations where modification is used as the wider concept encompassing accommodation (King-Sears, 2001, cited in Okumbe & Tsheko; Koga, 2004). In still other cases, accommodation and modification are used with distinctly different meanings (Beech 2010). In the context of this study, accommodation is used as a general concept to refer to the adjustments and alternative arrangements made in the learning environment so that it does not have a discriminatory effect on SVI. This ranges from the removal of physical barriers to the changes on the attitudes of people. This may include the provision of information to students using appropriate formats, allowing students multiple modes of response, provision of assistive technology to help students access the curriculum, and extracurricular services.

Accommodation, in this model, is not meant to lower academic standards since students with disabilities are required to demonstrate the same level of performance as their non-disabled peers. Nor is it intended to give students with disabilities an unfair advantage over their non-disabled peers (Martin n.d.: 4-5; Russell & Demko 2003: 21-22). In many of the institutional documents, the adjective "reasonable" is added before the concept to indicate that any of the modifications and adjustments made for individuals with disabilities are not intended to unfairly treat those individuals vis-a-vis their non-disabled peers. This can be clearly noticed in the definition given to *reasonable accommodation* by the Convention on the Rights of Persons with Disabilities (2006: Article 2). This definition includes:

> necessary and appropriate modification and adjustments not imposing a disproportionate or undue burden, where needed in a particular case, to ensure to persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms...

In the context of education, the goal of reasonable accommodation is to provide students with disabilities with a learning environment equal to their non-disabled peers, rather than giving unfair advantage to students with disabilities over their peers. In doing this, it does not compromise academic standards. However, the accommodation model is criticized as having limitations in its effectiveness and the UDL model (below) is recommended by some as a solution to the problem.

ii. Universal Design for Learning model

Universal Design for Learning (UDL) is a relatively new concept which is receiving attention because of its purpose of addressing student diversity at all levels of education. UDL is a framework for removing barriers to learning by anticipating the needs of all students. It is a model that is intended to make the curriculum inclusive by promoting access, participation and progress for all learners irrespective of their differences. UDL is an approach to designing course instruction, materials, and content to benefit people of all learning styles without adaptation. The Higher Education Opportunity Act (cited in Sopko 2009: 1) provides a comprehensive definition for UDL as:

> a scientifically valid framework for guiding educational practice that—(A) provides flexibility in the ways information is presented, in the ways students respond or demonstrate knowledge and skills, and in the ways students are engaged; and (B) reduces barriers in instruction, provides appropriate accommodations, supports, and challenges, and maintains high achievement expectations for all students, including students with disabilities …

The concept of universal design was initially developed in the field of architecture. Universal design was described as the "design of products and environments to be usable by all people to the greatest extent possible, without the need for adaptable or specialized design" (Center for Universal Design 1997, cited in Mace 2008: 1). Universal designs are universal and inclusive. Principles of universal design subsequently were borrowed by the education sector with the intention of creating flexible and inclusive curricula for diverse learners. Accordingly, UDL considers the needs of marginalized groups of students such as those with physical and sensory impairments at the outset and ultimately produces better solutions for all learners by providing a wide variety of alternatives.

UDL requires that learners should not only be provided with accessible information, but also with accessible pedagogy. Here, pedagogy is embedded into three specific and central considerations in teaching. According to the UDL model, instructors should provide:

i) flexible ways of presenting lesson content;
ii) flexible options for student engagement; and
iii) flexible methods of expression and assessment (DeCoste n.d.; Rose *et al.* 2006: 2).

The principles of UDL are compatible with the spirit of inclusive education. As inclusive education is meant to create a conducive learning environment for all students, disabled and non-disabled alike, UDL seems an ideal strategy to address this aim. However, there are educators who argue that UDL is not sufficiently well developed to be used in HE settings. These educators maintain that it is premature to promote UDL as an effective model of inclusion (McGuire, Scott & Shaw 2006: 172). There are others who assert that UDL is challenging to implement, the main challenge being the time limitations on the part of faculty. This challenge becomes more evident when we consider that the majority of faculty members are not proficient in pedagogical skills. In addition, HEIs may have budgetary problems that would prevent providing the necessary facilities to make UDL a reality (Johnson & Fox 2003: 16). Especially in

developing countries like Ethiopia, little has been done to provide students with disabilities with the minimum provisions. It is, therefore, not the right time to venture into the UDL model.

Considering this situation, the researcher found it reasonable to use the accommodation model as a mirror to examine the learning experiences of students with visual impairments in the current study. After all, accommodation is part of the process of working towards universal curricular access (Pedelty 2003: 78). In addition, in spite of the claim that UDL can address the educational requirements of all students, there will always be some people for whom this design may not work. Therefore, providing accommodation to individual students cannot be entirely abandoned, even under UDL (Johnson & Fox 2003: 14; McGuire *et al.* 2006: 171-172).

In taking the accommodation model as a theoretical lens to investigate the inclusivity of the curriculum in relation to SVI, the extent of modification and adaptation in the major elements of the curriculum – objectives, content, instructional methods, assessment practices and teaching and learning resources - will be considered. The relationship among these elements is depicted in the following conceptual model.

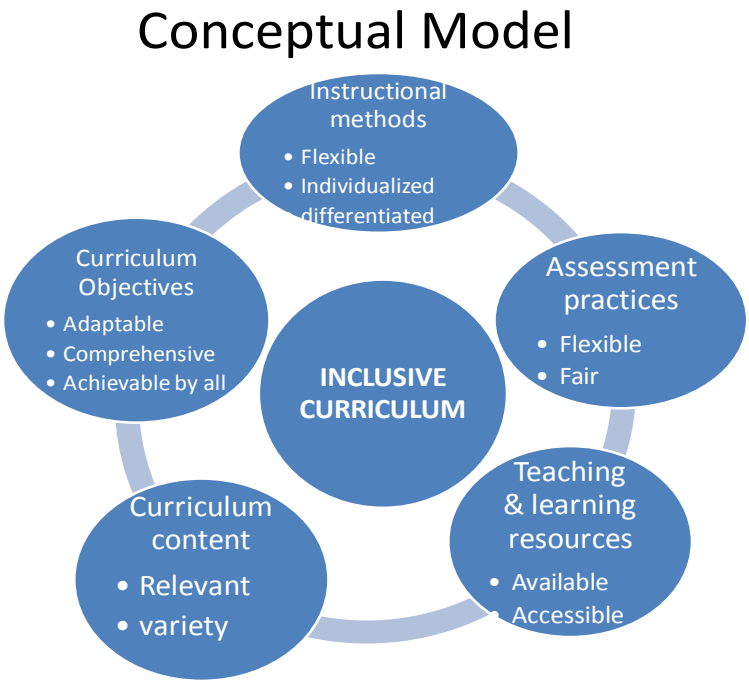


Figure 3: Inclusive curriculum

In this conceptual model, the central circle shows the basic concept of inclusive curriculum which this research addresses. The outer circles depict the components that will make up the central concept. The ring connecting the outer circles implies that they are all interconnected and interrelated.

3.4 Bio-ecological systems theory

This research is aimed at examining and understanding the learning experiences of SVI in HEIs of Ethiopia. In order to undertake this investigation, Bronfenbrenner's (2005) bio-ecological model is used as a theoretical framework. The basic essence of this theory is that an individual's development is mainly the result of the influence of his/her environment in addition to his/her personal attributes. The theory is further based on the assertion that in order to be effective learners, students must be active participants in the bi-directional interactions that occur within the environment (Smith 2011: 2). The theory also describes a multi-layer system of the environment that has varying levels of influence on the development of the individual (Bronfenbrenner 1994). In the following paragraphs, the basic elements of bio-ecological theory and how they were used in this research are explained.

When Bronfenbrenner first developed his theory, it was known by the name ecological systems theory which was mainly focused on the role of the environment in the development of an individual. It did not give much consideration to the role of the individual on his/her own development (Hirsto 2001: 30). Gradually, however, Bronfenbrenner refined his theory to give due emphasis to the role of the individual on his/her own development which is in constant interaction with his/her environment. As a result, the theory was renamed as bio-ecological systems theory (Berk 2007: 24; Hirsto 2001: 30).

The central essence of the bio-ecological theory lies on the interactive relationship of four interrelated elements which were developed into a model as the Process-Person-Context-Time (PPCT) model (Tudge *et al.* 2009: 199). These four conceptual elements form the basis of and explain an individual's development. They are each discussed below.

Process: Of these four concepts, *Process* plays a key role in human development. Bronfenbrenner and Morris (2006: 797) explain that human development is a result of:

> ….processes of progressively more complex reciprocal interaction between an active, evolving biopsychological human organism and the persons, objects, and symbols in its immediate external environment. To be effective, the interaction must occur on a fairly regular basis over extended periods of time. Such enduring forms of interaction in the immediate environment are referred to as proximal processes.

However, the effect of the proximal processes on the developing person varies depending on the nature of the individual and the context. Bronfenbrenner and Morris (2006: 798), in their second proposition elucidate this idea writing that:

> The form, power, content, and direction of the proximal processes effecting development vary systematically as a joint function of the characteristics of the developing person, the environment—both immediate and more remote— in which the processes are taking place, the nature of the developmental outcomes under consideration, and the social continuities and changes occurring over time through the life course and the historical period during which the person has lived.

Person: With regard to the second element of his theory, *Person*, Bronfenbrenner (Ibid: 810) stressed the personal characteristics of individuals that positively or negatively influence the development of the individual. These are "genetic, physical, psychological and behavioral characteristics", which the individual is bestowed with and are necessary for his/her development and learning (Smith 2011: 3). Darling (2007: 208) underlines that the characteristics of the developing person may "evoke differential responses from the environment or differential reactions to it". Here, also, three categories of process-related characteristics of *person* were identified – forces, resources and demands. Force characteristics, according to the conceptualization of Tudge *et al.* (2009: 200), refer to "those that have to do with differences of temperament, motivation, persistence, and the like". Resource characteristics, according to Bronfenbrenner and Morris (2006: 812) "constitute biopsychological liabilities and assets that influence the capacity of the organism to engage effectively in proximal processes". These may partly include features such as genetic defects, physical impairments, severe and persistent illness, past experiences, skills, and intelligence. Demand characteristics are "those that act as an immediate stimulus to another person, such as age, gender, skin color, and physical appearance" (Tudge *et al.* 2009: 200). These factors may entice or inhibit reactions from the social environment that can promote or suppress the functioning of the proximal process (Bronfenbrenner & Morris 2006: 812).

Context: The third key element of Bronfenbrenner's theory is *Context*. Context constitutes the interacting systems and social characteristics surrounding the developing person which Bronfenbrenner elaborated in his original ecological model. Context is also called the ecology of the learner that consists of "all the processes, relationships, and external influences" that have an enduring impact on the learning and development of the individual (Spencer 2006, cited in Smith 2011: 3).

The context or ecology of the learner is composed of four interrelated and overlapping subsystems - *micro-system*, *meso-system*, *exo-system* and *macro-system* – that help, support and guide human development (Berk, 2007: 24). The environmental factors within these subsystems that influence the individual's development in the context of the current study can be the following:

- individuals such as peers, instructors, and disability support officers;
- institutions such as departments and libraries;
- services such as students accommodations;
- physical settings such as availability of assistive technology and accessible buildings; and
- values and beliefs such as the existing predominant attitudes towards disability.

These will constitute the context in which learning within HEIs will take place and by which the learning experiences and learning outcomes of SVI will be determined. According to Smith (2011: 4):

> The context of learning is an outcome of the interaction systems in which learning occurs. This includes the institutional, political and societal systems governing learning. Holistically, learning environments will include not only include excellent 'content' but also consider the way in which the context of learning is subjectively experienced by the unique person…. Strong, mutual connection within the learning environments motivates the engagement with the learning concepts and enhances learning outcomes.

The *micro-system*, the first layer of Bronfenbrenner's ecological system, contains the structures with which the developing individual has direct contact and encompasses the relationships and interactions he/she makes with his/her immediate surroundings. Bronfenbrenner *(1994: 39)* describes this layer as:

> a pattern of activities, social roles, and interpersonal relations experienced by the developing person in a given face-to-face setting with particular physical, social, and symbolic features that invite, permit, or inhibit, engagement in sustained, progressively more complex interaction with, and activity in, the immediate environment.

This is the structure within the ecological system that has a direct and the most influential effect on the developing person. Bronfenbrenner asserts that at this level, the developing individual influences his/her environment as much his/her behavior and beliefs are influenced by the environment. These influences he calls bi-directional. Although these bi-directional influences are strongest in the inner environment, they may exist at the outer layers as well (Berk 2007: 24; Bronfenbrenner 1979). In an educational context, effective learning will result in situations where the individual learner is an active participant in these bi-directional interactions (Smith 2011: 2).

In the context of this study, the micro-system includes the curriculum materials, persons, tasks and activities with which the SVI has direct contacts. It also has the strongest and most enduring influence on his/her learning experiences. The micro-system may include, among some others:

- instructors and their attributes such as attitudes, pedagogical skills, training, disability awareness;
- peers and personal assistants – orientation, attitudes, skills;
- curriculum materials;
- the department;
- library attendants;
- disability support officers; and
- assistive technology.

The *meso-system* is the second layer within Bronfenbrenner's ecological system that refers to the different relations and interactions between the different structures of the micro-system. The developing person may not be directly involved in these interactions but they still influence the process of his/her development (Bronfenbrenner 1979: 209). For example, the relationship between the instructors and their department at a certain institution will definitely have an influence on the behaviors of the instructors in the classroom and ultimately on the learning of students. Similarly, the communication between the disability officers and the departments or the

instructors within these departments will definitely affect the quality of the accommodations students with disabilities will receive and ultimately their learning.

The *exo-system*, the third layer of Bronfenbrenner's ecological system, refers to the wider social system within which the developing person is situated, although he/she is not directly involved in its activities. The interactions of the structures of this layer with the structures of the micro-system will have an influence on the development of the individual (Berk 2007: 25; Bronfenbrenner 1979: 237). In the current study, for instance, a certain university's policies, provisions and budget allocations to departments will have an impact on the way departments make accommodations to SVI and ultimately on the students' learning experiences.

The *macro-system* is the outermost layer in the ecological systems theory of Bronfenbrenner. It is comprised of the values, laws and policies that will have a cascading effect on the interactions of the lower levels of the ecological system and ultimately on the developing individual (Berk 2007: 25; Bronfenbrenner 1979: 258). The macro-system, in the context of this study, will be the laws and policies of the country in relation to HE in general and those related to students with disabilities in particular. International declarations and conventions related to the inclusion of students with disabilities will also be part of the macro-system since they will have an influence on the commitments of governments and, as a result, on the practices of institutions.

A fifth element that Bronfenbrenner later added to his ecological systems is known as c*hrono-system*. This layer refers to the role of time on the development of the individual as well as on the environment. It could also be related to the physiological changes within the individual through time, causing different reactions to the changes in his/her environment (Berk 2007: 25; Paquette & Ryan n.d.: 2). In the context of this study, for example, the way students with visual impairments experience their learning environment may change with the passage of time during their stay in HEIs. Thus, the way SVI experience their environment during their first year at a university may not be the same as during their final years.

At the center of all these overlapping ecological layers lies the *individual* learner. According to Smith (2011: 3), "individuals are active in their own development through selective patterns of attention, action and response with people, objects and symbols from within their environment".

Hirsto (2001: 35) recognizing the role of the individual in his/her own development, expands the bio-ecological model to depict the individual as a "psychophysical whole that can be studied on different levels" including the physiological level, motoric level, psychological level and level of overall functioning. As part of the ecological system, he names this layer the *endo-system*. The current research also considers SVI's personal attributes such as family and educational background, previous experience as students with disability, family background, self-concept, academic potential, readiness to exert effort in learning, skills in using assistive technology, aspirations and gender in analyzing their voices about their lived experiences in the university environment.

As has been described in the preceding paragraphs, all levels of the ecological system have a role to play in the learning and development of students in a HEI. However, as this study is mainly concerned with examining the accessibility of university curriculum to SVI, only those interactions at the level of the *micro-system* were considered.

Time: The last component of the bio-ecological model is *Time*. According to Bronfenbrenner, an individual's development is affected by the time in which the process is occurring. Thus, a similar proximal processes happening at different historical periods will have a different impact on a developing person. This component of the bio-ecological model is especially relevant for longitudinal research so as to see the changes in development through time (Tudge, *et al*. 2009: 201) and therefore will not be applicable in the current research.

3.5 Concluding remarks

Three theories and models are selected to serve as a lens to examine and understand the learning experiences of students with visual impairments in HEIs of Ethiopia. The prevailing conception about disablement is very important in order to understand the policy and practice of HEIs in relation to students with disabilities. From among the different models of disability, the biopsychosocial model is found to be most appropriate for the current study for it considers the individual characteristics of learners, together with the environment, as having a profound impact on the learning experiences of students with disabilities. With regard to the theory of inclusion, two overlapping models are dominating the policy and practice of educational institutions in

relation to how the curriculum should be designed so as to make it accessible to all students. In this study, the accommodation model is found to be most appropriate, considering the prevailing condition in Ethiopia. The third theory that is selected to underpin the research is bio-ecological theory. Although there are similar theories that have relevance to the issue under investigation, Bronfenbrenner's bio-ecological model is considered to be most comprehensive and best able to examine the interacting elements within the HE environment that determine the learning and growth of students with disabilities.

CHAPTER FOUR

RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

This chapter expands the description of the research design and methodology that was briefly described in the first chapter. Specifically, the paradigm with which the current research will be aligned, the overall approach of the research, the specific methods to be used including the participants of the study, methods of data collection and data analysis are discussed. In addition, the chapter contains strategies that were followed to ensure the validity and reliability of the research and issues related to ethics are also explored.

4.2 Research paradigm

The design of any research endeavor starts with a decision regarding the paradigm in which the study will be positioned and which, in turn, will influence the whole research process (Maxwell 2005: 37; Rubin & Babbie 2010: 36). In this, as in any research, it is imperative to make paradigmatic decisions before the specific research design and approach are developed. This helps the researcher to have a good understanding of the problem under investigation and guide decisions regarding the overall research process. In global terms, a paradigm is a 'world view' that refers to the way one thinks and makes sense of real world phenomena (Patton 2002: 69). In the context of research, Neuman (2007: 41) describes paradigm as "an integrated set of assumptions, beliefs, and models of doing good research, and techniques for gathering and analyzing data. It organizes core ideas, theoretical frameworks, and research methods". Similarly, Hammersley (2012 n.p.) defines paradigm as "a set of philosophical assumptions about the phenomena to be studied, about how they can be understood, and even about the proper purpose and product of research".

Having defined what a paradigm is, it is important to describe how it influences the whole process of investigation. A paradigm influences the way knowledge is studied and interpreted. The paradigm to which any research aligns itself is reflected in the way the whole research process is designed, the way data are collected and analyzed as well as the way the research

product is presented (Mackenzie & Knipe 2006; Wahyuni 2012: 69). It was also helpful in ensuring the logical coherence of the different components of the research process (Maxwell 2009: 224).Therefore, the current researcher made his philosophical assumptions explicit at the outset. This helped him understand the phenomena under study and make decisions regarding the methods he should employ to collect, analyse and interpret his research data and justify his decisions.

There are different paradigms to which research designs can be aligned. These paradigms can be differentiated based on their ontological, epistemological and methodological assumptions when conceptualizing and conducting research. Ontology is a philosophical stance which is concerned with what constitutes reality (Hatch 2002: 11; Krauss 2005: 758); epistemology is concerned about the relationship between the knower (researcher) and what can be known (researched) (Hatch 2002: 11; Krauss 2005: 759); and methodology is concerned with how knowledge is constructed (Guba & Lincoln 1998: 201; Hatch 2002: 11-12; Krauss 2005: 759; O'Donoghue 2007: 9). Before indicating the paradigm on which the current research is based, it would be worthwhile to briefly elaborate the positivist and interpretivist paradigms, which are strongly opposed views of social reality and the way it is understood (Cohen, Manion & Morrison 2007: 21; Corbetta 2003: 12; Wahyuni 2012: 71).

i) Positivist Paradigm: Corbetta (2003: 13) defines this perspective as "the study of social reality utilizing the conceptual framework, the techniques of observation and measurement, the instruments of mathematical analysis, and the procedures of inference of the natural sciences". Positivists do not make any fundamental distinctions between social science and natural science research. They assume that social reality is made up of objective facts which can be precisely measured as long as researchers are value-free (Burton & Bartlett 2009: 19; Neuman 2007: 42).

Positivism is based on the assumption that there is a single concrete reality in the world that can be revealed provided that appropriate research tools are used. Its proponents assert that it is possible to know and discover whatever there is to know in the world (Blaxter, Haghes & Tight 2006: 60). According to this view, reality exists outside human perception which is governed by natural and universal laws. The task of the researcher should be to discover this reality and those laws that govern it. In other words, he/she has to try to explain human behavior in terms of

measurable variables and find out the causal relationship among these variables (Hammerswey 2012: n.p.; Klaus 2005: 760). The positivist researcher has to be objective and detach himself/herself from the reality being researched for otherwise he/she will affect the validity of the study. In other words, the researcher is not supposed to influence or be influenced by the objects of the study (Guba and Lincoln 1998: 204).

The ultimate purpose of research that is situated within the positivist paradigm is mainly to create cause and effect relationships that can enable prediction (Corbetta 2003: 14-15; Hatch 2002: 14; Kassi & Khan 2009: 95; Neuman 2007: 43). The emphasis is more on explanations rather than understanding (Kassi & Khan 2009: 95). In order to reach valid conclusions, positivist researchers employ a research methodology that will provide for careful measurement, manipulation and control. Because of this, the data collection and analysis methods used in this type of research are predominantly quantitative.

Positivist researchers utilize predesigned and fixed research procedures during data collection and analysis process. They are supposed to strictly follow those procedures with maximum objectivity. There is no flexibility once the research plan is put into operation (Rubin & Babbie 2010: 36).

ii) Interpretivist Paradigm: This paradigm was developed as a result of the criticism of the positivist stance in the social sciences. The basic argument was that social phenomena are different in nature from the phenomena of natural sciences, and therefore the approach followed by positivist researchers cannot fully explain a social phenomenon (Cohen & Crabtree 2006). From the perspective of the interpretivist paradigm, there is no reality that can be understood universally; rather there will be multiple realities (as opposed to a single reality from the positivist perspective), constructed by individuals or groups from their perspectives and which are unique to their situations (Hammerswey 2012: n.p.; Hatch 2002: 15; Neuman 2007: 43). Therefore, research should focus on understanding and illuminating the individual perspectives or constructions of reality. In other words, the researcher's task is to "understand how people see, think, and feel about the world" (Hammerswey 2012: n.p.).

The interpretivist view holds that researchers will join the participants of the study in the co-construction of the subjective reality which is being investigated rather than being distant and objective. Throughout the research process, the researcher's values will be obvious. His/her background and experiences will have an impact on the research (Guba & Lincoln 1998: 206-207; Hatch 2002: 15). According to the description of Staller (2010: 1160) "all interpretations and observations are filtered through the researcher, who brings his or her own values and identity to the process".

In order to reconstruct the reality held by the research participants, researchers in this paradigm attempt to get an in-depth understanding of their lives. The researchers prefer to approach the research participants in their natural settings and try to get an empathic understanding of what they feel. This approach also enables interpretivist researchers to interpret research participants' everyday experience and their deeper meanings and feelings, as well as the distinctive reasons for their behaviours (Rubin & Babbie 2010: 36).

Researchers who align themselves with this paradigm tend to trust in and favor the use of qualitative research methods to collect and analyze data. The research product is presented as rich textual descriptions with direct quotes from the research participants (Hatch 2002: 15-16; Neuman 2007: 43).

Here, it is important to note that there is also a difference among interpretivist researchers in their general approaches of social research. There are scholars who argue that interpretivist research should strictly follow a qualitative approach (Guba & Lincoln 1998; Wahyuni 2012). There are others who assert that, although qualitative methodology is the best approach for research within the interpretivist paradigm, quantitative methods can also be used if required by the research purpose (Creswell 2009; Johnson & Onwuegbuzie 2004).

Inclusive education research is the offshoot of special education needs research which was based on the traditional positivist paradigm (Kearney 2009; Paul, Fowler & Cranston-Gingras 2006). However, the marginalization of certain students because of their impairment or otherwise is a social and cultural issue which cannot be accurately described through research methodologies that are aligned with the positivist paradigm (Ibid). Therefore, since the current research

undertaking focuses on reconstructing the personal experiences of students with visual impairments in their learning endeavors, the interpretivist paradigm was found to be the most appropriate alternative. The best way to understand and interpret the unique experiences of SVI is to approach the phenomenon in its natural context. This will enable the researcher to jump into the culture of the participants of the study in their natural settings and get a feeling of their experiences. In addition, the questions that were used for inquiry purposes evolved as the researcher continued with the study and gained better insight about the phenomena under investigation.

The basic purpose of the research was to reconstruct the lived experiences of students with visual impairments in HEIs. The story which each of the research participants told was somehow different from the others as a result of the differences in the personal attributes which influenced interactions with their ecological environment and ultimately formed their individual experiences and perceptions. In order to understand and interpret these experiences and perceptions, the investigator had to closely engage with the students and help them reconstruct their lived experiences.

4.3 Research design

A research endeavor needs to have a design before the process of data collection and analysis is commenced. Research design is used by different educators with some differences in conceptualization. In certain studies, it is understood as the entire research process from the formulation of the research problem all through the conclusion stage (Harwell 2011: 148; Hutton 2008; Yin 1994: 20). Maxwell (2009: 216-217), for example, discusses five major components including goals, conceptual framework, research questions, methods and validity in relation to qualitative research designs. In other studies, research design is used with reference to the methods and procedures used to undertake the research (Haihambo 2010; Walton 2006). According to Yin (2011: 75), research design is mainly concerned with "logical plans" and not with "logistical plans". Its main focus is on determining what type of evidence is needed for the problem under investigation; the issues of data collection methods and sampling techniques (What is a research Design n.d.: 9).

In this study, research design refers to all the decisions the researcher makes in relation to how he plans to undertake the investigation. It includes decisions regarding how the data are to be collected, the participants of the study are to be selected, and the data are to be analyzed.

As this study is aligned with the interpretivist paradigm, a qualitative methodology with a case study research design is used to explore the learning experiences of students with visual impairments in the HEIs of Ethiopia. There are different justifications that favour the use of qualitative approaches, rather than quantitative, in research areas that focus on the investigation of social settings and processes. Hatch (2002: 7) and Yin (2011: 8) contend that qualitative research enables us to understand a phenomenon from the perspective of those living in it. Furthermore, various educators maintain that one can make sense of a social phenomenon only in the context in which it happens which can be achieved through qualitative approaches to research (Hatch 2002: 7; Stake 2010; Yin 2011: 8).

Since the present study aims at creating meaning concerning the phenomena of the day to day interactions of SVI with the curriculum as they pursue their university education, qualitative research methodology is the most viable choice. In addition, qualitative research of inclusive education has the capacity to discover rich and varied data from the participants (Stake 2010). The low prevalence rate of the study group in higher learning institutions, which makes it difficult to reach statistically valid conclusions, also made qualitative research the preferable methodology (Hartley & Muhit 2003).

Maxwell (2009: 215) and Yin (2011: 10) maintain that qualitative research does not have any fixed designs and the researcher can use any design that seems fit for his/her purpose. Likewise, in qualitative research, the researcher may not start the investigation with a plan that must be strictly followed. Designs in this type of research are emergent (Patton 2002: 44) and iterative (Cohen *et al.* 2007: 178; Hartley & Muhit 2003: 111&106). One can start the investigation with no, or a very loosely developed, plan and develop it with the emergence of new insights as new ideas unfold during the data collection and analysis process (Patton 2002: 44). Further, there is usually a movement between the different design elements resulting in changes in the overall research design until the project is finalized (Maxwell 2009: 15).

Yin (2011: 77) stresses that, at whichever stage a researcher develops the research plan, the design process should be "recursive", meaning that the different design elements can be reconsidered during different phases of the research process and that it is possible to revisit these design features as the study proceeds. Hatch (2002: 38) also advises that it is preferable to start qualitative studies with some sort of framework and make changes when circumstances dictate during the process of investigation. The current researcher recognized the importance of starting the investigation with a "flexible structure" (Ibid). This helped him to have a clear understanding about the structure of the research process and served as a roadmap to follow in carrying out the research. As this study was conducted as an academic requirement, having an initial plan was also mandatory so that those entrusted with the task of supervising the project would have clarity about how the researcher was going to undertake the study. Therefore, the researcher considered some design elements before the beginning of the data collection and analysis, which is described in the next section.

As indicated earlier, this research involved a case study design. Case study is a type of research that focuses on portraying the circumstances surrounding a particular situation in a very detailed way (Cohen *et al.* 2007: 254). In this type of research, Neuman (2007: 20) explains that a "researcher carefully selects a few key cases to illustrate an issue and study it (or them) in detail and considers the specific context of each case". Its focus is on a particular unit of analysis, the case. The case can be an individual, a group of people, an organization, an intervention or a situation that enables boundaries to be drawn around the case (Cohen *et al.* 2007: 253; Willig 2008: 74).

Case studies can be based on a single case or they may involve two or more cases which are believed to be similar, known as multiple-case studies (Willig 2008: 77; Yin 2009: 19). In this investigation, a multiple-case study approach was used where two HEIs which were believed to be representative of all HEIs in the country were selected as research sites. The two universities selected as research sites served as cases where as the individual SVI who volunteered to participate in the study became entities within the cases. Stake (2000, in Bentley-Williams 2005: 82) emphasizes that this type of case study is important "for exploring unique personal perspectives and for linking understandings with social phenomena in order to understand what

is common and particular to the case". Therefore, in the current research the unique and shared experiences of SVI who participate in the study from each university were explored.

4.4 Research methods

Having located the research methodologically, the next step is to identify the specific techniques and procedures to be used in collecting and analyzing data. These techniques and procedures used in collecting and analyzing research data are categorized into quantitative and qualitative methods. Quantitative method refers to a research method of collecting and analyzing numerical data (Neuman 2007: 110) and the results can be compared and generalized to a larger population (Patton 2002: 14). Qualitative research, on the other hand, refers to research method of collecting non-numerical data. The focus is on capturing what people have to say in their own words and describe their experiences in depth. It also takes into account the social context within which behavior takes place (Hatch 2002: 6-7; Yin 2011: 8). The commonly used data collection techniques are interviews and observations (Hatch 2002; Neuman 2007; Stake 2010; Patton 2002; Willig 2008; Yin 2011). The information collected through such methods provides insight into the reasoning and feelings that motivate people to act in a certain way.

A qualitative approach to research provides richness and detailed information about a relatively small number of people. This smallness of the number of research participants, however, makes the findings less generalizable to the whole population (Corbetta 2002: 49; Patton 2002: 14). However, such research serves as a springboard for larger studies and provides deeper understanding (Neuman 2007: 143) that can inform theory, practice, and specific situations.

Since the main purpose of this study was to explore the perceptions and learning experiences of students with visual impairments and describe it in a detailed way, it necessitated a qualitative research methodology. This methodology has enabled the researcher to gain an in-depth understanding of the phenomenon under study based on the research participants' voices.

In the following section, the participants of the study, methods and procedures of data collection, methods of data analysis, issues of validity and reliability as well as ethical considerations are presented.

4.4.1 Participants

Research design should consider the target population about which results are pertinent, the research participants or sample from which data are to be obtained, and the techniques and procedures by which the sample is to be selected. The target population of this investigation included all students with visual impairments in the two universities that were taken as case studies. The two public universities, Mekelle University and Hawassa University, were selected based on the availability of the required number of SVI for the sample as well as their proximity to the researcher and to public transport. As visual impairment is a generic term encompassing different levels of impairment, this study was confined to those students with profound visual problems who do not depend on their eyes for learning.

The number of participants to be selected for a particular study and the way they are selected is determined by the purposes of the study, by the characteristics of the participants, and to some extent by the style of the research (Cohen *et al.* 2007: 101-102; Hatch 2002: 49; Mack, Woodsong, MacQueen, Guest & Namey 2005: 6). Qualitative research aims at developing intensive descriptions of a social phenomenon based on the data obtained during face-to-face interactions with the participants. It requires data collection techniques that are laborious and time consuming (Stake 2010). For these reasons the number of participants selected for such type of a study is small (Cohen *et al.* 2007: 102).

In interview studies, Boyd (2001, in Groenewald 2004) and Creswell (2009) recommend a maximum of 10 participants as sufficient for the interview process. This is because the interview process will reach a point of saturation at which the participants will not provide any fresh perspectives on the topic under discussion. Accordingly, from each of the two universities where this investigation was conducted, the researcher initially planned, as samples, 10 SVI, five instructors who have SVI in their classes, all heads of departments and college deans with SVI, and the disability officer (or any personnel who is designated with the task of handling disability issues) of the university. During the process of data collection, however, the actual number of research participants who were interviewed from both universities included 19 SVI, nine instructors, nine department/school heads, four college deans, and two officers of the disability/students' services centers. (Their profiles are presented in 5.2.2.) In other words, the

researcher did not interview one SVI, two instructors and two department/school heads as originally planned, having realized that he wouldn't gain any fresh insights into the issue being investigated by continuing the interview to the last participant. This is what research scholars including Brantlinger *et al.* (2005: 198), Cousin (2009: 80) and Hatch (2002: 170), by borrowing a term used by Glaser and Strauss (1967), call 'saturation'. A data collection process is said to have reached a point of saturation when the researcher believes that he/she would not obtain any new information by continuing an interview or through any other qualitative data collecting procedure.

4.4.2 Methods of data collection

The design of a research project should include descriptions of the type of data needed to answer the research questions and the methods through which these data will be collected. Qualitative studies provide rich textual descriptions of people's feelings, values, experiences and perceptions of a phenomenon under investigation in their natural setting (Cohen *et al.* 2007; Mack *et al.* 2005). Their main focus is on "gaining a rich and complex understanding of a specific social context or phenomenon" rather than "eliciting data that can be generalized to other geographical areas or populations" (Mack *et al.* 2005: 2). The data that are needed for such descriptions are most often people's words and actions collected through direct encounters with the individuals involved in the study. The main intent of this study was to gain a deeper understanding of the lived experiences of SVI as they interact with the curriculum based primarily on their own perspectives. The primary data gathering instrument employed for this research purpose was an interview schedule. To supplement the information collected through interviews, observations were conducted on classroom situations and libraries. Some important official documents were consulted to check some of the information obtained from the interviews. This helped the researcher to gain a fuller understanding of the context in which students with visual impairments experience the curriculum and explained some of the problems SVI mentioned during the interview session. These two techniques are briefly discussed below.

i. Interviews: Interviews are used for collecting data that cannot be directly observed. They help the researcher understand peoples' feelings, thoughts and intentions. Interviews allow the

researcher to enter into the perspectives of those participating in the study (Patton 2002: 341). Cohen *et al.* (2007: 349) describe interviews as enabling participants to:

> ... discuss their interpretations of the world in which they live, and to express how they regard situations from their own point of view. In these senses, the interview is not simply concerned with collecting data about life: it is part of life itself, its human embeddedness is inescapable.

Since the current study investigates and describes the learning experiences of the participants of the study from their perspective, interview is the most appropriate method for this purpose. Most of the practicing researchers in the area of inclusive education, including Bourke (2008), Groenewald (2004), Joseph (2010), Konecni-Upton (2010), Mahlo (2011), Moswela and Mukhopadhyay (2011), have used this method.

Interviews may take different formats depending on the purposes they are intended to serve. Patton (2002: 342) classifies interviews into the informal conversational interview, the general interview-guide approach and the standardized open-ended interview. In the informal conversational interview, the researcher does not come with a predetermined set of questions and the questions may differ from one interviewee to another. The context determines what should be asked. Other scholars give different labels to this type of interview format such as the unstructured interview (Cohen, *et al.* 2007: 355; Corbetta 2003: 272-273), the informal interview (Hatch 2002: 92), and the field interview (Neuman 2007: 296). In the general interview-guide approach, the researcher conducts his/her interview with a predetermined set of questions or issues for all interviewees that serve as a checklist for ensuring that all relevant issues are addressed. The interviewer of course, can probe for further explanations in order to illuminate and elucidate the issues under discussion (Patton 2002: 343). This type of questioning is also called the semi-structured interviewing (Willig 2008: 23). The standardized open-ended interview format, which scholars such as Yin (2011: 133) call the structured interview, requires researchers to start the interview with a set of carefully worded and arranged questions to be asked of all participants in the same sequence. This format is not flexible enough to allow for much probing (Patton 2002: 342). The primary research instrument used in this study was the interview schedule, specifically, the general interview-guide or semi-structured interview approach, conducted on a one-on-one basis. Students with visual impairments who were selected to participate in the study were asked to describe their educational experiences during their

interactions with the different aspects of the curriculum as fully as possible on an individual basis.

In qualitative research, triangulating data, using multiple sources and methods, helps the researcher to build coherent justification for themes and enable him/her to have a fuller perspective on the phenomenon under investigation (Lacey & Luff 2009). Triangulation is also important for increasing the validity and reliability of the research (Cresswell 2009). In this research, interviews were conducted with instructors who have SVI in their classes and with heads of those departments and college deans where SVI were enrolled as well as with disability officers of the universities in addition to the primary participants. For the sake of more effective and smooth communication, all interviews were conducted using the Ethiopian national language, Amharic. All sessions were audio-recorded and transcribed verbatim into English.

ii. Observation: The other data gathering strategy employed in this study was observation. In observation, the researcher places himself/herself in the social setting where the research participants are engaged in typical activities or processes. He/she carefully records what is happening in the situation in order to understand how the participants are making sense of the situation. The basic purpose of this strategy is "to understand the culture, setting, or social phenomenon being studied from the perspectives of the participants" (Hatch 2002: 72-73). In this research, direct observation on the context where learning takes place served many purposes. The data obtained through observation helped the researcher to corroborate some of the information obtained through interviews and thus increase confidence in reporting it. It also helped him to understand and explain some of the views of SVI in relation to their learning experiences. Observations also provided some very important data about the learning environment which the research participants did not notice and hence failed to mention during interviews. Patton (2002: 262-264) describes six advantages of observation as a unique data collection strategy which Hatch (2002: 72) has summarized as follows:

- Direct observation of social phenomena permits better understanding of the contexts in which such phenomena occur.
- Firsthand experience allows the researcher to be open to discovering inductively how the participants understand the setting.

- The researcher has the opportunity to see things that are taken for granted by participants and would be less likely to come to the surface using interviewing or other data collection techniques.
- The researcher may learn sensitive information from being in the setting that informants may be reluctant to discuss in interviews.
- Getting close to social phenomena allows the researcher to add his or her own experience in the setting to the analysis of what is happening.

With these purposes and benefits of observational strategies taken into consideration, in this research, the settings in which the students with visual impairments interact with the curriculum such as classrooms and libraries were visited to make close and careful observations. Observations involve carefully recording of what is observed in the setting where the study is conducted. These records include detailed field notes of contexts, activities and objects of the setting as well as the observer's personal reflections on what is observed (Corbetta 2003: 249-250; Hatch 2002: 77). In the current study, the researcher entered the setting with carefully prepared observation guide that helped him to get focused on things and events which are relevant to the study. (See Appendices K & L). Thus, at the time of the observation, field notes were recorded based on the guide, and as soon as the observation was over, the researcher recorded his impressions and reflections of the events.

With regard to class observations, one class each of all instructors interviewed was planned to be observed. But since all classes were found to be very similar, following almost the same patterns, the process was terminated with two classes unobserved. In addition, all libraries and reading rooms, including two libraries for sighted students, were visited and information relevant to the study was noted. These observations in general enabled the researcher to gain a better understanding of the context of the phenomenon under investigation (Hatch 2002: 72).

4.4.3 Procedures of data collection

The researcher first conducted an informal preliminary survey on the prevalence level of SVI in the public universities that he considered as potential research sites. Based on the results, he

decided to make the Universities of Mekelle and Hawassa his case study institutions. Mekelle University, where the researcher works, is located 780 kms to the north of the capital, Addis Ababa, and Hawassa University is located 270 kms to the south of Addis Ababa. (More detailed information about these institutions is provided in 5.2.1.) These two institutions were selected because of their convenience to the researcher in addition to the criterion of the number of SVI they accommodate. Addis Ababa University, although more convenient than Hawassa University, was not considered for inclusion as a case study because of the researcher's belief that, due to its very long history of teaching SVI, the experiences from this university would not be typical of the other public universities that were established at a much later period and thus had a little experience of accommodating SVI.

Having identified the case study institutions, the researcher worked on the process of getting letters of permission from the Ministry of Education, letters of authorization from the two universities, and ethical clearance from the College of Education Research Ethics Committee at UNISA. After securing the letters and the ethical clearance certificate (attached as appendix) the researcher then started the process of data collection. The process of data collection in both institutions lasted for about a month from 1 April 2014 to 3 June 2014.

Except in certain cases, the data collection process followed the following procedures:

- further authorization was obtained from the college deans using the letter of authorization from the respective universities;
- disability/students' services center coordinators were approached to obtain necessary data about SVI;
- consent to participate in the study was obtained from SVI;
- interviews were conducted with SVI;
- interviews were conducted with disability/students' services center coordinators;
- departments/schools were approached to explain the research and obtain information in relation to instructors who had SVI in their classes;
- instructors were approached and arrangements made for interview sessions and class observations;
- interviews and class observations were made with individual instructors;

- interviews were conducted with department/school heads;
- interviews were conducted with college deans, and
- observations were made in libraries and reading rooms (this was conducted at any convenient time during the whole process).

Other information used to confirm claims made by the participants during the interviews was also drawn from official documents such as annual plans, reports and legislations.

The selection of research participants depended on their willingness to participate after the purposes and procedures of the research was explained to them. The participants were selected from all departments/schools that enrolled SVI. In departments/schools where there were large numbers of SVI, two or three students were selected. In selecting research participants from each department, all SVI were alphabetically listed based on their first names and those who appear first were considered. (The list of SVI and their departments was obtained from each university's students' service center or disability officer of the institution.) In some situations, however, this procedure was not strictly followed in order to include female students and to distribute the participants across all years of enrollment. After identifying the potential participants for the study through this procedure, the researcher then approached those selected, with the help of the disability officer, to ask for their willingness to participate in the research. Those who were willing were provided with the information sheet and consent form so as to give them enough time to make a decision regarding their participation. An arrangement was also made as to when and where the interview should be made based according to the participant's convenience. Their telephone numbers were noted for communication purposes. In fact, the majority of those initially selected were happy to participate in the research. Some of them preferred to be interviewed immediately without any appointment which was done accordingly. If a person was not willing to participate, then the next person on the list was taken.

After meeting the research participants about their participation and agreeing on a schedule, a conversation took place to clarify any outstanding issues about the upcoming interview session. This was followed by inquiry about the information sheet and consent form with which they were provided during the initial meeting. They were also asked if they needed any further clarification and if they still agreed to participate in the study.

In order to select the instructors who would participate in the study, information was sought from the respective departments/schools. It was found that there were six schools with SVI in U1 and five departments with SVI in U2. The instructors who participated in the interview were selected using the technique employed for the selection of SVI participants. All interviews were conducted in the Ethiopian national language, Amharic, in which participants were more comfortable. The interviews were recorded using a digital voice recorder.

The transcription process of the interview data started immediately after the first interviews were conducted although it took a lengthy period due to the volume of the data collected coupled with the researcher's occupation with other work-related tasks. Most of the interview transcriptions (especially those transcribed earlier) were sent back to the research participants for verification. All participants gave feedback that their ideas were correctly interpreted, but in certain cases participants provided additional information that came to their minds when they read the transcripts.

4.4.4 Methods of data analysis

As Hatch (2002: 148) describes, data analysis is "a systematic search for meaning" that involves organizing and examining the data collected in a way that it will allow you "to see patterns, identify themes, discover relationships, develop explanations, make interpretations, mount critiques, or generate theories". Data analysis in qualitative research is an ongoing process starting from the point when you start collecting your data (Hatch 2002: 149; Patton 2002: 634; Stake 2010: 137). While the researcher is collecting data, ideas that are useful for making sense of the data begin to emerge as a result of his/her analytic insights. Patterns may take shape and possible themes may surface that constitute the beginning of qualitative data analysis. However, this does not imply that the researcher can reach conclusions from this early stage analysis. Rather, these analytic insights and interpretations at the early stage of the research process serve as a source for organizing the final analysis (Patton 2002: 634-635).

Various strategies have been developed that can be used in qualitative data analysis (Hatch 2002: 151; Lacey & Luff 2009). The strategy selected depends on the overall aim of the research. Often researchers use a thematic analysis with the aim of identifying significant themes that emerge from the data (Finley 2008). LeCompte and Preissle (1993, in Hatch 2002: 152) also have

suggested a strategy known as typological analysis which is reported to be applicable in all research paradigms. This strategy starts by identifying some general categories under which the whole data of the study will be classified. These categories serve as a basis for the remaining process of data analysis (Ibid). This study investigates the curriculum experiences of the SVI based on the major curriculum elements. Therefore, typological analysis was considered an appropriate strategy since the curriculum elements can also serve as categories for analyzing the collected data. In the process of coding the collected data, additional themes emerged that added to the initial categories. Therefore, the categories that were finally used to analyze the data and present the findings were a combination of the initial categories and other categories that emerged from the data.

The process of analyzing the collected data started by entering the interview transcriptions and observation notes into data analysis software, Atlas.ti version 7.5.2., to be called Primary Documents (PD). All together there were 53 PDs. Each PD was read line by line to assign codes to segments of data (known as quotations). Coding is the initial step in the data analysis process through which you organize and sort your data. Saldana (2009: 4) describes coding as a "transitional process between data collection and more extensive data analysis". The same author states that coding is cyclic and that it requires more than two cycles of coding in order to filter, highlight and focus the salient features of the qualitative data under consideration. In the process, the initial codes might be "subsumed by other codes, relabeled, or dropped all together" (Ibid: 10). Accordingly, the initial codes developed from the data of this research were revised several times to develop more refined codes.

After a refined list of codes was created, the codes were grouped or organized based on their similarities to create categories or code families. Here also the researcher had to go through many rounds of cautious reading and reflection to refine the categories further. The initial categories that were considered before the process of data collection were fit into the codes that emerged from the data. The codes that were entered into each category were cautiously examined further to create sub-categories so as to make the data manageable during analysis.

The final categories and the emerging sub-categories were then sequenced in a way that would create a coherent line of narration. This served as a basis for analyzing and presenting the

findings of the study. The quotations that made up each code were analyzed and synthesized to lead to important findings. Entries were stated that describe each sub-category that helped to form a structure of the whole analysis work. This served as an outline of the story SVI told about their learning experiences during their studies at HEIs. The data obtained from the other sources were mainly used either to explain or support the ideas described by SVI. After all data were entered, the analysis process focused on finding patterns and differences across individual cases and institutions which led to the conclusions of the study.

4.5 Trustworthiness

The process of any research as well as its final output should pass through some form of quality checks to ensure its 'trustworthiness'. In quantitative research, the two common criteria applied for such purposes are validity and reliability. In global terms, validity is concerned with the accuracy of the findings of the study; where as reliability refers to the replicability of the findings in other similar contexts or in the same context by other researchers (Lecompte & Goetz 1982: 32). When applied to qualitative research, however, validity and reliability are conceptualized somehow differently considering its distinctive goals and procedures. Thus, from the perspective of qualitative researchers, validity refers to the extent the results of the study accurately describes the reality under investigation from the stand point of the respondents (Bourke 2008; Murphy et al. 1998; Toma 2006; Willig 2008). It is about the authenticity of the portrayal of the reality under study from the viewpoint of the research participants (Neuman 2007: 120). Similarly, reliability is conceptualized in qualitative research as "whether the process of the study is consistent, reasonably stable over time and across researchers and methods" (Miles & Huberman 1994: 278). In qualitative research, the criteria used to address these criteria are broadly termed as 'trustworthiness'

Many scholars in the field of naturalistic inquiry suggest different sets of criteria to ensure the trustworthiness of a qualitative research, thereby distancing themselves from the positivist tradition. Lincoln and Guba (1985) have developed four criteria that could be used in establishing the trustworthiness of qualitative studies. These are credibility, transferability dependability and confirmability, which are equivalent to internal validity, external validity or

generalizability, reliability and objectivity in quantitative research. In the following sections, these criteria will be briefly discussed in relation to their application in the current study.

4.5.1 Credibility

Miles and Huberman (1994: 278) define credibility as "truth value"- whether the findings make sense to those studying and to those who read the study. In other words, it gives an answer to the question whether what is depicted is authentic - what happened, what it means to people, how various concepts might explain it, and an evaluation of it.

In checking the credibility of a certain research, one has to look into the quality of the data collected, the way it is analyzed, and the conclusions reached. According to Geelan (2007: 16) the strategies to be employed to improve the credibility of an investigation are "those that improve the probability that the participants will say 'yes, that is how I see the situation'".

One strategy of improving credibility in qualitative research, according to many scholars including Creswell (2011), Lincoln and Guba (1985), Maxwell (2009: 244) is by engaging with the research participants and the research context for a prolonged period. This, they argue, helps to create trust between the researcher and the researcher participants, reduces the possible distortions as a result of the visibility of the researcher, and develops the researchers understanding of the research context. According to the assertion of Creswell (2011: 192), "The more experience that a researcher has with participants in their actual setting, the more accurate or valid will be the findings". Thus, in this study the researcher stayed in the research site for a long period engaged in interviews and observations. In fact he is an instructor in one of the universities where this study was conducted with the experience of teaching SVI. This condition together with the fact that he has made a preliminary visit to the second research site as well helped him to understand the culture of the research context (Shenton 2004: 65) and contribute towards the generation of credible results.

Another commonly referred to strategy to improve credibility is triangulation. Triangulation refers to the use of multiple data sources and multiple research methods (Creswell 2011: 191; Fraenkel & Wallen 2009: 453; Maxwell 2009: 245). This can help to validate the information you get from one source or through one method by making use of other sources or other data

gathering methods. Thus, in addition to the data obtained from SVI, other important actors in the phenomena (instructors, department heads, college deans and disability officers) were also interviewed which helped to verify the data obtained from SVI against the viewpoints of the other research participants and reach more credible interpretations (Fraenkel & Wallen 2009: 453). Moreover, the interview data was further strengthened through careful observations of the context under study. This helped, in addition to filling gaps necessary to reach conclusions, to check the accuracy of the information obtained from the interviews.

Third, the participants of the study were made to respond to the interview questions through the national language of Ethiopia, Amharic. This helps in ensuring that they have no difficulty in fully and accurately articulating their perceptions. The interview data were recorded objectively and comprehensibly through the use of a voice recorder (Seale & Silverman 1997: 380) and the use of field notes to capture any non-verbal reactions of participants to the interview questions. The audio records were carefully transcribed verbatim (Maxwell 2009: 244) to English and were double-checked if they were accurately transcribed. In addition, available participants were made to check the transcriptions whether they reflect their perspectives of the phenomenon (Fraenkel & Wallen 2009: 453; Lincoln & Guba, 1985). Moreover, the audio recordings were repeatedly listened to grasp the actual meaning of the words of the interviewees.

Finally, the research report included evidences of raw data, such as quotations from interview transcripts, to support the findings (Fraenkel and Wallen 2009: 626; Patton 2002: 476; Willig 2008: 154). This enhances the believability of the conclusions reached in the research.

4.5.2 Transferability

In quantitative research, external validity is concerned with the generalizbility of the findings of one research to the population of the study or other similar settings. In qualitative research, however, the main intent of a study is not to generalize the findings. This is because the context in which a particular qualitative research is carried out is unique (Krefting 1991: 215) which creates difficulty in making generalization to other contexts. This situation is coupled by the fact that the sample size in qualitative research is too small usually selected through non probability sampling techniques (Maxwell 2009: 245) to be representative of the population under study.

However, the readers of a qualitative study can generalize the findings to their own context if they are convinced that the research was carried out in a similar context to their own. Thus, transferability refers to the degree in which the research can be transferred to other contexts or settings. This can be achieved only if the researcher provides sufficient information about the research context, the research process, the researcher participants and the relationship of the researcher with the participants so that the readers can make decisions whether the research findings could be generalized to their context (Morrow 2005: 252).

In order to meet the criterion of transferability, the research report has included a thick description of the context of the study. Moreover, all the methods employed and the strategies followed in this study are described in a detailed manner (Creswell 2011: 191; Frankel & Wallen 2009: 453). In addition, the transferability of this study enhanced if the results of the analysis across the two sites produce similar results.

4.5.3 Dependability

Many scholars agree on the difficulty of attaining dependability (a term commonly used in qualitative research as a substitute of reliability) in qualitative research and that researchers have to do their best to enable future researchers to repeat the study (Shenton 2004: 63). Miles and Huberman (1994: 278) define dependability as "whether the process of the study is consistent, reasonably stable over time and across researchers and methods". Dependability is an instrument of maintaining quality and ensuring accurate representation of the phenomena under study.

Dependability could be achieved through a detailed reporting and documentation of the research process from the stage of data collection to data analysis and interpretation (Ali & Yusof 2011: 35; Yin 2009: 45) to enable researchers to understand the methods and their effectiveness. Thus, in the current study also, the researcher gave the research report to a colleague who has an experience in qualitative research methodology to review the methods and procedures followed in the research (Fraenkel & Wallen 2009: 453; Lincoln & Guba 1985; Patton 2002: 562). After analyzing and interpreting all of his data, he made his audit trail available for the auditor to be thoroughly examined consisting of the original transcripts, data analysis documents, field journal, comments of research participants on the interview transcription, and the text of the

thesis itself. His colleague's examination of audit trial supplements the feedback and comments of the researcher's supervisor regarding the whole research process.

4.5.4 Confirmability

This criterion is concerned with the extent to which the findings of the study are free from the researcher's bias. It assesses whether the data collected has led to the most reasonable conclusions possible without any prejudice (Lincoln and Guba 1985: 324). Morrow (2005: 252) further elaborates the construct of confirmability writing that it is "based on the perspective that the integrity of findings lies in the data and that the researcher must adequately tie together the data, analytic processes, and findings in such a way that the reader is able to confirm the adequacy of the findings.

Murrow (Ibid) asserts that many of the procedures used to accomplish the three other criteria are also applicable to testing confirmability. The major strategy that could be used to establish confirmability of one's research is through 'audit trail' (Krefting 1991:221; Shenton 2004: 71; O'Donoghue 2007: 100). Thus, in this research, as was described in the previous section, all documents and data related to the research process are made available for a qualified researcher for thorough examination.

In addition, Krefting (1991:221) affirms that confirmability could be established through the triangulation of data sources and methods. In this study also data was collected from different sources, including students, instructors, department heads, college deans and disability officers. In addition, multiple data collection methods were used, including interviews, observations and document analysis. Furthermore, the researcher has tried to establish the confirmability of the findings of the study by providing evidence from the interview transcripts to support all claims and interpretations

.

4.6 Ethical considerations

Research scholars, including Hatch (2002: 66), Mack, *et al.* (2005: 9), Patton (2002: 415), Yin (2011: 44) strongly advise that researchers should take all considerations to protect the research participants from any kind of harm or loss and to preserve their psychological dignity when

designing and implementing their research. Accordingly, written permission was obtained from the participants regarding their participation in the study after explaining the objectives and procedures of the research as well as informing them that they had the right to refuse or to discontinue the study at any time. By informing the research participants of how the information they give was going to be used and stored, their privacy and confidentiality was assured (Fraenkel & Wallen 2009: 54). Their consent to be audio-recorded during the interview schedule was obtained. The anonymity of the research participants was ensured (Bourke 2008; Willig 2008). An assigned code was used for identification purposes instead of their real names in the research report and every care was made to ensure that the information they gave would not make them, directly or by implication, identifiable.

In addition, permission was obtained from the research participants' respective colleges and departments/schools. Prior to conducting class observations, the concerned instructors were approached and their permission was secured. All possible care was made in order that the data collection process would not interfere with the class attendance of the students; the class schedules of the instructors who were involved in the study were similarly respected (Wiersma & Jurs 2009, in Kearney 2009: 69).

4.7 Concluding remarks

This chapter has detailed the design and methodology to be followed in conducting the research. It started with the discussion of the meaning and importance of a research paradigm. Two opposing research paradigms - positivist and interpretivist - were discussed and the interpretivist paradigm was selected for this research considering its nature and purpose. The paradigm one chooses for a study also determines the overall research approach. Therefore, qualitative methodology, which is aligned with interpretivism, was selected for the study and discussed in the chapter. The differing views in relation to the meaning of research design and its nature in qualitative research were also considered.

The chapter gave details on the specific methods to be used in the study. The research participants and how they were selected and how data were collected from them are explained. The primary research participants are SVI in two public universities where the study was

conducted. In addition, instructors, department heads, college deans and disability officers were used as data sources. The methods of data collection employed in the study were interview and observation which are explained in detail. Moreover, typological analysis as a method of data analysis for the study is justified and the procedures to be followed are described.

This chapter also discussed how the issues of validity and reliability are conceptualized and applied in qualitative studies. The parallel terms of credibility, transferability and dependability and the strategies that were used to meet these criteria in the current research were described.

Finally, this chapter described the ethical procedures followed in this research based on UNISA's ethics policy. A detailed account is provided of how the principles of informed consent, anonymity and confidentiality were ensured in order to protect the research participants from any kind of harm or loss and to preserve their psychological dignity when designing and implementing the study.

The next chapter presents the findings and discussion of the study.

CHAPTER FIVE

FINDINGS AND DISCUSSIONS

5.1 Introduction

This chapter presents the findings of the study based on the data collected through semi-structured interviews with SVI, instructors, department/school heads, college deans and disability/students services centre coordinators, which were conducted on a one-to-one basis. These data were supplemented by information collected through direct observations of class interactions and library facilities. Additional information was obtained from relevant governmental and institutional documents. As the primary sources of the data for the study are SVI, most of the findings are based on the analysis of SVI interviews, complemented by the data collected from other sources either that support or deviate from the findings - the latter being the process of triangulation. In certain themes such as instructors' lesson preparation, institutional policy, institutional efforts to build staff capacity and institutional challenges and problems, however, findings primarily depended on data obtained from sources other than SVI.

5.2 Institutional background and profile of participants

This research was conducted in two public universities purposively selected based on their SVI population and convenience to the researcher. The primary data collection techniques employed were interviews and observations. Interviews were conducted with SVI, instructors, department/school heads, college deans and disability officers. Observations were conducted in classes, libraries and other facilities SVI were expected to use.

All data in this research were collected in the first half of 2014 and therefore depict the situation of that time.

5.2.1 Institutional background

Hawassa University (U1)

Hawassa University is located in the southern part of Ethiopia some 270 km away from the capital, Addis Ababa. The university was first established as Debub University in 1999 after a merger of three junior colleges located in nearby towns. One of the colleges in the merger, Dilla College of Teacher Education and Health, was later separated to become an independent university of its own. At the time of the present research, Hawassa University was organized into seven colleges and one institute. Within the colleges, there were schools and each school included specific programs. In 2014 the University had 1,325 academic staff and a student body of over 22,000 out of which 79 were SVI.

Mekelle University (U2)

Mekelle University is located in the northern part of Ethiopia some 780 km away from the capital, Addis Ababa. This university was established in May 2000 as a merger of two previously functioning institutions - Mekelle Business College and Mekelle University College - as an autonomous higher education institution. At the time of the research, Mekelle University (U2) was organized into seven colleges, eight institutes and two schools in six campuses and run programs at undergraduate and postgraduate levels. At the time of data collection for this study, there were 1,739 academic staff members. The student body was nearly 29,000, with a total of 43 SVI.

5.2.2 Profile of research participants

i. SVI profile

A total of 19 SVI participated in the study from both universities. They were purposively selected from the departments that enrolled SVI based on their number. The specific profiles of each participant are presented in table 5.1 on the following page:

Table 5.1: Profile of SVI

Code	Sex	Institution	Department/School	Year of enrolment
P1	Female	U1	Sociology	III
P2	Male	U1	English Language & Literature	II
P3	Male	U1	Journalism	II
P4	Male	U1	Governance & Development Studies	II
P5	Male	U1	Sociology	II
P6	Female	U1	Governance & Development Studies	III
P7	Male	U1	Sociology	I
P8	Male	U1	Law	II
P9	Female	U1	Educational Planning & Management	III
P10	Female	U2	Civics & Ethics	I
P11	Male	U2	Civics & Ethics	II
P12	Male	U2	Sociology	II
P13	Male	U2	Sociology	I
P14	Male	U2	Law	III
P15	Male	U2	Civics & Ethics	III
P16	Female	U2	Ethiopian Languages & Literature	II
P17	Male	U2	Sociology	III
P18	Male	U2	Political Science & International Relations	II
P19	Female	U2	Law	V

ii. Instructors' profile

As was indicated earlier, the total number of teaching staff of U1 was 1,325 and that of U2 was 1,739. Those instructors who were eligible to participate in the study were purposively selected from nine departments/schools of two colleges. These were departments/schools and colleges that accepted SVI. A total of nine instructors (four from U1 and five from U2) who had SVI in their classes participated in the study and their profiles are presented in table 5.2 below:

Table 5.2: Profile of instructors

Code	Sex	Institution	Department/school	Experience in teaching SVI
P20	Female	U2	Law	Five years
P21	Male	U2	Sociology	One year
P22	Male	U2	Civics & Ethics	Two years
P23	Male	U2	Amharic	Two years
P24	Male	U1	Educational Planning & Management	Three years
P25	Male	U1	Journalism	One year
P26	Male	U1	Sociology	Three years
P27	Male	U1	Governance & Development	Six years
P28	Male	U1	Law	Two years

iii. Department/school heads profile

The total number of Department/school heads who participated in the study was nine.

Table 5.3: Profile of department/school heads

Code	Sex	Institution	Department/School	Experience in position
P29	Female	U1	Law	Seven months
P30	Male	U1	Behavioural Sciences	One and half years
P31	Male	U1	Governance & Development Studies	Seven Months
P32	Female	U1	Education & Training	Seven Months
P33	Male	U2	Ethiopian Languages & Literature	Two and a half years
P34	Male	U2	Sociology	One year
P35	Male	U2	Civics & Ethics	Six months
P36	Male	U2	Law	Two years
P37	Male	U2	Political Science & International Relations	Two years

iv. College deans' profile

The deans of the two colleges in each university where SVI were enrolled were also participants of the study. Their details are presented in table 5.3 below:

Table 5.4: Profile of college deans

Code	Sex	Institution	College	Experience in position
P38	Male	U1	Law & Governance	Three years
P39	Male	U1	Social Sciences &Languages	Two years
P40	Male	U2	Law & Governance	One and half years
P41	Male	U2	Social Sciences & Languages	One and half years

5.3 Presentation of findings

The findings are presented based on categorized themes that emerged from the researcher's initial readings and later modified through the process of reading and re-reading of the interview transcripts and observational notes. The findings are supported by extensive verbatim quotations from the responses of the research participants. The participants (including the two universities included in the study) are identified by their codes. The findings with regard to each theme are followed by brief discussions that include the researchers own reflections using the theoretical framework of the study as a lens for understanding. The categories that are used for presenting and discussing the findings are:

- SVI Experiences of Transition to University
- SVI experiences of Teaching and Learning
- SVI Relationship with their instructors.
- Learning Environment
- SVI Experiences with Assistive Technology
- SVI Use of Library Services
- SVI Experiences with Assessment Practices
- Administrative Support
- Peer Support and Perceived Problems.

In addition to these major categories, there are sub-categories within each category used to present and discuss the findings of the study. These subcategories are introduced when the findings of each category are presented.

5.4 SVI experiences of transition to university

The findings of this study with regard to this category are presented and discussed in three sub-categories. These are: SVI reception and settlement at university, the registration they passed through and their assignment to departments.

5.4.1 Reception and settlement at university

The image students develop at the time of their arrival at university will have a tremendous effect on their later experiences and feelings. SVI were asked questions on how they were welcomed/received and settled into the university's premises. Participants at both institutions confirmed that arrangements were made in a way that all students could reach the campus with no difficulties by providing transport services once they had arrived in the cities where the universities are located. Upon their arrival at the campus, in most cases, SVI were taken to their pre-arranged dormitories with the help of students volunteers. However, there were situations where SVI had no assignment, or had to stay in dormitories that were meant for sighted students due to lack of preparation on the part of the responsible body in the university. One respondent, for instance, described the situation he faced when he first arrived at campus as follows:

> There is nobody to solve your problems when you first come to the campus. They don't provide you with a dormitory on time. There was a situation where I stayed a night at the area known as Darfur at the third floor. This was because we were not given our dorms on time (P17).

The most serious problem upon arrival and in the early days on the campus, as stated by some of the SVI, was the failure of the university to arrange a support system to help them in getting used to the campus environment (P2, P13 & P19). It is obvious that anybody who comes to a new environment requires orientation and support to find his/her way around the institution's premises. This becomes more crucial when it comes to SVI who cannot read information posted to guide students. As a result it is mandatory that there be a special arrangement that provides

them assistance until they get used to the new environment. Most of the SVI interviewed claimed that there were not any arrangements of this type in either institution and they described the challenges they encountered as a result. P19 described the situation as follows:

> Until you become familiar with the surroundings and you get acquainted with people it is very difficult to move around. There was a time when I couldn't find the café. I went to the back door and there was a time when they led me back to my dorm.

Similarly, P4 described the problem he encountered as follows:

> One day when going to the registrar we missed the direction and … at some point we missed the turning in the road and kept walking forward. There was nothing we could hear and we realized that we were lost. We could do nothing and waited until someone came and helped us find the right direction.

On the other hand, there was one particular SVI, P5, who said he was satisfied with the assistance provided to SVI in getting used to the university environment. Thus, he said:

> When we see it at university level, I can say that we were received with good preparation and we did not face any serious problems. Even after our registration, we were getting all necessary information from the centre. For about a week or two the centre coordinator made the settlement of newly registered students his priority task.

Significant assistance for SVI was provided by their peers, their fellow students. Some SVI claimed that if it was not for the assistance they got from their peers, they could not have survived in the university.

> Generally speaking it is with the help of other students that we are living in this university. You cannot say enough about the support we get from students. They provide all sorts of support, including in our social lives (P10).

> They [other students] make me forget my family. They take care of me in all aspects of my university life. They are the ones who take me downtown, they read me course materials, and they find students who can read my exams. I am surviving in this university with the help of my friends (P13).

The universities, for the most part, seem to have left the responsibility of settling SVI to other students. With regard to this, the disability officer of one of the institutions said that sighted students took the responsibility of helping SVI get used to the campus environment. Students' organizations such as students' councils, clubs, church communions and *ad hoc* committees

established for this purpose were reported to have played the biggest role in welcoming newly assigned students and helping SVI in particular to settle in and get used to the new environment. The following two excerpts of SVI interviews substantiate this claim:

> It was by asking others' assistance that we managed to carry out different activities. Of course, the council members were there. In addition there were senior students with visual impairment who also provided assistance (P8).

> What I want to thank very much here is students who are members of the church. ... They help us in all matters. ... So when I came here I did not face any problem because of the support they offered (P11).

But this support system doesn't seem to be well organized; otherwise, SVI wouldn't have encountered the problems they claimed to have faced. In addition, many SVI also expressed their difficulty in developing acquaintances with sighted students, which of course could have become an asset in dealing with the situation. One participant (P12) said in this regard:

> … in the first year before I became acquainted with people, I had a lot of difficulties. It takes you some time before you make decisions about with whom you should establish relationships.

5.4.2 Registration process

In response to probing, following students' responses to the question "*How do you describe the situation you encountered when you first entered the university*?" SVI described their experiences during the registration process. SVI had mixed feelings. Although the majority of them described the situation as very difficult, there were some who claimed that they were provided with assistance in the registration process. One SVI from U1 described the difficulty he encountered while processing his registration as follows:

> During registration, we couldn't easily get somebody who can assist us in filling out the forms. We did have only other students around us. These students were filling out their own forms. Therefore, it was somehow difficult to find a volunteer student. Even if they volunteered, they had to fill out their own forms first and, as a result, it took us a lot of time to register (P2).

A SVI from U2 said:

> There was nobody assigned to help us. You are treated like any other student. You have to plead for students' assistance in order to get registered. Actually students are more supportive than the university (P18).

Another SVI from U1 (P3) described a somewhat different problem:

> We are not even notified about the exact day of registration. When we come in the morning, they tell us to come in the afternoon and when we go in the afternoon, they tell us to come in the morning. Because of this we encountered a lot of mishandling.

The change of the registration process from paper to online seems to have posed SVI more challenges. One SVI gave a detailed description of the problems he faced in the process of registering online as follows:

> I asked my friends to process my registration online; they told me that I was registered. When I checked afterwards, I was not registered. My repeated attempts to register were not successful; it was blocked because the registration time was over. After that I daily went to the head of the Office of the Registrar to process my registration. I went back for more than a month. ...I told him that I was not registered explaining my reasons. But he refused to accept my reasons as a result of which I had to speak a bit loudly. Then he told me to come the next day. When I went the next day, I found him so furious ... I was mad saying to myself that there is nothing I will miss even if I don't register. He said a lot of things to ridicule me, but I remained calm without responding to his bad words. He afterwards thought a little and asked me for my password and told me to go saying that I was registered (P18).

Another SVI also expressed his concern about registering online in the following way:

> … during registration, you have to jostle with a lot of students in order to register. Especially, starting this year registration is conducted online. You need to have someone who is trustworthy to help you register; otherwise, you can't do it (P13).

Contrary to this notion, there were SVI who claimed that they were provided with support during registration and, as a result, did not face serious problems.

> There were students assigned by the university for this purpose. They arranged all processes of our registration and prepared the forms and as a result we did not face any significant inconvenience (P7).

> During the registration process what I found to be unique, especially in the Law School, is that students do not face any serious maltreatment. I was well treated and I did not face any problems. The staff and others have made sure that we do not face any serious problems (P14).

5.4.3 Assignment to departments

Experience and literature inform us that learners are successful if they are allowed to study fields in which they are interested. In this regard, both institutions in which this study was conducted have put in place a provision allowing SVI to join departments of their choice (P39 & P1). In actual practice, however, there were many conditions where this couldn't be realized. Basically, it is the EMoE that assigns students to all public universities as well as to specific colleges, and the universities are responsible for the assignment to departments within the colleges. When students are assigned to colleges, the student's entrance examination results are considered. As a result, SVI may not be assigned to the colleges of their choice. In this situation, it might not be easy for SVI to transfer to a department, which is found in a different college even if the university allows it. This was what some SVI claim to have faced (P5 and P8). One college dean (P40) also confirmed this. Transfer of students to a department of a different college sometimes took place at the discretion of department heads and college deans. Thus, one college dean said:

> There are some students who were allowed to transfer from social science to law. We did this not because there was any enforcing regulation but with the belief that they could be successful if they joined a department where they have an interest. We do this arbitrarily and it doesn't follow any systematic procedures (P40).

SVI assignment to the college they choose also did not guarantee them to be enrolled in the specific field of study in which they were interested. Although many of the SVI who participated in the study affirmed that they were assigned to departments of their first choice, there were some with different experiences. One SVI, for example, described the overall situation as follows:

> One can join a department he likes. [with some hesitation]. But when we observe the practical situation many SVI are assigned to departments they did not choose (P12).

Another SVI described the challenge he had to go through to get a transfer to another department in the following way:

> … the procedure was not easy. I had entered into conflict with the department head. But since there was a directive allowing us to join any department we chose, he was forced to accept me after going to all concerned bodies such as the registrar. I succeeded in securing the transfer after two weeks (P17).

There are different reasons that were attributed to the problems of not assigning SVI to their preferred departments. One issue that was commonly raised by many of the research participants was that students were assigned to departments on the basis of their entrance examination results. This would mean that a SVI might not be assigned to his/her first choice department if other students who applied to the same department had better examination results.

> … the universities decide students' choice of departments based on their GPAs and students with disabilities may not get their first choices (P14).

This issue, as a factor for denying SVI their first department choice, was coupled with another observation according to the claims of college deans. The observation is that SVI choices are concentrated on certain departments and that made it problematic for the department to accept all SVI applicants. One of the deans explained the situation as follows:

> What happens often is that they all want to join Sociology. Everybody else also wants to learn Sociology. So what we do is we try to consider their examination points when we assign to the department. ... It is determined by the department's capacity of accommodation. ... The department doesn't take more than three sections which will be around 120 students. ... their examination results also become problematic (P41).

A college dean from U1 also confirmed this practice saying "if we get more SVI in one department, some of them will be shifted to other departments based on their examination results" (P38).

But the most serious problem SVI faced in their assignment to departments was related to attitude. Certain departments resisted accepting SVI claiming that they were not fit to learn in some of the courses they offer. One student said:

> The Department of Sociology had decided not to accept SVI. The reason I was assigned to the department was because of my academic results without knowing my condition. So when another SVI applied to the department, he was denied. ... [Finally] they accepted him, not because they were willing, rather because of the student's persistence (P13).

Other problem SVI faced in the assignment to departments was the limited choice of departments. The majority of the programs the universities run were considered to be out of the domain of SVI since they required sight in learning. P 41, in this regard, argued:

> … because of his impairment, for example, SVI cannot learn geography if he is assigned to the department; neither can he choose psychology. The departments he can choose from are limited – Amharic, Tigrigna or History.

Thus, even if a SVI applied to any one of the departments considered out of the domain of SVI, he/she would not be accepted (P19).

Considering the tradition of assigning SVI to departments considered to have minimum challenges in the HEIs and the lack of appropriate technology to facilitate SVI learning in a wider range of departments, it might seem appropriate to limit SVI choices to a narrow range of departments. However, in each university, even those study fields in which SVI could learn without much accommodation were very limited in number. SVI were not provided with necessary advice and consultation, when choosing institutions and fields of study, about which universities run these programs. Therefore, once these students arrived at their assigned universities, they ended up with a list of departments in which they were not interested from which they would have to choose one. A significant number of the participants in the study from both universities confirmed this situation through their statements such as the following.

> It was not my choice. I took it since the department I was interested in was not given in this university (P1).
>
> I am interested in art. I enjoy theatre. But this is not offered in this university and it is also not allowed (P3 from U1).
>
> In general there is a limitation of departments in the university. ... As a SVI, there were no other departments that could prepare me to be employed after graduation (P5).
>
> … there is not a wide choice of departments [for SVI]. They are about three or four. So, from these departments, my interest was governance and my choice was allowed (P6).
>
> I was interested to study special needs education. Since it is not offered in this university, however, I was forced to choose sociology (P7).
>
> If you look at what is available here, there are only a few fields for SVI such as civics, Amharic, Tigrigna and the like (P19).

SVI were asked about their feelings towards the departments to which they were assigned after they started learning to which they expressed mixed feelings. Some of them were happy about the overall situation (P9, P15). Others expressed their satisfaction with what they were learning

although they couldn't hide their discomfort about the lack of facilities and the teaching process. In relation to this, P2 from U1 asserted:

> I like it [with some hesitation] but there are certain problems. There is not sufficient material. There is nothing. I listen to the instructor. If there is anything to be written like handouts, I quickly record it. ... I can't read additional resources or different literatures. Because of this, I have the feeling that there are limitations in the knowledge I am gaining.

Still there were others who were totally unhappy about what they learn and the teaching and learning process in general. For instance, P11 from U2 claimed that the department in which she was enrolled did not satisfy her expectations and explained her reasons as follows:

> The condition of the instructors is not motivating. Even the subject itself was different from what I had expected. There are so many different issues we learn that are different from my expectations. There are too many handouts.

When SVI were asked if they could have been successful if they had joined any program in the university that could provide all necessary support and accommodations, all students responded affirmatively. This self-concept can be well demonstrated by the voice of one SVI:

> I don't have the belief that there is anything impossible. When I think back about my situation in primary and secondary education, my mind was well suited to natural science. I was smart in mathematics, in biology. My brother ... was teaching me using string and I understood him very well. The objective conditions of our country present us with many challenges. Otherwise, there is no reason that we couldn't be successful. I always think that if I joined medicine, even if I couldn't be a high achiever, I could graduate with the minimum requirements. Although I couldn't be a top scorer, I could finish my studies having the lowest pass result. So I believe that I can learn any field of study (P5).

SVI choice of department, aside from the limitations of available fields, was influenced by different factors and motives depending on each individual student. Many of them claimed that their basis for choosing a department was interest in the field of study. One SVI, for example, asserted:

> I listen to my internal interest. If you join any department without heeding your internal interests, I feel that one may face something that he did not expect. So I chose my field based on my internal feelings (P7).

Some others based their choice on the job opportunities a particular field of study has in the market (P6 & P18). Thus, it seemed that where a certain department was perceived to have few job opportunities, it attracted few SVI, but if it was perceived to provide better job opportunities, more SVI chose it. This was also what one of the college deans claimed, arguing that when students were assigned to different departments, their thinking was in relation to the employment market and not from the perspective of their interests (P39).

Some SVI chose their field of study considering the extent of the challenges and workload of the department. Some of the challenges they raised include: availability of learning materials and accommodation to SVI, number of courses offered in the department, perceived level of difficulty, own skills of using Braille and computer, availability of courses that require sight, and the volume of study material (P2, P6, P11, P13, P15 & P18). One SVI even informed the researcher that she joined a department where there were no other SVI so that she could easily get assistance from her sighted peers (P9).

The number of years a certain program takes to finish also influenced some SVI choices. The SVI wanted to get their degrees as soon as possible so that they could support themselves and their families by being employed. Staying five years in higher education was also considered to be 'boring' (P2 & P13). Other reasons claimed by the participants for included age (P15) and a desire to be unique in the profession (P19), that is, the only SVI working in a certain area.

5.4.4 Discussion

From the analysis of data collected in the study, three sub-themes emerged in relation to the main theme of this section, SVI experiences of transition to the university. The sub-themes are reception and settlement at university, the registration process, and assignment to departments. In this section, a discussion of the findings in relation to these three sub-themes are presented using the theoretical lenses discussed in chapter three considered and the relevant literature. The purpose of this is to give an interpretive insight into the findings.

5.4.4.1 Reception and settlement at university

The findings of the study showed that although both institutions have helped students to safely arrive at the university by arranging transportation services within the town, the preparations made to settle SVI within the university facility were not adequate in many cases. This created a very serious problem for the SVI since, as Adams and Brown (2006: 15) explain, adjusting oneself to life away from close family members and friends is a more serious challenge for students with disabilities since, in the new environment, they may not get the type of support they were previously provided by their family members and others. Especially in U2, there were situations where SVI had to stay in a dormitory that was arranged for sighted students due to lack of preparation on the part of the responsible body in the university (P10 & P13). This demonstrates the institution's lack of preparation to receive SVI. This first impression of the university that the SVI had could affect their subsequent feelings and experiences of their studies. A similar problem was observed in the findings of a research conducted in the HEIs of Namibia (Haihambo 2010: 265-267).

The findings also showed that neither institution had well-organized support systems to help SVI that provided them with information that would help them got used to the new environment. Once they reached their dormitories, SVI were left alone to deal with all processes by themselves (P2, P13 & P19). Although the number of participants is small, this finding is contrary to a survey conducted in 11 Ethiopian public universities where 52 % of students with disabilities claimed to have been given specific orientation about university life as a whole, although it was added that a "notable size of students in all participating universities was not given orientation" (Tirusew, Daniel, Alemayehu, Fantahun, Sewalem, Tilahun, Yirgashewa & Yeshitila 2014: 27).

5.4.4.2 Registration process

During the registration, process the majority of SVI described the situation as very difficult and online registration was reported to have created more difficulty than paper registration. It was only in some cases that SVI expressed their satisfaction with the support they were provided at this stage. P6 was one of those who had positive experiences:

> There were students that I think are called 'volunteers' who assisted us in the registration process as well as in the dormitory assignment. They took us to the registrar and helped us to register.

Many SVI confirmed that the level of support one gets from peers was determined by his/her communication skills and approach. This is what P11 suggests when he says:

> In this university, what matters is your personal approach. If you have good manners, you will have good friends. You should also understand their [friends] problems as well.

This might be the reason for the different levels of satisfaction. In fact, much support for SVI came from peers – some of it on an individual basis and some through organized efforts. Organized students' groups such as student council members, clubs and church communion members played an important role in organizing and providing such support. The following quotations of two SVI would support this claim:

> I want to thank very much students who are members of the church. They have a section which they call 'Development and Assistance' and through this section they help us in all matters (P11).

> There are some clubs in the university, one of which is a volunteers' club. So the club itself coordinated our reception and volunteer individuals from these clubs assisted us (P6).

5.4.4.3 Assignment to departments

With regard to the academic placement of SVI, there was a directive in both universities that SVI should be assigned to the departments/programs of their choice. This is a remarkably positive provision, since it is believed that students would be more successful learners if they are enrolled in areas in which they are interested. In actual practice, however, this was not fully realized, since there were many SVI assigned to departments which they did not choose. This was what Tirusew *et al.* (2014: 36) also found out in a recent survey. Having a good entrance examination result was the only guarantee of gaining admission to your preferred department. It was discovered that in both universities the college management limited the number of SVI to be enrolled in any single department. This is not a positive policy since it categorizes SVI as a separate social group within the student population. In addition, the research showed that certain

departments resisted accepting any SVI at all, claiming that they were not fit to learn in some of the courses they offer.

The findings of this study also support Howell (2006: 166) when he reports about the general nature of the problem in Africa, stating that students with disabilities in HEIs are denied access to certain courses if those courses involve practical activities which are believed to pose difficulty to students with impairments. SVI had a limited choice of departments that were the ones considered appropriate for them. This ties in with what was discussed in the literature chapter regarding the way HEIs address the needs of students with disabilities in ways consistent with the traditional medical model in spite of governments' recognition of the social model of disability as their policy base. The limitations in the field of studies SVI could choose from would force them to study subjects in which they did not have an interest. Some of the participants in this study experienced this. This makes it highly advisable that SVI should be provided with necessary advice and consultations when they select the institution they want to join. Their enrolment in departments in which they did not have interest is probably one of the reasons why some of them were unhappy with their programs. This is only made worse when there is a lack of proper accommodations.

One important finding worth mentioning was related to students' self-concept. They all expressed their strong conviction that they could be successful in any field of study if all accommodations were in place. There is enough evidence in the literature (Roy 2003: 41; Jones and Hopkins, cited in IBID: 52) to show that SVI are now successfully learning in fields that could not be imagined in former days. It seems that such information could be a factor that has inspired SVI of our HEIs to develop such a positive self-concept.

The findings of the study revealed that SVI did have different factors and motives that influenced their choice of department: interest in the field of study (P3, P7, P14, P16 & P18); the job opportunities a particular field of study has in the market (P6 & P18) ; the workload and the challenges they might face (P2, P6, P11, P13, P15 & P18); prospect of getting assistance from sighted peers (P9); number of years a certain program takes to finish (P2 & P13); and the desire to be unique in the profession (P19).

5.5 SVI experiences of teaching and learning

The findings of the study in relation to SVI experience of teaching and learning are presented and discussed in nine sub-themes. These are: SVI feeling of becoming a university student, SVI initial assumptions, SVI challenges with curriculum content, instructors' lesson preparation and presentation, the attention and support they give to SVI needs and their behaviours and SVI' reactions, SVI participation in learning activities, making course material accessible to SVI and SVI relationship with their instructors.

5.5.1 Feelings of becoming a university student

SVI were asked about their feelings about being university students. All of them expressed their happiness, but for different reasons. The following are sample excerpts of SVI interviews that expressed their feelings of being university students.

> It gives me a lot of happiness. Well, reaching this level after passing through a lot of challenges is a big opportunity (P9).
>
> Generally the fact that I have joined the university makes me very happy. Because being a SVI to learn alongside students that don't have any physical impairment is a big success (P10).
>
> The fact that I joined the university created happiness for me. It was something that I had been always aspiring for (P11).
>
> Well, I am very happy that I am a university student. Because when I was studying in Grades 11 and 12 there was a shortage of materials. We did not learn with all the materials available like other students. In this regard, succeeding to enter higher education and becoming equal with others is very pleasing (P16).

Many of them considered reaching this level as a great success, considering the challenges they had gone through in their pre-university years. In this regard, P8 commented:

> Becoming a university student is not something that should be lightly taken. We have reached this level after going through many challenges. There are many students who did not manage to be here. So I am very happy because of the fact that I have managed to go through all the challenges and reach this stage (P8).

Similarly, another student (P4) supplemented the idea as follows:

> I think it is a big success for a SVI to reach university level. Not only for a person with impairment, it is very challenging for any person to reach university level. So I am also very happy to be a university student. Although this is not the biggest success in my life, I consider as a big success. In Ethiopia, for a disabled person to reach this level is a great achievement.

Other students viewed university level of education in terms of personal development. They said that, having spent a good deal of their life in an effort to reach this level, this is an important stage where they would now be in a position to think about their future lives.

> … university is, I think, a place where we think about our future lives. In addition, it is a place where we identify our inner potential and think about what we can do in the future (P3).

> ... in order to reach this stage, I have spent the largest portion of my lifetime. I have spent most of my life in education and this level will determine my future life. I feel that I am accomplishing my initial goals (P2).

Some other SVI were happy to join university education because of the job opportunity it would create for them after graduation so that they could help themselves and their families.

> It was something that I had always been aspiring to. I was aspiring to join a university, get a job and help myself and others after graduation. I am from a poor family and, in order to help myself and my family, I was trying hard to join the university (P11).

On the other hand, there were certain students who, in spite of their initial happiness in becoming university students, expressed their disappointment and frustration. They argued that what they found in the university did not meet their expectations and assumptions (P15, P12, and P6). The comments of P6 summarizes the ideas of those SVI who held this view:

> When I first came here I was very happy for becoming a university student. When I see it these days, however, I cannot say that I am as such happy. For one thing, I am not satisfied by the quality of education. For the other, we SVI are not provided with enough instructional materials; it is difficult for us to compete with other students. Due to this, I am always feeling inferior in education. I would have been happier if I had not joined the university; I mean it (P6).

5.5.2 Initial assumptions

Many SVI seemed to have incorrect understandings and assumptions about university education that affected their experiences, their feelings, and even their academic performance. These

understandings and assumptions were based on their secondary school experiences and information they got from other students. At the secondary school level, many of them had their study material available in Braille, especially those who came from boarding schools. They were not required to use any reference materials outside of their textbooks. In addition, many were provided with all necessary attention and support from the school community. When they joined the university, they were expecting a similar, if not better, support system and facilities. However, the condition many faced was disappointing:

> … the situation is not according to my expectations. At a university level, my expectation was that a student will focus on his studies and not have to think about facilities. But the actual situation is that a student has to worry about facilities and other problems apart from his academic studies (P14).

> … when we were at high school there were different support systems such as tutorials, provision of summarized notes, that is, in the school I attended. Teachers had better awareness. ... We were also getting immediate responses from the school management – things I could not get from the university community. ... Here the policy is 'eat by toiling' (P5).

The complexity of education and the difference in its delivery system also seemed to have exerted additional challenge to SVI when they started their university education. P18, for example, said that at the secondary level, education was 'straight forward' whereas at university he found it to be 'complicated'. P12 described the differences in course delivery systems as follows:

> At high school, teachers teach from their heart. Here ... they finish two, three chapters in one week - and sometimes they may finish it in a day. At primary and high school levels, however, the teachers try their best to make students understand their lessons (P12).

Contrary to these views, there were two cases which expressed their satisfaction with what they found in their university education (P2 & P10). P10, for instance, claimed that:

> … when I first arrived at the campus, I had some uncertainties. I had the feeling that the education would be very difficult and I was concerned about how I would deal with it. But when I started my classes, my worry was decreased since we got some support from the university.

One finding, however, was that some students' perceptions about university education and their field of study had a long-lasting effect on those students' self-confidence and ultimately on their

academic performance (P8, P14 & P18). P14, who was a third-year law student at the time of the interview, talked extensively about this issue:

> … many students were discouraging me [from joining the School of Law], which created a lot of pressure on me thinking about whether I would survive the semester. This has created some psychological stress for me. I was really hurt. This did not completely fade away until now. It eroded my self-confidence. ... When I was in high school, I was confident of myself and I had good results. When I entered the university, however, everything was gone and usually I became afraid of examinations. This is the biggest challenge I have faced. It has a lot of influence on me during examinations. You do not perform well when you sit for examinations and are frightened. The fright itself becomes a test for you.

Another SVI expressed similar feelings:

> There was a rumour that university education is very difficult. To be frank, I almost got sick at the beginning week because of terror thinking of the challenge I would face. ... Due to this, my grades at the beginning were very low. Gradually I managed to get better grades (P18).

5.5.3 Challenges with curriculum content

For a curriculum to be accessible, all possible adaptations and modifications should be made at all phases of the curriculum development process starting from its design. Thus, department/school heads were asked if any considerations were made for the needs of SVI when the curriculum of their department was designed and validated. Some of them did not participate in those curriculum design or validation workshops. Those who took part revealed that no consideration was made. As P33 noted:

> I have participated in all national curriculum design workshops and we discussed on general issues, but we never discussed anything in relation to the needs of students with disabilities.

In a case where a curriculum is designed without considering the needs of SVI, it would not be surprising if some curriculum components were not inclusive to all students. This was confirmed by the SVI themselves as well as their instructors. Both interviewed SVI and instructors of some of the departments/schools agreed that there were certain courses that included visual content or content that requires mathematical manipulation. Students explained the challenges they

experienced as they attempt to use such curricular materials in the absence of appropriate teaching methodology and necessary technological support.

Departments and instructors followed different approaches to those courses in relation to SVI. SVI were exempted from courses that predominantly required calculations, and were given replacement courses instead. In courses with certain content that was visual or calculations-related, however, instructors usually exempted SVI from those parts of the courses. Many SVI, however, were not happy about this kind of arrangement since it would not make them fully competent professionals. They argued that they should have dropped the courses altogether and replaced them by other relevant courses. P6 used an example to describe the situation:

> There is a course called finance. We learn the theory part by avoiding the calculations. So in such a learning situation it cannot be said that we have full knowledge about finance. So instead of taking finance, it would have been better if we were given another substitute course.

On the other hand, there were two instructors who tried every possible method to help SVI learn certain visual materials in the courses they teach (P4 & P23). Especially one of these instructors summoned the students to his office to teach those contents using a strategy he considered was more appropriate.

> …there was a certain course that posed challenges to us. But the instructor tried to make it simpler for us by giving us some extra support in his office and using different methods (P16).

One other problem SVI complained about with regard to the curriculum was the vastness of the content. Specifically, students of two departments/schools alleged that their courses were vast by nature and that this created a challenge in taking notes, recording course material, and preparing for examinations.

> … at high school the notes were shorter. Here (at university) our courses have much more content. And this creates some challenges for us, SVI. We cannot easily write the notes. It creates some challenges to take notes, to record and even to study (P19).

5.5.4 Instructors' lesson preparation and presentation

Instructors' efforts to make proper adjustments in their teaching to accommodate SVI include the considerations they make during their lesson preparations. This involves the teaching strategies, learning activities and resources they can use that consider SVI learning needs, depending on the contents and objectives of the lesson. Most of the instructors who were interviewed said that they did not make any adjustments to accommodate SVI when they prepared for their lessons. P28, for example, said:

> To be frank, I do not make any special preparations for them. I try to maintain the pace of the lesson for their sake. There are some occasional things you do when you teach by making indications with your hand…. Otherwise, there is no special preparation I make and I do not think others do it either. But I feel that it would be important.

One of the interviewees argued that the course he teaches did not require any special preparations for SVI because:

> … most of the teaching methods I employ are class presentations and oral discussions. Sometimes, I use analogy with the intention of helping SVI understand the issue under discussion. In most cases, it is not necessary to use any special technique. What is very important for them is to maintain the quiet of the class. It is important to keep you position near to the place where SVI are seated. Otherwise, nothing special is required (P22).

Two instructors, however, made claims that they tried to consider SVI learning needs when they planned for their daily lessons (P23 & P25).

> Since I feel that linguistics is a little difficult for them, I can try to use methods that are more appropriate for them. It can be through the use of models or giving more time when explaining. I think about them before I go to the class (P23).

From the class observations he made, the researcher noted that instructors did not plan especially to accommodate SVI. All lessons followed similar patterns, primarily dependent on lecturing. In one instance, the instructor did not have any materials on hand, except a duster and pieces of chalk, nor did he seem to think about any modifications. In another instance, the instructor printed out the handout he needed for the lesson at the last minute, on his way to the classroom.

The predominant method of teaching employed by instructors, as indicated by SVI and confirmed by some of the instructors, was lecturing. This was also what was observed during the researcher's visits to classes. In almost all of the classes observed, there was a similar pattern of lesson presentation where the instructor wrote or displayed through LCD the main contents of the lesson as bullet points, followed by explanation. In a situation where all or most of the session time is consumed by a instructor's talk, leaving little room for student participation, little or nothing is seen from the instructors by way of accommodations for SVI.

> The instructor comes to the class and talks about his topic and does not write much [which could have somehow affected VÍS learning]. He shows no pictures (P11).

One of the department heads also confirmed this idea with statements that summarize the beliefs and practices of the majority of instructors:

> It is mainly based on speech. We use the Socratic method or the didactic method. So listening is enough for our students. Even if it may not be enough, it does not create for them any serious difficulties (P36).

In some instances, however, instructors and SVI alleged that student presentations and group discussions were used as a teaching strategy. In such occasions, they claimed that instructors gave attention to the participation of SVI in such activities.

> I use lecture as one teaching strategy. ... Apart from this, when there are certain activities such as group discussions, I facilitate a situation where they [SVI] can participate in sharing their ideas with other group members (P25).

One SVI also supported this idea saying:

> The way lessons are delivered focuses on student presentations which helped us to develop our speaking skills (P9).

The most common problem which SVI experienced during lesson presentations was related to instructors' failure to describe visual materials, most often something they wrote on the chalk/white board or displayed on LCD slides.

> They write something on the board and they ask 'what is this' and 'that' and I had difficulty understanding what they were talking about. They used to demonstrative words as 'this' 'that' without describing them using their fingers as indicators. I have tried to

> inform them about the problem, but this had become a habit and they couldn't easily abandon it (P2).
>
> Many of them write a lecture note and do not read it even though there are SVI in the class. They simply go on teaching. They write something and then talk. This is the general atmosphere (P6).

This problem did not happen with all instructors, for there were some who explained everything they wrote on the board considering the presence of SVI in their classes. In all of the classes the researcher observed, he did not come across any serious flaws with disregard to explaining visual material written or displayed. One student narrated his experience of how his instructor tried to include him in the learning process.

> … when our instructor was teaching about culture, the topic was about clothing styles, and when he was talking about it, he asked students about how his clothing could be classified by describing what his clothing looked like. ... He described his shoes, his trouser, his shirt, etc. He tried to create a mental image for me. So there are instructors who make such attempts and there are also others who do not give such explanations. It depends on the individual instructor (P8).

One other problem that was raised by SVI was that there were occasions when they had to sit idle while other students were engaged in activities; the instructors had not considered this.

> … there are times while other students interact with materials when we do nothing except idly sit (P3).

Instructors were also asked about whether they used to make any adjustments on their teaching strategies in order to address the learning needs of SVI. None of them claimed to make such attempts except by adjusting the pace of their lesson presentations, summarizing their lessons (P20 & P21), and talking loudly so that SVI can record what they say (P28). With regard to this, instructors gave different explanations. The majority of them claimed that the courses they taught are more of theoretical and thus did not require any modifications since all students - SVI or others - could equally benefit from their teaching strategies. They also argued the fact that students had never complained, demonstrated their satisfaction with the instructors' method of teaching (P21, P22, P25, and P27 & P28). Two of the instructors claimed that they used teaching strategies they considered were appropriate for the topic, but if SVI faced problems in

understanding, they gave them additional support by calling them to their office following the class (P23 & P20).

One other problem that certain of the SVI participants raised in relation to lesson presentations regarded the pace of instruction. They asserted that lectures were too fast for them to follow and take notes (P16 & P19). In three of his lesson observations, the researcher noticed that instructors' presentations were probably too fast for SVI to follow. Many of the instructors, however, seemed to realize the importance of using a slower pace during teaching for the benefit of SVI.

> While I am teaching, I think over issues like whether I am too fast (P20).
>
> What you have to do to address their interests is to decrease the pace of your lesson (P21).

The principal medium through which SVI learn in the classroom is listening. Instructors, therefore, should use clear and audible voices during their teaching so that SVI can clearly hear what they say as well as for the clarity of their recordings. Many instructors seemed to have realized the importance of doing this because it was observed that many of them used clear and audible voices and they did not move far from where the SVI were seated when talking. In other cases, however, there were situations where instructors moved far away from where SVI where seated, sometimes to the back of the room, talked facing the wall, or used a low voice which would make it problematic for clear recording. Two SVI in their interviews talked about this problem:

> … the voices of many instructors is problematic. When one is moving the sound of the recorded gets higher and lower. When the instructor goes to one corner his voice will be distant and as a result the sound of the recorded material will be low. So the movement creates problems for us. There are also instructors whose voice is very low (P2).
>
> There are instructors whose voice is not audible. If we tell them this ... they say OK but they do not raise their voices. To tell an instructor that his voice is not audible once again is very difficult from the perspective of a student. So we do not do it. When they are writing something on the blackboard, at the same they time talk with their voices to the blackboard (P5).

5.5.5 Instructors' attention and support to SVI needs

The attention and support instructors give to their SVI is one of the most determinant factors for the success of these students in their education as well as for the effective implementation of inclusive education in general. Asked about what they did to understand and consider SVI learning needs, all instructors except two claimed that they made certain attempts. For example, they said that they tried to recognize and address SVI by their names and stay near where SVI were seated during the whole class time (P20, P26 & P32). In three of his class observations, the researcher also found evidence that corroborates this claim. In addition, as P20 said:

> I ask them if they would be comfortable when I ask them questions, or any other issues that might create for them any discomfort. I ask them in advance about what I should do in the classroom.

Conversely, the majority of students in the study disagreed with this claim. Two of these participants, for example, described the attention instructors gave to SVI needs as *"*they forget our presence*"* in the classroom (P18 & P19). Another student explained the situation in the following way:

> I have met no one so far who makes any attempt to consider our impairments. I did not see any attempts even in areas that do not incur for them any additional costs (P17).

P3 described his experience as evidence supporting instructors' neglect of their learning needs:

> … yesterday we had a video show. Students were asked to write their reflections based on what they observed. We were not given any additional assistance about the show and therefore we had limited understanding of it.

In most of the class observations the researcher made, instructors did not pay any special attention to SVI needs.

Students with disabilities were also asked about their experiences with the support they get from their instructors. The perceptions differ from one SVI to the other, but in general it seems that there were instructors who understood the situation of SVI and made attempts to provide some support and, on other hand, there were instructors who disregarded the needs of SVI and did little or nothing to support them. With regard to those instructors who were supportive, P5 described it in a profound way:

> There are instructors who are very smart, who try their best to help us, who try to understand our needs, who provide us with choices to make about the time of examinations and other issues. When they teach lessons that consist of diagrams, they slowly try to explain them so that we can have a clear image of them. These are instructors who understand that it is my eyes that do not see but that I can create an image through my mind. So they try to help make an image from the words. I hear through my ear the material that others have observed through their eyes.

The same student described the support of one particular instructor:

> He writes notes on the blackboard and while sighted students are copying, he reads us the notes for recording. Apart from the explanations he makes, he reads the notes for us. After we have finished recording, he explains the notes he has given. We were able to study what we have recorded before we go to the next class (P5).

Another student described the support he got from his instructors as follows:

> They try to make sure that we understand their lessons by encouraging us to ask questions. They also ask us about how we want to be supported. They give us handouts earlier so that we can have enough time to record (P12).

Other types of support instructors do to assist SVI include: giving them priority to express their ideas when they raise their hands (P2 & P14); allowing them to do assignments on group basis (P5 &P9); giving them their notes in softcopies (P5 & P14); giving them summarized notes (P6); and arranging additional support for them in their offices (P15 & P16). In two of the class observations, the researcher noticed that instructors gave special attention to SVI when they raised their hands either to ask a question or to participate in class discussion.

In spite of these limited efforts by some instructors to address the learning needs of their SVI, many of the interviews revealed a total disregard of their needs by instructors. They claim that the support they received from secondary school instructors was much better than what they got from their university instructors. P13 described her frustration as follows:

> At secondary level, teachers have the tendency to support you at the individual level and be humane. This does not exist here. Once they have finished their classes they do not show any interest to help you individually.... You do not get handouts on time; they do not give you softcopies of their teaching materials. This is specifically so in our department. In other departments there is some support. In our department, however, it is my effort and the support I get from my friends that has helped me manage my education. There is nothing from an instructor.

Similarly, P18 described the reactions of instructors to SVI request for some accommodations:

> … there is no support you get from your instructor. This is because there are instructors who do not even give you handouts when you are asking them. They ask you 'Why should we specially give handouts to you? What makes you special?' When we explain to them that we need the handouts earlier because we have to find people who will help us record the material, they still refuse to them to give us.

P5 also said that *"*instructors do not give any type of support, whatsoever*"* and used a maxim to describe the general situation in the university as *'tireh gireh bila'* which can be translated as 'eat by toiling'. Many SVI also agreed that what contributes to the effectiveness of their learning are their individual efforts (P5, P10, P12, P13, P16 & P18).

5.5.6 Instructors' behaviours and SVI reactions

Instructors' behaviours have a big effect on their relationship with students and ultimately on the students' feelings and learning experiences. SVI talked about some instructors who were sensitive to their needs and feelings. On the other hand, many instructors were rude and used labels in reference to SVI:

> They give us some labels. When you go to their offices they receive you with sickening words, like "you people …" We are given nicknames like 'you bothersome' people. Since it was not what I expected, it makes me uncomfortable (P6).

Some instructors were reported to have exaggerated mistakes made by individual SVI which wouldn't have been the case if they had been made by sighted students:

> We may make some mistakes like all other students. ... If we take cheating for example, the cheating of SVI is highly exaggerated as compared to that of other students. Although I do not know the reason, a SVI is a student who is not different from other students. He/she may cheat. So instead of penalizing the student like what they do to others, they come to class and say 'you bring scribes who …' (P6):

> When we make some minor mistakes they treat us differently from other students (P9).

One problem in the behaviour of instructors about which many SVI seriously complained was the generalization of individual student's behaviours to all SVI. One SVI described his feelings as follows:

> What I observed here is, they say 'they are not fit'. 'They are this or that'. There is a kind of generalization. I know the name we are assigned before. We were considered as smart students at the beginning which later – well, at some point, poor students may also come. ... Why should we be classified as one? We are many. It is said that there are more than five million disabled people. This always touches my inner feelings. I would be pleased if there were an end to this generalization. Otherwise, this situation will follow us into the world of work as well. If this person here becomes my boss at work, what is he going to do? So I want this kind of generalization to end (P8).

Some instructors turned deaf ears to students' pleas for some considerations to the problems they encountered. Two SVI described their encounters with instructors as follows:

> I asked a certain instructor to give me a softcopy. Then he told me to back off [used strong words] and I just laughed and went back (P13).

> We tried to explain the problem to the instructor, but he left us there without giving us any response. Our further attempts to plea about the situation did not bring us any response (P4).

Similarly, P5 gave a description of the reaction of some instructors when SVI asked for some considerations to be made to the challenges they faced in examinations:

> The instructors teach for one or two hours and it takes us time to consolidate what we have learned and prepare ourselves for examinations. Instructors do not consider this situation. In one week, we may have three or four examinations. If we ask them to change the examination time, they do not listen, saying that it is not convenient for them. Not all instructors do this (P5).

P6 described the prejudice of instructors towards SVI:

> When you go to their office, they have a prejudice that you go there for some complaint and, therefore, they do not give you any attention.

SVI did not always accept to their instructors' negligence and inappropriate behaviour without a fight. There were situations where SVI strongly claimed their rights. P2, for example, described his arguments with his instructors in order to get the necessary support:

> When I am deeply immersed in the teaching and learning process, a situation arises that limits my learning because of my visual limitation, I easily get angry. I told the instructor outside the classroom that he should explain things for me. He told me that he was doing just that. We did not agree. Finally, he agreed that he will try his best in future. There are other instructors to whom I have explained my problems in such an encounter (P2).

Another student told of his reaction to the instructor who refused to accept the scribe he brought to assist him in his examination:

> … one day I took a law student as an assistant. But the instructor rejected my assistant saying that law students couldn't be assistants for civics students. ... I countered saying that I was there to handle my own examination, and not to depend on others' minds. As a result we reached a point of conflict. He refused to allow me to take my examination until the final 10 minutes when I was allowed to take my examination [with the assistance of the same student] with the instructor standing over me to closely supervise (P15).

Other SVI had gone to the extent of reporting the problem of some instructors' refusal to allow the use of recorders in the classroom to their college dean which resulted in the instructors being reprimanded. They also claimed that from then on they fought for their rights through their club (P17).

5.5.7 SVI participation in learning activities

Students' participation in learning activities is imperative for effective learning. From the data collected through class observations and interviews made with the students, however, it seems that instructors of the two institutions have done very little in terms of engaging students in meaningful learning activities except for certain assignments used for summative assessment purposes. The lecture method was used almost exclusively across all instructors observed. The only way SVI were seen participating was in raising certain questions and giving responses to questions asked. In the absence of any learning activities, it is not possible to raise the issue of modifications of such activities or of SVI' participation.

From the interviews with the students, however, it was learned that there were some instructors who provided students with occasional learning activities. In response to whether their instructors equally involve them in those learning activities, the students reported that there were certain instructors who gave them little attention while other students were engaged in different in-class activities:

> There are instructors who do not bother whether we participate or not. What I have seen so far is this - while others engage in different activities, we are limited only to recording what can be recorded (P3).

Students with visual impairments raised other factors that inhibited them from fully participating in the teaching and learning process:

> I do not participate in the classroom because of my inability to read my materials earlier. If you do not have any ideas to contribute there is nothing you will say in the classroom (P8).

> If we could get Braille materials and write our notes right there, it would have been much easier for us. This could have been very helpful to prepare for the class and participate in the teaching and learning process (P9).

On the other hand, students talked about how some of their instructors involved them in learning activities. The most common ways were reported to be in group presentations, group discussions, and in asking questions and responding to questions (P7, P9, P11 & P12). Instructors also talked about the efforts they made to involve SVI in learning activities:

> ...when there are certain activities such as group discussion, I facilitate a situation where they can participate in sharing their ideas with other group members. Another is I give them more chance to express their ideas than other students. In order that they will not feel any alienation, I call them by their names. I ask them to reflect on different issues (P25).

> There are presentations and in these presentations I make sure that SVI get the opportunity to present (P20).

5.5.8 Making course material accessible

In addition to active participation in the classroom, students should also be provided with an opportunity to read different materials that enhance their learning. It is a requirement of educational institutions to make sure that they have facilities with sufficient relevant reference materials. At the classroom level, instructors should also provide their students with lecture notes and other supplementary reading materials. This should consider the needs of SVI. Like all other students, SVI have the right to get reference materials in accessible formats. Instructors should also think of mechanisms to make their instructional resources accessible to SVI. They have to recognize the barriers their traditional way of teaching pose to the learning of SVI and make extra efforts in the way of helping these students.

An examination of the interviews with SVI and the staff of both institutions showed that there were differences with regard to the level of provision of course materials to SVI in accessible formats. There were instructors who showed very little cooperation to SVI and there were also many others who supported SVI as far as their capacity allowed. This difference was apparent between departments/schools as well as between institutions.

One of the complaints SVI raised as a very serious limitation in their learning was the total absence of reading materials in Braille. Except in the law schools where there were some materials, there was no reference or textual material in Braille in other subjects that was relevant to students in other departments. The only study material SVI got in most cases was the handouts instructors provide which they would have to record with their voice recorders using the help of other students. But here also there were certain instructors who did not give handouts (P9 & P12); even in situations where SVI got handouts, they faced many problems and challenges. One of these problems was that their instructors did not give the handouts early so that they could record it on time (P1, P2, P5, P6, P9, P13 & P18):

> Some instructors give us [the handouts] very late, usually when the examination time is near and at that time it is difficult to get a student who can assist you to record since they will be busy studying. If we were given earlier, we could record the material without many problems and we can timely prepare for examinations (P10).

Some SVI also talked about other dimensions of the problem with recording handouts and studying material recorded in this way:

> We are just provided with handouts which we have to record with the help of others. One may record accurately, and another person may record it incorrectly. We study this recorded material. During examination time, we answer the question on the basis of what we heard in the recorded material which could be different from what it was intended to be (P15).

> I live here with their [peers'] support. But they have some limitations in English language use. ... I find it difficult to comprehend their pronunciation (P12).

SVI also talked about some very considerate instructors who gave them handouts although they did not give to others; they also gave it early. Although it was not a common case, there were also instructors who provided SVI with softcopies of their lecture notes:

> Actually our instructors are very close to us. They give us what we request. They, of course, do not give us the course materials in Braille, they give us soft copies. When they give handouts, they give them to us before they give them to others. Actually they do not give handouts to sighted students (P8).

One very serious problem SVI faced with regard to getting study materials in accessible formats was related to recording instructors' lectures. In both institutions, SVI were provided with digital recorders so that they could record whatever learning material was available and study through listening. In fact, all SVI asserted that listening was their principal learning modality. In addition to recording their handouts, SVI also recorded their instructors' lectures. In spite of this, SVI faced many challenges in recording instructors' lesson presentations. Although many instructors gave all possible support for this, there were some others who did not allow SVI to record their presentations (P6, P7, P11, P12, P13, P17 & P19). In one of his class observations, the researcher found a situation where SVI did not record due to their instructor's denial of permission to record. P12 described the situation as:

> … the university has given us recorders. However, it did not provide us with access to the material we should record. The instructors are uncooperative.

One SVI reported that there were instructors who went to the extent of taking away the recorders of those who failed to follow their orders (P19). This might be the reason why some students recorded lectures by hiding their apparatus from their instructors:

> There are instructors who do not allow recording their classes. So we record them with a lot of fear by hiding our apparatus (P11).

Some SVI described their experiences of how they reacted to their instructors' behaviour:

> … at one time a certain instructor forbade me to record his presentation. After the class I talked to him and told him that we do not have any other options to learn? Then he said 'We have the right not to be recorded'. I told him that he does not have such a right. That sighted students are listening and writing. In the absence of all required materials we should also be able to record the lectures (P19).

SVI also talked about the poor quality of their recordings due to certain problems. The noise from outside the classrooms interfered with their recordings of class lectures (P2, P6, & P18). SVI also claimed of the poor quality of their recordings was due to instructors' movements and poor voices (P2, P9 & P17):

> When we are recording, other sounds outside the classroom interfere with what we record. Sometimes we end up having in our records the external sounds (P2).

> Yes, the voices of many instructors are problematic. ... When the instructor goes to one corner, his voice will be distant and as a result the sound of the recorded material will be low. So the movement creates problems for us. There are also instructors whose voice is very low (P2).

In the majority of the classes where class observations were made, the researcher noticed that the voice of the instructors was loud enough for everyone in the classroom to hear and when talking they did not move far from where SVI were seated. In two cases, however, there was a low audibility of the instructor's voice as he moved around making it hard to hear him at the back of where SVI were seated.

Asked about why instructors failed to consider this problem of quality in recording, one participant responded as follows:

> In fact, there are situations where instructors purposely try to avoid the recording. When they notice that you are stretching your hand with a recorder towards their direction, they talk facing the opposite direction (P17).

The behaviour of instructors in this regard seems to be related with their previous experiences with SVI. Those instructors who had experience of studying alongside SVI were very considerate to such students in their teaching and those who did not have such an experience were negligent. In relation to this, P17 said:

> Maybe the fresh and young instructors are better. At least they give us softcopies of their teaching notes which we couldn't get from the older ones. Maybe they have some experiences with SVI.

This difference of instructors' behaviours with regard to making their teaching material accessible to SVI was also visible between departments. Thus, in those departments where there had been a tradition of enrolling SVI, especially in the School of Law, SVI got better treatment and consideration:

> In our [department] there are materials already prepared for the whole five years. They are called teaching materials and we are given all materials at once. We efficiently make use of them. But when there is a need for any additional material, or any reference book,

> they will be listed in the course outline and if instructors have softcopies of these materials they give them to us (P14).

Instructors and department/school heads were also asked about the efforts made to provide SVI with the necessary course materials. Their responses were quite different with no consistent patterns. From some responses, however, it appeared that agreements were reached in some departments and even at a college level to provide SVI handouts in advance as well as to provide them with softcopies (P35 & P41). In spite of this, the implementation seemed to depend on individual instructor's good will. This is what P5 confirmed:

> SVI should be given handouts in advance so that they can record the material and come to class with some clarity and possible questions. This does not mean, however, that all instructors are doing it. There are instructors who have started and there are some who did not start yet. It depends on the individual person's awareness and understanding.

In general, it was found that there were certain instructors who gave handouts in advance to SVI (P31, P34 & P35) and there were others who gave them at the same time as other students (P20, P30, P32 & P33). In the class observations he had made, the researcher did not find any evidence to support instructors' claims of giving learning materials in advance. One striking finding, however, was the considerable number of instructors who said that they gave their materials when the students themselves asked for them (P22, P26, P29 & P36). This means that if a student failed to ask for the material, there would be no way he/she would get it. Some instructors gave their handouts in hardcopies while there were others who gave softcopy materials. There were also instances where instructors specifically prepared handouts for SVI even if they did not give to other students (P28 & P38).

5.5.9 SVI relationship with their instructors

The relationship students have with their instructors does have a tremendous effect on SVI attitudes and experiences at university in addition to the impact of the curriculum itself. In situations where there is a close and positive student/instructor relationship, there is a possibility that students will have a better interest in the course the instructor teaches and better academic performance than when the relationship is distant and negative. Therefore, it is very important to examine the relationship SVI have with their instructors. The opinion of interviewed SVI, except

in a few cases, was that there was a strong barrier in their relationship with instructors that could not be broken easily:

> Psychologically, they consider themselves superior to students. They want to proceed with the kind of thinking they previously had. … In their own mind, they have a certain standard they want to maintain about themselves. It is very difficult for us to break this barrier (P4).

> There is normally a red line between students and the instructor. If he does not show me a good face in the class, I feel that he will harass me if I go to his office (P5).

One reoccurring theme in this respect was that SVI feared their instructors. They were afraid of coming into conflict with their instructors because of their requests and the consequences thereof. This can be clearly seen in the following sample excerpts from the interviews (P1, P4, P5, P6, P7, P11, P13, P17, & P18):

> … if we make any legal claims, we are afraid that instructors may hurt us. …We are highly fearful of our instructors. We fear them like an angel. If we do something against them, we know that we will be at a disadvantage (P4).

> We are afraid of them. When you go to their office, they have a prejudice that you go there for some complaint and therefore they do not give you any attention (P6).

> I am afraid to approach them. In this university, an instructor is very difficult to approach. If the instructor says no, it is no (P11).

> Honestly speaking, we are afraid of them. There are instructors who are not willing to be approached. They do not give you any chance. Therefore, you can do nothing (P13).

It also seemed that the information they had before they came to the university had an influence over their relationship with their instructors. Some SVI compared this situation with their experiences in secondary education:

> At high school, you have a family-like relationship with your teachers. But here it is something that we have been informed of earlier and your relationship with instructors is very difficult. You become afraid of your instructors. You do not even feel free to ask them questions. Their approach does not allow you to get close to them (P17).

In very limited cases, however, it was reported that there was a close relationship between SVI and their instructors, and here, again, such a relationship was evident in those departments/schools that had a long tradition of hosting SVI. P8 who was a law student said:

> Actually, our instructors are very close to us. They give us what we request (P8).

P2 who was a language student described his experience of his relationship with a particular instructor as follows:

> I told the instructor outside the classroom that he should explain things for me. He told me that he was doing just that. We did not agree. Finally, he agreed that he will try his best to do so. There are other instructors too to whom I have explained my problems when I face such a situation.

And when asked about the reaction of the instructor to his appeal, he said:

> This instructor was not positive. The rest, however, were very positive. They regretted their inattention and asked me for ways I could be better supported.

The problems SVI faced in their relationship with their instructors could be attributed to different factors. One of the factors that many of the research participants agreed on was related to instructors' awareness and understanding. Instructors did not clearly understand the extent of the problems and challenges SVI faced in the teaching and learning process. They also did not have full knowledge about their responsibilities of providing SVI with special support and accommodation to enhance their learning nor did they have full understanding of students' right to request those accommodations:

> Some instructors do not have any idea about the difficulties we may face in the teaching and learning process. They do nothing different to help us in our learning. ... You may be amazed to know that the number of SVI in our class is considerable but no special assistance is provided that considers this number (P4).

> In general it seems a problem of awareness. They could not put themselves in our shoes (P12).

When SVI asked their instructors for consideration, they countered with a response that they were equal with other students and, therefore, should not expect to be treated differently (P14 & P18). There were also instructors who prohibited SVI from recording their lectures, saying that it was their right not to be recorded (P19).This was another evidence of their limitation of awareness which SVI confirmed:

> … there is no support you get from your instructor. This is because there are instructors who even do not give you handouts when you are asking for them. They tell you 'Why should we specially give handouts to you? What makes you special?' (P18).

Instructors did not mention having limitations of awareness in their interviews. From the ideas they forwarded, it was evident that there were instructors with awareness limitations (P21, P23 & P27) and others who had better knowledge and understanding (P23 & P26). The data collected from both department/school heads and college deans also confirmed that there were instructors with and without limitations of awareness about the problems SVI faced in the teaching and learning process and the support they needed from their instructors. One department head claimed that those instructors who were from the field of education and training had better awareness than those who had not taken any education courses:

> This is a matter of profession. I am an education person. My BA and my MA are related to teaching. So I have the awareness. Most of us have the awareness. It is only those instructors whose training is outside the education profession; otherwise, I know that those students need special treatment (P33).

Another research participant argued that those instructors in the School of Law were better in awareness due to the issues addressed in their field of study:

> The discipline talks about justice, equality, etc. and each individual has to consider this in his class teaching. … I have the belief that instructors in the law school have better awareness (P36).

Many SVI also agreed that the attitude of their instructors was one of the root causes of the problems they face in their learning. This problem hurt the feelings of SVI more than any of the other problems they faced. Aside from denying SVI the cooperation and support they required in their learning, instructors used different expressions and labels in reference to SVI which hurt their feelings:

> … one of their commonest sayings that makes me highly disgusted is 'you are inconsiderate of the help you are provided!' We are not asking them for any favours. In the first place, why did we learn? We could have begged on the roadside like some unfortunate ones. That [begging] is what I call a help. What we are asking is to be given some support in order to complement the limitations we have. Rather, what they say is 'You do not consider when people show you pity! You …'. These are expressions many instructors use. So it would be good if they change this type of attitude (P6).

> There is one SVI. While he was in class, he had forgotten to switch off his mobile phone and it suddenly rang. The instructor insulted the student using words that could affect his moral. ... What he said was 'please drag this guy out of the classroom' which affects the morale of people (P7).

Some SVI also argued that instructors' disregard for their learning needs was not due to lack of awareness. They said that they did not have any interest in listening to their problems and providing the necessary support. They contend that if it had been due to lack of knowledge and information, the instructors would have listened to what they tell them (P7 & P13).

One other issue that SVI underlined with regard to instructors' attitudes which seriously wounded their feelings was their skepticism regarding their capacities. This was mainly manifested in relation to examination arrangements and their academic performances (P5 & P18):

> There is suspicion that the assistants help us in answering the examination questions. I would have been very happy if I could avoid their help and do my examination by myself (P18).

This attitude was manifested in certain of the interviews made with instructors and department/school heads as well as college deans. One instructor, for example, asserted that he did not believe that SVI have the capacity to perform as well as other students and that they were admitted to the university only through affirmative action (P21). One department head also talked about the disbelief of instructors concerning the outstanding performance of one SVI, which was evidence of their scepticism:

> … there is one female student that seriously attends her lessons and her performance in examinations is also very good. Sometimes, instructors doubt whether it is because of her own work (P33).

The majority of instructors and academic leaders, however, expressed their strong belief in the capacity of SVI to perform equally and sometimes better than their sighted peers, especially if the environment was made conducive for their learning:

> So far I have had two or three students. They are very clever if they are provided with support. ... They are active in the classroom and they participate. They might have suffered from a lot of problems which they shouldn't have but still they are clever if they are supported (P20).

Another problem in relation to instructors' failure to provide special support to SVI was their lack of relevant pedagogical skills (P13, P18, P22, P28, P36 & P39). Such skills can develop

only when appropriate training is provided. P22 provided an extensive explanation about this problem:

> I understand that they need special treatment and a separate way of lesson delivery. Sometimes you may not have those skills. ... Some of the instructors have educational backgrounds [they took pedagogy courses]. I guess these instructors have relatively better pedagogical skills. Others are out of it. They came from other disciplines without any pedagogical knowledge. They have specialized in their fields of study and were recruited to teach without the necessary skills of teaching. Therefore, there is no doubt that there will be some gaps here. This is because, when I was a student myself, there were such students and you clearly see it, there was no special approach.

Instructors' experience with SVI was another factor that influenced their relationship with such students and their commitment to provide them with the necessary support:

> When I was a student at the University, there were SVI in my class. There were four. When we study together, there is something that you observe. The perception we had before is a blind person who is totally blocked. Therefore, as a result of the exposure I had at that time, I came to understand that if they are provided with a favourable environment they have the capacity to learn. ... So it is through my experience that I got some knowledge about how they should be supported (P36).

Similarly, many SVI also associated their instructors' lack of understanding and failure to provide them with appropriate support with previous experience (P2, P4, P6, P14, P15 & P17).

One of the serious problems SVI faced during their studies at university, as was described earlier, was the denial of permission to record lectures by some of their instructors. Instructors denied SVI permission to record their lessons for two reasons: one was because of concern for the students themselves and the other reason was fear of being accused as a result of what they said in the classroom. With regard to the concern for the students, instructors argued that if SVI recorded the lecture, they would totally depend on it and therefore would give little attention to classroom instruction (P14, P15, P19 & P26):

> We can say that the teaching and learning process is like a drum. When the teacher presents, the students also listen and write and their pace and concentration in learning also increases. ...I see some of them being sleepy. This is because they do not fully observe the interaction. Their mind and concentration become sharp when they are actively listening to what is said. But when they use the recorder, they tend to depend on it and become careless. When they come to the classroom, they feel that they have an

> advantage over other students and, as a result, you do not see them becoming active (P26).

What many students said and certain instructors confirmed, however, was that instructors did not allow SVI to record their lectures, claiming that they might talk about some sensitive social or political issues, which could be used to incriminate them (P11, P12 & P13). At the end of one class observation, the researcher inquired about why SVI were not using their recorders. The instructor responded that he did not allow it in his classes for the reason that the course he taught deals with politically sensitive issues and he did not want to take any risk of being incriminated because of a possible slip of words (P21).

This reason, however, did not have any credibility from all concerned bodies. P43, for example, explained that the highest management bodies of his university had informed instructors that there was nothing they needed to be afraid of since, as long as "they do not preach about their religion or their political opinion, they can teach anything". P14 also contended that it was the instructors' "lack of capacity and confidence" that led them to such fears.

Instructors were also asked about the challenges they faced in the way of providing necessary support to SVI. The problems they raised included the following:

- The shortage of resources in the department did not allow them to use different teaching methods (P21).
- The class size they handled limits their capacity to understand and support individual student's needs (P22).
- Time limitations did not allow them to think of teaching methods that address SVI needs and give tutorial support (P23, P24 & P35).

One last, but very serious, limitation that prevented the provision of necessary support to SVI was the lack of institutional policy and a legal framework that provide for such support and the consequent lack of instructors' accountability for failing to implement those provisions. Whatever accommodations SVI were provided depended on the goodwill of individual instructors or results of common practice. This is a situation that students, instructors, department/school heads and college deans agreed on:

> … there is no policy in relation to this issue. Because, if the instructors had a written policy in their hands, they would consider this as a system and implement it … (P19).

> We do not have any official guideline to follow. It requires individual courtesy. I, for example, may understand their problem. So it requires individual instructors to be considerate (P34).

> Every instructor gives softcopies of his lecture notes to students when they ask him which, of course, is based on his goodwill (P29).

> The university regulation stipulates that we should provide support for those students who need it. This is general without making any specifications ... there is no clear guideline that states that this type of support should be given for this type of disability (P40).

In some situations, it seemed that decisions were made at department or college levels based on the requests of the SVI themselves that lead to some accommodations. But in many cases, these decisions were not followed for different reasons. In relation to a decision made to give SVI extra time in examinations, P40 said:

> It is official but it couldn't be binding. We have approved it at College Council and circulated it to departments. But in order to be binding, it should be endorsed in the university system; this did not happen and it is one of our problems.

In the absence of a binding policy, it could not be expected that instructors would be held accountable for their behaviour. As P41 of U2 said:

> … you cannot make an instructor accountable for his failure to give any special support to those who are in need.

Although one dean from U1 claimed that if an instructor does not allow SVI to record his lectures, that instructor would be:

> … either punished or apprehended as the university regulation allows (P38).

This seemed unlikely in the absence of any rule in the university that led to such consequences. Thus what department heads did was to entreat instructors in meetings to understand the situation of SVI and provide all possible support (P33 & P38).

5.5.10 Discussion

In this section, key findings in relation to SVI experiences of the teaching and learning process are discussed. These findings are clustered around nine sub-themes, namely: feelings of becoming a university student; initial assumptions about university education; challenges faced with curriculum content; experiences with instructors' lesson preparation and presentation; instructors' attention and support to students' needs; instructors' behaviour and students' reactions; participation in learning activities; instructors' efforts in making course material accessible; and, relationships with their instructors.

5.5.10.1 Feelings of becoming a university student

The findings of this study revealed that almost all SVI were very happy to join the university, considering the challenges they went through to reach this level. This is not surprising considering the fact that the number of SVI who get the opportunity for a university education some years back was very small; still there are many who do not get the opportunity. This finding agrees with that of Sachs and Schreuer (2011) who associated the satisfaction of students with disabilities in HEIs with the situation of those who did not get the opportunity to join HEIs. Some other students viewed university-level education in terms of personal development. There were also SVI whose happiness was caused by the job opportunities their degree would create so that they could help themselves and their families. This is not surprising in developing countries like Ethiopia where a university degree is considered the main factor for employment and consequently the road to self-reliance.

5.5.10.2 Initial assumptions about university education

Hirtso (2001: 41) theorizes that the initial learning environment (which is the home) to which a child was exposed will "influence the way in which the child expects to be treated at school". Thus, when SVI were in their pre-university years, they had a learning environment, which shaped their 'world view' and which, in turn, was used to interpret their future 'world and social interactions'. The findings of this study also indicated that many SVI had a mistaken understanding and assumptions about university education, which affected their feelings and even their academic performance. This mistaken assumption was caused by their more positive

secondary school experiences and also from the information they got from other students before they joined the university. Consequently, when they found the condition in university education to be different from their initial assumptions, many felt disappointment and frustration, especially during their first year. The complexity of education and the difference in its delivery system was unbearable to some SVI. As P15 describes:

> I was told that there are people who give you support in your studies and in the examination. But after I came, I did not find what I was informed about and had expected. There are a lot of problems in all aspects, in the learning process and during examinations.

Two students, particularly, were of the opinion that their misperceptions about university education/field of study had a long-lasting effect on their self-confidence and ultimately on their academic performance (P5 & P14).

Many studies also confirm that students with disabilities face more serious problems in adjusting themselves to the new styles of learning and teaching when they entered HEIs as compared to their non-disabled peers (Adams & Proctor 2010: 191; Fuller *et al*. 2004; Marshack *et al.* 2010: 168). This affirms Bronfenbrenner's assertion that the personal characteristics of individuals positively or negatively influence their development (Bronfenbrenner & Morris 2006: 810). This makes it imperative that students, especially those with disabilities, should be given orientation and training about some learning strategies and other important issues when they arrive at the university. Although, in both institutions, orientation is given to all new students, those with disabilities require a special orientation due to the unique nature of the challenges they face.

5.5.10.3 Challenges with curriculum content

For the curriculum to be inclusive to the needs of all learners, consideration should be made starting from the design phase. When designing an inclusive curriculum, the learning outcomes to be attained, the contents to be addressed, the learning experiences to be included, and the assessment strategies to be used have to be part of the process. In Section 2.2 of Chapter Two, a framework for developing an inclusive curriculum was provided. In this study, however, it was established that no such considerations were made about the needs of SVI and students with disabilities in general in the development of the curriculum. Therefore, in this situation it is not

timely to think of UDL as a model to apply in the HEIs of the country. This is because UDL is said to be challenging to implement, the main challenge being the time limitations on the part of faculty (Johnson & Fox 2003: 16). This challenge becomes more evident as the majority of faculty members are not proficient in pedagogical skills. In a study conducted to investigate the teaching and learning support for students with hearing impairment in one HEI of South Africa, Bell (2013: 227) reports a similar finding concerning curricula that fail to consider "the principles of accessibility, flexibility or universal learning design and thus not being responsive to the needs of the students". Therefore, it seems reasonable for HEIs in the country to use the accommodations model in their efforts to create an equal opportunity of learning for students with disabilities.

Due to the lack of proper consideration during the design phase of the curriculum, in the present study it was found that certain courses included visual content or content that requires mathematical manipulation with no suggestions regarding how to deliver this content in classes with diverse students. Due to this, the approaches followed in making reasonable adjustments to accommodate SVI differed from instructor to instructor and from department to department. In some cases, SVI were exempted from those courses which were substituted by other courses; in others, SVI were exempted from those contents considered challenging without any substitution; and there were instructors who exerted their maximum efforts to teach those contents to SVI using strategies they believed was appropriate. In fact there is a lot of evidence in the literature to suggest that SVI can effectively learn any curriculum content provided that this is facilitated with relevant assistive technology and their instructors have the training and commitment to support them (Roy 2003: 41).

The research also established that SVI found the vastness of curriculum content to be challenging due to the problems they faced in taking notes, recording, and preparing for examinations. P19 describes her challenge as follows:

> The courses are vast in nature. There is what we call an exit examination. You have to read a lot of books to prepare for the examination. The textbooks are very vast and too difficult to record. After all, who is going to record such a voluminous book for me? As a result, there are some courses I do not manage to complete.

5.5.10.4 Instructors' lesson preparation and presentation

According to Bronfenbrenner's ecological systems theory, an individual's development is determined to a large extent by the interactions that take place within the *micro-system*. Perhaps the original definition of the *micro-system* would help to explain these interactions:

> A *microsystem* is a pattern of activities, social roles, and interpersonal relations experienced by the developing person in a given face-to-face setting with particular physical, social, and symbolic features that invite, permit, or inhibit, engagement in sustained, progressively more complex interaction with, and activity in, the immediate environment (Bronfenbrenner, 1994: 39).

When it comes to a university learning environment, the classroom is the element of the *micro-system* where much of the interaction that affects students' learning takes place. It is here that students spend much of their learning time and interact with each other, with their instructor and with the curriculum materials. An instructor is the one who can determine the level of this interaction through the way he/she plans and implements lessons. Different studies have underlined the vital role teachers play in determining the effectiveness of inclusive education. For instance, Joseph (2010: 248) emphasises the exceptional role of teachers as follows:

> Professors play a significant role in the provision of academic accommodations to students who are visually impaired. It is these professionals who work directly with students who are visually impaired in the classroom. They are presented with the students' limitations and needs; these educators are the ones who have firsthand experience in assisting students who are visually impaired to access the educational materials they present in their classrooms.

All instructors interviewed, except two (P23 & P25), admitted that they did not make any accommodations for SVI when they prepared for their lessons. Some of them did not realize the need. In such circumstances, it is impossible to think of instructors making appropriate accommodations to help SVI to become as successful learners as other students. All lessons observed followed a similar pattern, primarily dependent on lecturing with students as passive listeners. This conforms to the findings of a similar study conducted by Tirusew *et al.* (2014: 45). This type of learning environment cannot make SVI effective learners for, according to Bronfenbrenner's bio-ecological systems theory (Smith 2011: 2), students have to be active participants in the bi-directional interactions that occur within the environment. It was in rare

occasions that students' presentations and group discussions were used where SVI participated actively.

A teaching and learning process with a lecturing as a predominant method, though not desirable for both SVI and sighted students, might not place SVI at a considerable disadvantage. However, SVI might face at least some barriers unless instructors make some consideration. It was found that there were problems in some instructors such as failing to describe visual materials and leaving SVI idle while other students were engaged in activities. Several researchers, including Fuller *et al*. (2004), Jacklin *et al*. (2007), Madriaga and Goodley (2010), Tinklin *et al*. (2004) and Wolanin and Steele (2004), reported similar barriers encountered by students with disabilities in Western universities in instructors' classroom teaching. These reports further associate the barriers students with disabilities face with instructors' lack of knowledge about their legal obligations to make reasonable adjustments and their knowledge and skills in making such adjustments. There is also evidence in this research indicating that these factors have played their part to what is happening in the institutions under study.

5.5.10.5 Instructors' attention and support to SVI needs

The single most important variable that determines students' learning experience is what takes place in the classroom and their relationship with their teachers (Joseph 2010). Thus, the attention and support SVI from their instructors during the teaching and learning process will have an enormous effect on whether they have a positive or negative attitude towards the overall institutional environment and ultimately on their learning. The key role instructors play in the learning of SVI can be explained by proposition I of Bronfenbrenner's PPCT model:

> human development takes place through processes of progressively more complex reciprocal interaction between an active, evolving biopsychological human organism and the persons, objects, and symbols in its immediate external environment (Bronfenbrenner 2005: 6).

From the findings of the study, it appears that there were instructors who understood the situation of SVI and made attempts to provide some support. On other hand, there were instructors who disregarded the needs of SVI and did little or nothing to support them. The majority of students emphasized that most of their instructors forget their presence in the classroom. A similar finding

is also reported in the limited research conducted in HEIs of sub-Saharan African countries. Although the majority of instructors were reported to be understanding, some instructors totally ignored students with disabilities' needs and problems. For instance, Moswela and Mukhopadhyay (2011: 313) in Botswana, Haihambo (2010: 279) in Namibia and Bell (2013: 229), Tugli (2013: 100) in South Africa came up with findings of some instructors' negligence to students with disabilities' needs.

Regardless of the lack of support from their instructors, SVI maintained that what mattered most for their academic success was their individual effort. This conforms to the findings of Tirusew *et al.* (2014: 47). A similar opinion of the role of individual students with disabilities for academic success is reported by Swart and Greyling (2011: 101). This claim of SVI is in line with Bronfenbrenner's and Morris' assertion that "the person's own disposition and resources would play a far stronger role in affecting the direction and power of the proximal process than in the case of interpersonal interaction" (2006: 814).

Instructors' experiences with SVI as students seemed to have an influence on the way they treated SVI as university instructors. Those instructors who came from universities and departments that enrolled SVI tend to treat SVI in a relatively better way than those who did not have any experience of learning alongside SVI. Instructors in the latter group tended to treat SVI harshly. This agrees with the findings of Ryan and Struths (2004, in Swart and Greyling 2011: 101) when they assert that instructors' previous experience with students with disabilities and their knowledge and understanding of the type of support they need will determine their willingness and ability to accommodate those students.

The present research found that those instructors who make an effort to consider SVI learning needs in their lessons used the following strategies: adjusting the pace of their lesson presentations and summarizing their lessons (P20, P21); talking loudly and staying near where SVI were seated during the whole class time (P26 & P28); addressing SVI by their names and giving priority to them to express their ideas when they raise their hands (P20, P26 & P32) ; allowing SVI to do assignments on group basis (P5 & P9); giving their notes in softcopies to SVI (P5 & P14); giving them summarized notes (P6); and arranging additional support in their offices for SVI (P23 & P20). Haihambo (2010: 284) in her study in Namibian HEIs also identified

similar adjustments made by instructors and asserts that these types of adjustments do not require any 'specialized skills'. Fuller *et al.* (2008) call such adjustments in the teaching and learning process as 'formulaic' as opposed to the need for a more fundamental institutional change that fosters effective inclusion of students with disabilities. In his theory of human development, Bronfenbrenner underlines the interconnectedness between the interacting systems and proximal process as fundamental for positive developmental outcomes (Bronfenbrenner & Ceci 1994: 572). Smith (2011: 4) elaborates this as follows:

> When values and expectations of each system positively support each other, the more likely it is that the learners will fulfill their potential and achieve salient learning outcomes. When systems are congruent, they reinforce each other.

Therefore, individual instructors' disorganized and fragmented support to SVI does not guarantee any fundamental change in their learning environment. If SVI and all students with disabilities are to get full accommodation and inclusive education becomes effective, there is an urgent need of a systemic awareness and change, through which everybody concerned, primarily instructors, would be accountable for their failure to provide the required support.

5.5.10.6 Instructors' behaviour and SVI reactions

There is evidence in the literature that indicates the effects of instructors' behaviours on the decisions and interpretations students make on the learning process and ultimately on their learning. For students to have an interest in the learning process and become active participants, the teacher's approachable and supportive behaviour is vital (Joseph 2010: 249). This notion is in line with the bio-ecological theory, for this theory maintains that the developing person has to be in constant interaction with the elements of the *micro-system* surrounding him or her. The behaviour of instructors, therefore, will affect the frequency and intensity of the student/instructor interaction and ultimately the learning. An analysis of the students' interviews in this study, led to the finding that there were instructors who demonstrated improper behaviour towards SVI. Although the majority of instructors were identified as considerate and sensitive to SVI needs and feelings, some were reported to have demonstrated certain behaviour that hurt the students' feelings and ultimately affected their learning experiences. Some of the behaviours those instructors demonstrated included the following:

- becoming rude and using labels such as 'you people' and 'you bothersome people' in reference to SVI (P6);
- exaggerating mistakes individual SVI made and bringing those mistakes to other students' attention (P6 & P9);
- generalizing individual SVI behaviour to all SVI (P8);
- giving little attention to SVI requests for accommodations (P4, P5 7 P13); and
- having prejudice towards SVI capacities and behaviour (P6).

This is not surprising considering the findings of research reviewed in the literature chapter which reported students with disabilities' negative experiences due to instructors' classroom behaviour in HEIs of England, a country where the practice of inclusive education is well established (Madriaga *et al.* 2010: 653).

In the present study, the reactions of SVI towards such behaviour on the part of their instructors are different. The majority of them simply remained submissive for fear of the consequences of any reactions. However, there were certain SVI who confronted their instructors and tried to fight for their rights. Some went to the extent of reporting the problems to higher management bodies. For example, P19 narrates how she maintained her right to record lessons by confronting a certain instructor:

> … at one time, a certain instructor forbade me to record his presentation. After the class, I talked to him and told him that we do not have any other options to learn. Then he said 'We have the right not to be recorded'. I told him that he does not have such a right. That sighted students are listening and writing and in the absence of all required materials we should also be allowed to record the lectures. He told me that this [the recording] will not help me, but if it does I can do it. With this, we settled the issue.

This situation demonstrates the role of the individual in the bio-ecological system in changing the learning environment through his/her reactions and personal characteristics that determine his/her behaviour (Darling 2007: 208).

Joseph (2010: 256) argues that self-advocacy skills may not be possessed by all SVI entering higher education indicating for the need for training. Therefore, HEIs should consider assertiveness training as one way in which students with disabilities can claim their rights.

5.5.10.7 SVI participation in learning activities

The importance of the active engagement of students in the teaching and learning process is well reported in the literature as discussed in 2.1.1(vi). Bronfenbrenner's bio-ecological theory (Smith 2011: 2) also emphasizes the importance of the active engagement of the learner in the learning environment as a precondition for his or her development. This requires the instructor to design learning activities where the learners can be active participants in the learning process. Students could be made to engage in class activities as well as in home-take individual and group assignments and projects. The findings of this study, however, did not show any efforts worth mentioning towards this effect except for rare assignments that were intended for grading purposes. In most cases, instructors' methods were based on lecturing where students were passive listeners, except for some infrequent questioning. The only learning activities which some instructors were reported to have occasionally used in the classroom were small group discussions and oral presentations of group assignments. SVI mentioned the problem of not having reading materials in advance that would enable them to fully participate in those activities. In general, however, it was found that SVI participated actively in group discussions and in presentations when they took place. It can be concluded here that, although the dependence of instructors on lecturing as a primary teaching method might not have greatly disadvantaged SVI in comparison to their sighted peers, it is clear that it would have a negative effect on the quality of their learning.

5.5.10.8 Making course material accessible

One of the elements of the *micro-system* in which the learner is supposed to be in a constant and prolonged interaction in order to learn is the curriculum material. For this to happen, the curriculum materials should be accessible to the learners. Most learning resources in educational institutions were prepared for sighted students and therefore it requires individual and institutional commitment and effort to make them accessible to SVI. SVI having learning materials in appropriate formats is a matter of legal rights for the students and an obligation on the part of those who provide it. As was discussed in Chapter Two, Roy (2003: 43) provides a list of possible accessible formats for SVI but underlines that SVI should be consulted regarding their choice of the media for learning. The findings of this study revealed that institutional efforts

in this regard were insufficient. There was a total absence of reading materials in Braille. SVI totally depended on the handouts instructors provide, which they made it recorded with the help of other students. There were also instructors who did not give handouts. Those who gave handouts often did not give them early enough so that SVI could have it recorded on time. These types of problems were also identified in the studies conducted in other African countries (Bell 2013: 173; Haihambo 2010: 343; Swart & Greyling 2011: 100; Tugli 2013: 133).

The most serious problem, however, was some instructors' not allowing SVI to record their lessons. This is a very serious lack of responsibility on the part of the instructors who know that SVI totally depend on listening to recordings to learn. SVI in the present study also talked about the poor quality of their recordings due to certain problems such as the interference of external noise, instructors' movements around the classroom and their poor voices. Thus, this study confirms the problems Tirusew *et al.* (2014: 45) identified in their survey of 11 public universities in Ethiopia.

5.5.10.9 SVI relationship with their instructors

The support and cooperation SVI get from their instructors is to a large extent determined by the type of relationships they have. The evidence collected from the students themselves in this study indicated that there was a strong barrier in their relationships with instructors that could not be broken through easily. SVI feared their instructors. They were afraid of coming into conflict with their instructors and the consequences that would arise from such possible conflict. Certain students provided evidence of such experiences. In such a situation, there would be little chance of SVI to openly ask for accommodations and fight for their rights.

The research also found some factors that influenced instructors' relationships with and support to SVI. One of these factors was related to instructors' awareness and understanding. Instructors did not have full knowledge and understanding about the extent of the problems and challenges SVI faced in the teaching and learning process, their responsibilities of supporting SVI, and students' rights to accommodations. This is not only evidenced from what has come up of this study but also by previous investigations. For instance, Fuller *et al.* (2004: 465) report that, due to their instructors' lack of awareness, students with disabilities had to go through "frustrating

incidences" in order to inform instructors about their impairments and their need for reasonable adjustments in the instructional process. Other factors contributing to the poor relationship between SVI and their instructors include: instructors' attitudes; instructors' lack of relevant pedagogical skills; and instructors' lack of experience with SVI. All these factors are documented in previous research (Bell 2013: 228; Haihambo 2010: 227; Swart & Greyling 2011: 100).

Instructors also expressed challenges that were barriers to their efforts to support SVI. These included: shortage of resources; large class sizes; and limitations of time. However, it seems that the lack of institutional policy and guidelines that make instructors accountable for their actions was the most serious limitation. Most of the accommodations SVI were provided depended on the goodwill of individual instructors or the results of common practice.

5.6 Learning environment

The findings of the study with regard to the learning environment SVI perceived to have experienced is presented in the following five sub-categories: barriers to learning, dependence on sighted students, SVI strategies of learning, equality of opportunity to learning and accessibility of the physical environment.

5.6.1 Barriers to learning

Learning institutions are required to create a conducive learning environment for the success of their students and effectiveness of their programs as far as their capacity allows. Students with disabilities require special attention since the environment itself creates additional barriers for them because of their impairments. Students with disabilities should be provided with assistive technologies, other resources, and other types of support to facilitate their learning.

When it comes to the actual situation, however, what SVI of both institutions said was that they encountered different types of barriers to their learning. Students with disabilities asserted that the support they got from their universities was minimal as compared to what they should have been provided, although there were improvements from time to time (P4 & P5). Students with

visual impairments said that they found it difficult to compete with sighted students in a situation where the general policy was, as one SVI described:

> … 'survival of the fittest'. Of course, that the fittest can survive is true. However, I think there is some misunderstanding. This saying works in an environment where all students, both students with and without disabilities, are learning in a similar situation. In a situation where there is a different learning environment for sighted students and students with visual impairments, where one group is learning in a relatively comfortable environment and the other is learning in a risky environment, it is unwise to forward such a thought (P5).

Students with visual impairments identified a number of barriers that affected their learning. One was the lack of resources. They credited provision of the voice recorder by their institutions as playing a big role in minimizing their challenges. In spite of this, however, SVI still needed many more resources if they were to be effective learners. Due to the absence of reference materials in accessible formats, their reading was restricted to the handouts instructors provided. This brought into question the quality of their learning (P2, P3, and P11):

> The problem is we could not read as many books as the other students which, to some extent, influences our learning. The instructor cannot give you all the knowledge you are required to possess. That can only prepare you for examinations. We read the handouts, we take our examinations, after that we have nothing more to read. In order to gain more knowledge you have to browse the internet, read more books. We do not have the use of those resources (P11).

Students with visual impairments also complained that even the handouts instructors gave and other resources the university provided did not get to them on time. With regard to the handouts, they said that they got them when there was little time left for recording and studying the material before the examinations started (P5, P11 & P12):

> … we have to have our handouts recorded and then we have to study the recordings. As a result, we are left with little time to study our course materials before the examination time (P5).

Students with visual impairments did not get other materials, such as voice recorders and Braille materials, on time. They argued that, in the same way that other students come to their first-day classes with pens and notebooks, their learning materials should also be available for their first-

day classes (P3, P4, P6, P9, P11, P16 & P17). In addition, they claimed that they have limited access to computers and internet services (P3 & P18):

> … the assignments given are too extensive which is a problem for students with visual impairments. We can do the assignment but the problem is our computers are not loaded with JAWS [Job Access With Speech] software. [JAWS is a computer screen reader program commonly used by people with visual impairments]. We have to depend on other students to write our assignments for us. Most of them do not have software loaded. There are 12 computers with only three of them loaded with JAWS. You can imagine how three computers will serve over 80 students (P9).

They also particularly mentioned about the lack of an embosser, a machine that converts print material to Braille, as a big limitation (P6 & P7).

Other barriers students with visual impairments raised in relation to their learning were related to instructors' behaviour. Many instructors denied SVI permission to record their lectures which was not equitable since sighted students had the opportunity to take lecture notes in their notebooks (P11 & P17). The voices of some instructors were also reported to be very weak and, since SVI learn through listening, this was a big challenge (P15). In addition, in some cases the volume of the course material (P5) and the pace of the volume of material in the course seemed to have put SVI in a difficult situation:

> They just give one handout after another … (P4).

> … they finish two, three chapters in one week, and sometimes they may finish it in a day (P12).

5.6.2 Dependence on sighted students

One issue which the students in the study repeatedly mentioned in relation to their learning environment was their dependence on their sighted peers. They depended on other students especially to record their handouts, to assist with writing individual assignments, and to write what was dictated by SVI for their examinations. They expressed their gratitude for the assistance their fellow students provided them and many claimed that they couldn't have survived in the university had it not been for their support. However, SVI were not happy about their total dependence on peer support. The touching words of P11 probably represent the feeling of all students with visual impairments:

> You feel dependence. You have been asking for the support of others throughout your life and it is difficult to imagine begging for help at the university level as well. If all resources were available, we wouldn't have been in such a situation. When I am given an individual assignment, except for the ideas I provide, all the writing is done by others whom I asked for their assistance.

The feelings of students with visual impairments were affected also because, in many cases, they did not get support on time since they paid little, and in some cases nothing, for the services they got:

> … we may not even get a student who will assist us in recording since they will be busy with their own studies. We get the assistance of students by their free will. If it is not convenient for them, that is all. You can do nothing. We cannot pay for recording since we do not have enough money (P11).

5.6.3 SVI strategies of learning

With regard to how SVI studied their course materials, the majority of the students who participated in the study said that they studied alone. They listened to their recordings and, in some cases, to softcopies using JAWS software on either computers or their mobile phones. In using the recorded or softcopy materials, however, SVI raised some problems and concerns. One issue some of the students who participated in the study mentioned was that in their pre-university education they used to study through reading Braille materials and the shift to studying through listening was difficult to get used to (P7 & P12):

> We do not have any Braille resources. We only make use of the digital recorder the university has provided us. Since we were used to Braille at high school, the shift to the digital recorder is new to us (P7).

P4 argued that the time required for studying through listening to recordings and reading was different. When studying through listening, one has to rewind several times in order to understand the material. P8 also expressed his disappointment about the lack of Braille materials, saying that what one hears cannot be equal to what he reads. He further claimed that having Braille material to study:

> … saves you from entreating others to read for you. A recorder by itself will not help you much. We will be forced to ask for the help of others to read for us. So Braille materials do not have any satisfactory substitute.

One other problem P3 raised was that always putting the earphones in one's ears is not comfortable. This could have an effect on his learning. He also expressed his concern about the long-term effect of earphones on his ears.

Some students also said that they sometimes studied their course materials through discussions with their sighted peers. They discussed based on the lecture notes they took during class sessions or any summarized notes they had prepared (P5, P7, P9, P10, P11, & P17).

With regard to study spaces, almost all students who participated in the study raised similar problems. They mentioned two major problems with regard to using the library as a study space. One was that the libraries or reading rooms were too small to accommodate a large number of students. For this reason, you had to go early to find space. The second major problem was that the reading rooms also served as recording rooms and due to this one could study there while another student was recording materials:

> If I decide to come to the library to study it is not convenient. You will see the width of the so-called library – it is just a little wider than this room. A student may come who wants to record while you want to study in a silent atmosphere. So you will have to leave the room. When there is recording, the reader has to be loud and it will not be suitable for anyone to study there (P6).

P2 also added that since there was nobody who monitors the reading room, students made noises such as by making phone calls.

Dormitories also were not convenient for study purposes since students have different interests. They said that some dormitory mates may want to chat and others may want to listen to music:

> The dormitory is not convenient for me. There are different things. We live in groups and we all have different interests. One may want to chat and the other might want to study (P14).

But weighing the severity of the problems in both situations, almost all SVI studied in their dormitories. They entreat their friends to be considerate and sometimes criticize them when they are not:

> Although there may be some disturbance from our friends, the dorm is more convenient for us to study. You have to tolerate such situations (P7).

Certain fortunate students with visual impairments had more adequate study rooms. For example, senior law students at U2 were provided with separate study rooms which they also used for recording purposes (P14 & P19). In U1 some SVI used the office of the students with visual impairments club for study purposes (P7).

Some SVI used a different strategy to escape the noise from other students, which was to study at night (P10, P11, P14 & P15). As P10 claimed:

> I study my course materials at night. I sleep in day time and I study at night. I also record my study materials during the day. Night time is very appropriate for my study since there is nothing to disturb me.

5.6.4 Equality of opportunity to learning

The student participants of the study were asked about their perceptions of whether they had equal opportunities in learning with their sighted students. They all agreed that they were equal in terms of having the opportunity to join the university. Otherwise, considering the overall learning environment, all except three of them strongly argued that they did not have equal opportunity to learn. They all mentioned different challenges and problems that hampered this equality. The main problem that all of them mentioned was related to materials provision which they described as minimal as compared to what was available for their sighted peers. They said that what was at their disposal were handouts and instructors' lectures if that was also allowed, whereas sighted students had different reference materials and internet services. As P15 said:

> … we are not provided with enough materials. We are just provided with handouts which we have to record with the help of others. ... So it would have been fair if we were provided with Braille materials like the handouts sighted students are given and also examined in a similar way. In the absence of this, it is difficult to speak about equality.

P 19 used an analogy to describe the situation:

> I can equate the situation with the war between Ethiopia and Italy. When the two countries went to war, Ethiopia did not have any modern armaments like the Italians. They fought the Italians using backward weapons, although the Italians were equipped with modern weapons. Students with visual impairments also compete with their sighted peers in the same way. This is because they have libraries they can use, they have handouts, they can write down notes. Look! They have access to the internet. Whereas

> for us... it is the recorder that is at our disposal … if the instructor does not talk while writing on the blackboard how can we learn?

Some of the students asserted that although the materials they were provided might have helped them to prepare for examinations, they did not have equal opportunities to enrich their learning through reading additional materials such as sighted students had. They said that they did not have any reference materials in Braille or other accessible formats and little access to internet services (P3, P5, & P6):

> ... with regard to enriching what we have learned - we usually study focusing on our examinations. But lessons should be studied for the sake of developing knowledge. Thus from this perspective we do not have any additional reference materials. Other students can get additional material from the internet or by purchasing them, even if the department does not provide them (P3).

In spite of the said differences in the availability of learning resources between SVI and sighted students, one SVI claimed that they had one advantage over their sighted peers:

> … we record all the lectures and we have the opportunity to listen and re-listen to that lecture in full. Whereas sighted students can listen to the lecture only once and take fragmented lecture notes (P5).

5.6.5 Accessibility of the physical environment

Students with visual impairments also talked about the challenges they faced in relation to the physical environment which had influences on their class attendance. One of these challenges was related to the location of classrooms. In many cases the classroom buildings were far from their dormitories which made it difficult for SVI to locate their classrooms without the help of others:

> Since the classrooms are very far, there were days when we spent a lot of time trying to find them. We usually enter the classroom after the class is already started and this led to confrontation with the instructor. We also diverted students' attention (P2).

Although there were some attempts to assign SVI to classrooms on the lower floors, this did not always happen and there were cases where they were assigned to the uppermost floors. The most serious problem, however, was the change of classrooms. They did not have classes constantly in the same rooms. Courses might be scheduled to take place in different classrooms at different times, or the course instructor might change his/her classrooms for different reasons without

informing students in advance. As a result, SVI faced challenges in locating the classrooms and, if they couldn't get anybody to help them, they might even end up failing to attend the class. This happened many times:

> The difficulty with classrooms is that we do not have consistent classrooms. We move around from one classroom to the other. It would have been good if our classrooms were on the ground floor. We could then easily go from one class to the other. In this situation, however, in one class we will be in the fifth floor and in the next class we may go to the first floor. This creates a lot of problems for us (P10).

Some instructors acknowledged the existence of this problem which they claimed was caused by the shortage of classrooms. They said that instructors also sometimes changed their classes to locations that were most convenient for them (P22).

One other problem students with visual impairments complained about regarding the physical environment was related to the pathways on the university campus. They said that the way to their classrooms and other service centres was rugged and full of ditches. In some cases, they reported that they faced piles of logs, stones and gravel in the pathways. This is what the researcher also noticed during his visits to SVI dormitories for interviews. This situation, in addition to creating physical injury for certain students, made it difficult for SVI to move around without the guidance of others. Students who participated in the study alleged that if there were nobody to take them from their dormitory building, they would often fail to attend classes (P4, P12, P13 & P18).

5.6.6 Discussion

In 5.5 the major findings in relation to the learning environment of HEIs in relation to SVI were presented. In this section, these findings that revolve around five sub-themes, namely, barriers to learning, SVI dependence on sighted students, SVI strategies of learning, equality of learning opportunity to learning, and accessibility of the physical environment are discussed.

5.6.6.1 Barriers to learning

For the creation of an inclusive learning environment, educational institutions must remove barriers to learning that hamper any group of learners. The removal of those barriers is an

important precondition for the success of students with disabilities in higher education. Research into the inclusiveness of HEIs of different countries, both developed and developing, has provided evidence that students with disabilities face different barriers as a result of the institutions' lack of responsiveness to their specific needs. For example, Fuller *et al.* (2004) have identified a number of barriers students with disabilities faced in a certain UK HEI which were caused by instructors' behaviour and lack of access to sites and facilities. Studies conducted in Africa including Tugli (2013) in South Africa, Haihambo (2010) in Namibia, Moswela and Mukhopadhyay (2011) in Botswana, Tirusew *et al.* (2014) in Ethiopia and others all reported barriers related to attitudes, resources, infrastructure, psycho-social issues, and others. Results from this study also showed similar barriers SVI encountered in their learning journey as a result of the institutions' lack of proper attention and intervention to create conducive learning environments. Primarily, SVI did not receive enough support from the universities in which they are enrolled. They were not provided with much-needed resources for their learning, except a voice recorder which played a big role in minimizing their challenges. They did not have any reference materials in accessible formats. Even the handouts instructors gave them and other resources the university provided did not reach them on time. Their access to computers and internet services was limited. Above all, the hurdles they faced in recording instructors' lectures were unacceptable. Students with visual impairments also faced difficulties in dealing with the volume of the course material and the pace of the course. Considering all these barriers SVI faced, it is difficult to assume that they have had equal opportunities to learning. The truth is that many of these barriers could have been removed easily without requiring many additional resources. What was required was institutional attention and commitment.

5.6.6.2 Dependence on sighted students

The relationship and support SVI get from their peers is very crucial for their academic and social life, especially considering the fact that in most cases they are living in institutions that are located far from their immediate families. Bronfenbrenner's theory acknowledges the role of peers in the development of the individual (Bronfenbrenner & Morris 2006: 818). The findings of this study indicated that, in most of their academic-related activities, SVI depended on the assistance of other students. It was with such assistance that they were able to record their

handouts, do individual assignments, and take their examinations. This help was provided by other students either with some payment or as a result of humanitarian motives. However, many SVI were not happy about their total dependence on peer support. According to the claims of P11, if SVI were provided with enough resources, they would have, to some extent, been relieved of this dependence. They had the feeling that their institutions could have minimized this total dependence, especially considering that they sometimes did not get this support in a timely manner. A similar finding is reported by Haihambo (2010: 268) who wrote that "some students with disabilities harboured feelings of guilt to rely on their support all the time".

5.6.6.3 SVI strategies of learning

It is clear that students with visual impairments face challenges in the learning process. In their efforts to cope with these challenges, this study discovered that SVI did not follow uniform learning strategies. With regard to the strategies they followed to study their course materials, the study revealed that the majority of SVI listened to their recordings alone. In some cases, however, they discussed course material with friends. Some students described the difficulty they encountered in getting used to the new style of studying through listening to recordings rather than through Braille. They also complained that the earphones put a strain on their ears that would negatively affect learning because of the irritation. Because of this they would prefer Braille. The researcher did not come across any empirical research reporting the effect of long-term use of earphones. However it is understandable to the researcher that SVI voice such complaints, since he had similar feelings when he was engaged in transcribing his participants' interviews for long hours.

The study also found that all SVI faced serious problems in finding a convenient study space. In the reading rooms, there was a noise problem due to students recording in addition to limitation of space. In addition, the noise problem of reading rooms was associated with the absence of library attendants. As P2 describes:

> In the absence of people who monitor your study space there are always problems. For example, there are students who make or receive phone calls in the library.

Although the same problems of noise were reported in dormitories, this was the place where the majority of SVI preferred to study. Some others solved the problem by studying at night when everyone else was asleep. Therefore, arranging a convenient study space for SVI should be one of the focus areas of HEIs in their efforts to improve the support systems for these students.

5.6.6.4 Equality of opportunity to learning

Students who participated in the study where asked to reflect on whether they had opportunities to learning equal to those of their sighted peers. Considering all the challenges and problems discussed under 5.5.6 above, all SVI concluded that they did not have equal opportunities to learning. One student described the general policy as *'the survival of the fittest'* in a situation where the two groups of students were studying in different learning or educational environments. It seems that the challenges SVI had gone through to reach the level of university education had given them the strength to overcome or give little weight to the problems and challenges they faced at university, for the most part, getting on with their studies.

5.6.6.5 Accessibility of the physical environment

Different research studies conducted on the inclusivity of HEIs have reported the challenging physical environment to students with disabilities. Much of the university infrastructure was constructed with little consideration to students with physical disabilities. Research conducted in HEIs of Ethiopia by Tirusew *et al.* (2014: 44) also came up with findings related to physical facilities. The results of the present study also suggest that SVI faced a challenging physical environment which had an influence on their class attendance. As was described in 5.5.5 above, in many cases their classrooms were too far from their dormitories which, coupled with the unsafe pathways, made it difficult for students with visual impairments to move around independently. In some cases, SVI classrooms were arranged in upper floors and there was a constant change of classrooms due to the schedule or the instructors' own decisions which put the students in difficult situations. P1 describes her experience in this regard as:

> Once or twice, I went to the scheduled classroom but I couldn't find them and I went back to my dormitory.

Since the pathways are often unpaved and strewn with obstacles, there were situations where SVI tripped or fell and hurt themselves. In such a situation it is very difficult for SVI to move around without the assistance of other students. This is how P18 describes the situation:

> … the pathways are very problematic. We sometimes joke saying, 'we are not learning; rather we are making others learn'. [a laugh] This is because our problems will be a lesson to others who will follow us. You can see there are piles of stone and sand on the pathways, there are ditches here and there, etc. All these create problems in your learning ….

From this evidence, it is clear that students with visual impairments were facing many challenges due to the inaccessibility of the physical environment which necessarily has an impact on their learning. Although there is a national policy (FDRE 2011) that provides for making infrastructural adjustments to make them accessible to students with disabilities, there is still a long way to go in its implementation.

5.7 SVI experiences with assistive technology

The challenges SVI face in the learning environment due to their impairments can be minimized with the help of assistive technologies. Assistive technology refers to the software tools and hardware equipment that assist students with disabilities in their learning. It is essential that, as far as capacity and resources allow, institutions should provide necessary assistive technologies to SVI just as they provide learning resources for other students. Students with visual impairments should also be provided with training on how to make use of those technologies. Students with visual impairments in the present study recognized the role assistive technologies could play, especially in widening their opportunity to study the fields in which they were interested (P6 & P7):

> I have learned that in other countries, students with visual impairments study subjects such as biology, chemistry and mathematics with the assistance of modern technology. Here, however, the absence of such technology has prohibited students with visual impairments like myself from studying those fields (P7).

One assistive technology which both institutions provided SVI to facilitate their learning was the digital voice recorder. Students who participated in the study acknowledged the significance of this apparatus to their learning. Using this technology, they recorded class presentations and

handouts and listened to their recordings in order to study their course materials. However, as was explained earlier, the SVI faced problems in the use of this technology, the most serious of which was instructors' refusal to allow SVI to record their lectures. Of the seven class observations the researcher conducted, he saw SVI recording in only three. As P12 said:

> … the university has given us recorders. However, it did not provide us with the material we should record. The instructors are very difficult.

The traditional technology most SVI use for learning purposes is Braille. In the use of Braille at the universities in this study, however, two major problems were identified. One problem was that there was little material in Braille that was relevant to their studies (P6, P7, P8, P9 & P19). In addition, they could not convert their handouts to Braille due to the lack of an embosser machine in both universities (P7). The second problem was that many SVI, particularly those who did not come through boarding schools, did not have Braille skills (P4, P5, P6, P7 & P11). Therefore, even if there were Braille materials in those institutions, a significant number of the SVI would not have been in a position to use the materials. Little or no effort was made to train SVI in the use of Braille for those students who did not have the skill before entering university (P4). The dependence of SVI on their digital recorders also minimized their use of Braille in classes to take notes.

One technology which is of immense value for learning purposes, to both disabled and non-students with disabilities, is the computer. Computers can enable students carry out different learning tasks and access various learning resources. In both universities, computer rooms were set up for the service of students with disabilities. However, SVI made little use of these facilities for various reasons:

- One problem was that the number of computers was very small for the number of users (P4, P6 & P18). Many SVI claimed that all the computers were usually occupied by others. Due to this they stopped going.
- Many SVI did not have sufficient computer skills (P1, P3, P5, P6, P7, P9, P11, P12, P13, P15 & P18). In U1, training in computer skills was given only in the second year and this training was considered by all SVI to be ineffective. They claimed that they should have

been provided with continuous support and follow-up in order to be in a position to use computers more confidently (P1, P4, P6 & P12). In addition, as one student stated:

> We were trained by a person who had little knowledge about students with visual impairments. We usually use the keyboard and the method the trainer used was not suitable for us. He uses a mouse and it is difficult for him to use keyboard. Therefore, since the method he used was not suitable, it is difficult to say that we got training (P6).

Additional points made by SVI about the inadequate support for computer use were the following:

- There is nobody around to fix the computers when they had a problem or they were attacked by a virus.
- Most of them were not loaded with JAWS software without which SVI could do nothing (P9).
- Internet access is very limited.
- There is no softcopy material to read with the help of computers (P1).
- Students with other types of disabilities share the same computer facilities with SVI. This created some additional problems for SVI since, in addition to minimizing SVI chance of finding a free computer, students with other disabilities sometimes delete the JAWS software.

In addition to the limited access to internet services, some of the SVI in both institutions lacked the skills to use the internet (P11). On the other hand, there were certain SVI who used their mobile phones to access the internet by installing the JAWS software on them. They also used their mobile phones to study their course material (P2).

5.7.1 Discussion

Assistive technologies play an important role in minimizing the challenges SVI face in the learning environment and in helping them to learn even in curriculum areas which previously seemed to be inaccessible to them. Although modern technology is playing an important role in facilitating education for all students, Stodden (n.d.) asserts that it is even more beneficial to students with disabilities. Siew (2002: 17) emphasises that for students with visual impairments,

assistive technology is "more than an educational tool" and adds that it is a "fundamental work tool". As described in Chapter Two, various scholars (Burgstahler 2002, cited in Stodden n.d.: 11; Sloan, Stone & Stratford 2006: 130) have described the different benefits of assistive technology for students with disabilities. The present research found that the only assistive technology which was intensively used by all SVI in the study was the digital voice recorder. Students with visual impairments did not make much use of Braille due to the absence of reading materials in Braille and some students' lack of Braille skills. There was also an indication that SVI dependence on their digital recorders minimized their use of Braille.

Students with visual impairments' use of computers was also limited due to the lack of totally disproportionate number of computers with appropriate software. In addition, the computer skills SVI possess prevented them from becoming effective users. Studies in different contexts have come up with the similar finding of students with disabilities' lack of skills to enable them to use assistive technologies (Hanafin *et al.* 2006: 441; Marshak *et al.* 2010: 168). This affirms the argument of The World Bank (2002: 15) described in the literature chapter that if necessary arrangements are not made to make it accessible for all students, ICT can further disadvantage students with disabilities. Therefore, if SVI are to make effective use of the ICT facilities they are provided, institutions have to make sure that these students have the skills by organizing adequate training. According to the words of Asuncion *et al. (*2004, in Konur 2007: 207):

> Failing to proactively address the accessibility of the technologies has consequences that affect the ability of many students with disabilities to take full advantage and to participate in the same learning opportunities as their non-disabled peers.

5.8 SVI use of library services

Libraries play a critical role in the academic lives of students. The two universities in this study had established libraries for their different colleges. They also had reading rooms with computer facilities that were supposed to serve SVI. In U1 there were rooms allocated for SVI in three of the libraries. The room for SVI located in the social science library was near the dormitory where most SVI lived and was more frequented. This room had computers specifically for SVI. The other two libraries were less frequented by students due to distance from the dormitory, lack

of chairs, and the inconvenient location of the rooms where they have to cross the main library hall to reach the reading room.

In U2 also there were two reading rooms for SVI. One is a reading room specifically allocated to SVI in the School of Law separate from the main library. The other room is located at the social science library that served all SVI and other students with disabilities outside law. In the law school reading room there were two working computers with JAWS software installed; similarly, there were 12 functioning computers in the social science library reading room. In both rooms, the researcher confirmed that there were library attendants.

Students who participated in the study were asked to describe their experience with the library services in terms of the frequency and purposes of their visits. Many of them said that they rarely visited the library. At the time of the researcher's visit to these facilities, there were two SVI in the law school reading room of U2 using the available computers, and in the reading room of social science library there was one SVI in the computer lab and another in the reading room. In U1 there were only two SVI at the reading room located at the social science library– one listening to his recordings and the other browsing the internet.

The students raised multiple problems as reasons for not visiting the reading rooms. The only purpose for which most of the SVI went to the reading room was to record their handouts:

> I mostly use the library to record. I have one student who reads for me, so when there is the need for recording I go there (P6).
>
> Since there are not sufficient books, these rooms are changed into recording rooms (P8).
>
> It is only when I want to record that I go there. Otherwise I do not use the library (P9).

There were students who claimed that they preferred to listen to their recordings in the reading room since it is quieter. But many of the SVI said that the reading room was not appropriate even for listening purposes (P8). Two major factors were mentioned that contributed to this. One was that the reading rooms primarily served for recording purposes and it became impossible to study there while others were recording. The second problem raised by students of U1 was that there was no attendant to maintain order in the reading room. As one student from U1 claimed:

> Out of the existing 38 students with visual impairments, it is only two or three people that visit the library. The rest, they study in their dorms (P18).

Still some other students went to the library for computer-related activities such as when they were given a task that required computer facilities (P2), when they wanted to practice their computer skills (P11), or when they wanted to use the internet (P13).

The reading rooms did not possess any worthwhile material in Braille. Whatever Braille material existed had minimal or no relevance to their courses. Most of it was said to be related to religion or fiction which came through donations. The researcher confirmed these claims. The following interviews from SVI at each institution describe the situation:

> Library – library- it is easier to say there is no library. A library should contain books. A library without books is like a dorm. There is a serious problem. There area very limited number of books. To your wonder there is a Bible in an institution that preaches secularism. That is because it is easy to get. The foreigners gave it without any problem. The possibility of getting other relevant books is very small. There are a few law books which were brought a long time ago, although there is word that new books have also recently been printed. So the library is empty. Just fiction.... There is not even a single book that is relevant to our field of study (P4).

> I think a library is a place where you go to read books. Here there is no book in the library that we can use. I remember there was one book that we used for the course in communication. In some cases, some of the volumes are missing and we do not know where they have gone. It is only in order to claim that we have a library, otherwise we only have the building. The only books in Braille are very old ... and of no relevance to our studies (P18).

Some students reported that they preferred to use the library for sighted students rather than the one reserved for SVI. This was particularly reported in U2 where these SVI claimed to have borrowed print books to have read by and discuss with their sighted friends (P15 & P19). A visit to the main social science library at U2 made the researcher aware that students with visual impairments sometimes visited the library with their sighted peers so that they could read periodicals and books together. He was also informed that SVI can borrow books from this library.

The only field of study where some Braille materials were available was law. Especially in U2, the researcher affirmed through observation that the reading room of students with visual impairments had code books in Braille.

Another problem in relation to library services was that in both universities there was no digital library that could provide satisfactory service to SVI. For a digital library to function, there should be enough computers with appropriate software and digital or softcopy materials. The computer labs of both institutions, however, were found to be short of these facilities. The number of available computers was not in proportion with the number of users. As a result, it was futile for a SVI to go to library since computers were usually occupied. The fact that SVI shared the computer labs with students with other types of impairments posed additional problems. In addition to increasing the competition to share the limited resources, some students with visual impairments claimed that the other students deleted the JAWS software from the computers:

> There is a computer room we share with students that have other types of disabilities. This room cannot accommodate 60-70 students (P15).
>
> Even when you want to use computers, you will find them occupied by other students who went earlier. So the only option you have is to use the recorder (P17).

In U1 those computers with JAWS software installed were reported to be limited in number:

> … our computers are not loaded with JAWS software. We have to depend on other students to write our assignments. Most of the computers are not loaded. There are 12 computers with only three of them are loaded with JAWS. You can imagine how three computers will serve over 80 students (P9).

At the time when the data were collected, the U1 was organizing a computer lab with more computers with JAWS software installed.

Most importantly, however, these libraries did not have any digital materials that SVI could use. It was only in rare cases that their instructors provided them with such resources. Some SVI were not skilled enough to use computers and there was nobody around to help them (P6). There was also no person around to maintain the computers. As a result, only a few of these students got proper service from the computer lab.

One last problem students of U1 raised was in relation to the location of the libraries or reading rooms. These rooms were located in the basement of buildings and some SVI claimed that they didn't feel comfort to stay there for long hours due to shortage of air. As a result, it was not inviting and SVI did not use them frequently (P1). Secondly, in the other library where the reading room was located, SVI had to go across the main library hall that other students were using. This disturbs other students when SVI use their canes and this also discouraged SVI from using the reading rooms (P16). Similarly, students of U2 who participated in the study raised a problem in relation to the cleanliness of three very narrow rooms that were primarily used for recording purposes. These rooms had initially served as toilets and they still smelled although the drains were sealed. The researcher confirmed this situation. These problems have contributed to students with visual impairments lack of interest in using the libraries.

5.8.1 Discussion

According to the bio-ecological systems theory, the *micro-system* is a layer of experience in which the developing person will be engaged in sustained "interactions not only with persons but also with objects and symbols" (Bronfenbrenner & Morris 2006: 815). For such purposes, identified long before this theory was posited, educational institutions have libraries and other resource centres that students are supposed to regularly visit in order to enrich their learning. With regard to students with visual impairments and students with disabilities in general, institutions are required to remove all barriers that might hinder them from using the libraries. This includes, among other things: arranging accessible space, providing reading materials in accessible formats, providing enough facilities, and assigning attendants to be available to help students use the libraries.

The findings of the study revealed that the majority of SVI rarely visited their libraries or reading rooms. Their main purpose in going to the reading room was to record their handouts. A few of them visited the reading room to listen to their recordings since it is a quieter place. The experience of P4 confirms this notion:

> I go to the library to read with full concentration like all other students. I go there with my recorder to listen and not for anything else.

The major reason why SVI distance themselves from the library was the absence of reading materials in Braille or other accessible formats. It was only in the field of law that any worthwhile Braille materials were found. The literature reviewed in Chapter 2 also attests that many libraries are not organized in such a way that they would meet the needs of students with disabilities (Athanasios *et al.* n.d; Holloway 2001: 402-03).

Some students with visual impairments also went to the library to do computer-related activities. But this also was limited due to the small number of computers, the absence of digital resources, and some students' deficiency in computer skills. This is reflected in the response of P1 to the researcher's query about why he stopped practicing his computer skills:

> Well! There are not enough computers. There is not also any softcopy material.

It is urgent, therefore, for HEIs to either arrange reading rooms with relevant resources for SVI in the libraries of the colleges where they are enrolled, or provide one reading room big enough to accommodate all SVI with an attendant present. In addition, there should be separate rooms for recording purposes if the reading rooms are to serve their purposes for SVI.

There should also be enough computers with appropriate software and digital resources and someone who can assist SVI when they are in need of help. This is also what Roy (2003: 45) suggests to HEIs, stating that libraries and other study centres should be equipped with computers with appropriate software and that there should also be well-trained support staff that can provide necessary support. It is only if these conditions are taken care of that we can talk about the presence of library services for SVI and these students are served equally with all other students.

5.9 SVI experiences with assessment practices

The assessment tasks that instructors provide to their students could be formative (or continuous) designed to provide feedback and enrich students' learning; they could also be summative to determine students' knowledge, skills and attitudes and contribute to their final grades. A close examination of the assessment policies of different HEIs worldwide shows that there are various strategies that can be used to make assessment practices fair and appropriate to SVI (Clapper *et*

al. 2005; Cortiella 2005; Craddock & Mathias 2009; Luke & Schwartz 2007; Waterfield & West 2005). These include the change of assessment circumstances, the modification of the assessment tasks, and the use of alternative assessment (Sheffield Hallam University 2003). Instructors and department/school heads who participated in the present study were asked about the existence of an assessment policy in relation to SVI as well as their efforts of making their assessment activities accessible to SVI. This inquiry provided evidence that, in both institutions where the study took place, there was no policy to guide instructors in making their assessment practices inclusive. Aside from some disorganized and insignificant attempts on the part of some instructors and departments, there was no uniform and well-organized practice of assessing SVI in a fair way. The most commonly referred to assessment activities mentioned in the interviews were assignments and tests. This is examined below.

5.9.1 Assignments

Assignments were reported to be commonly used as continuous assessment by all instructors of both universities in the study. Assignments were given to students to be worked on in groups as well as individually. In group assignments, SVI did not face serious challenges. What instructors commonly did to accommodate SVI needs was, give them freedom to join the group that they preferred (P25, P31, P34 & P35). In these group tasks, both instructors and the students themselves claimed that SVI actively participated in the contribution of ideas:

> When we give them group assignments, they are grouped with sighted peers and they do not face any serious problems since they just contribute ideas. They participate in discussions and there are students who write and organize what is discussed. We do not group students with visual impairments together since they face a problem in writing. Otherwise they are active in discussions and generating ideas (P25).

One study participant, however, stated that there were obstacles that hindered them from actively participating in such group activities. One of the problems he mentioned was the distance between the dormitories of SVI, which limited their interaction with their sighted friends. The other was, that sighted students usually failed to consider them when working on the group assignment (P5).

When there were class presentations of the group assignments, SVI participated in presenting (P20 & P21). It is when the assignments are individual that SVI faced serious challenges. In

these cases, they totally depended on the assistance of other students to do their assignments. As one research participant succinctly put it:

> … we look for other person's assistance to do our assignments which is very difficult to get (P6).

Among the challenges SVI faced in doing their assignments, the following are noteworthy:

- They did not have references in Braille to do their assignments.
- There was limited internet access and some of them had no skill to use the internet.
- There was no support system to enable them to collect information outside the university campus.
- They found it difficult to write their assignments, especially when extensive writing was required.

The strategies instructors used to solve or minimize the challenges SVI faced in doing their individual assignments differed. Strategies can be summarized as follows:

- making SVI do the individual assignments in groups (P5 & P24);
- making them do only one assignment in situations where two or more individual assignments are given (P15);
- exempting SVI from doing individual assignments and converting their test results as a compensation (P15);
- helping SVI choose topics that they can easily manage when there is a term paper type of assignment (P22);
- making sure that there are references for the questions SVI are assigned to do (P26); and
- giving SVI assignment questions that were of less complexity than those given to other students (P26 & P27).

In spite of these reported attempts to accommodate SVI needs, there were still some students with visual impairments who gave evidence of the challenges they faced in doing assignments:

> It is in doing assignments that we face the most serious challenge. If you do not have a good friend you are in trouble. I am fortunate that I have many good friends. But I see

> other students with visual impairments who face a lot of problems. It is very problematic to write an assignment of 15 to 20 pages. If it is a group assignment, I will contribute my own part and there is no problem. In individual assignments, however, instructors do not consider your challenge. They evaluate your work in a similar manner as they do for other students (P17).
>
> Assignments are very problematic. You may not get an assistant. Most of our resources are from the internet and we do not have computer access. There are a few computers but they are not sufficient enough for all of us. Even if we had computers, we do not have sufficient skills to use them well (P6).

SVI also identified the pressures created on them as a result of the multiple assignments they were required to do at one time (P2, P3, P9 & P27):

> … the assignments given are too many which is a problem for students with visual impairments. ... We have to depend on other students to write our assignments for us (P9).

Although some SVI said that they did not have any problems in finishing their assignments on time (P4 & P10), there were others who complained about time shortages. Instructors did not give them any extra time to submit their assignments, although there might be some who allowed them one or two extra days (P2, P5 & P15):

> There are some instructors who do not understand your problems even when you tell them. For example, when they give you an assignment, it takes us a lot of time to do the assignment and be ready for the presentation, if there is a presentation. We have to get the support of others to write it, and then we have to copy it into Braille. All this requires a lot of time. There are some instructors who do not understand this problem. They tell you to do the assignment within the time range given to other students. On the other hand, there are many instructors who consider our problems and give us additional time to complete our assignments (P15).

5.9.2 Examination

The most serious assessment challenges SVI experienced were related to examination. These problems were concerned with examination format, examination venue, examination time, support of scribes, and behaviour of invigilators.

Examination formats: Examination is one important curriculum element where students with visual impairments need accommodations. Most of the instructors interviewed said that they did not use any different strategy to test SVI. It appears that they had no knowledge about alternative

strategies that can be used for SVI. They had the opinion that the strategies that were used for sighted students could also work with SVI, as long as there was no visual material or mathematical manipulations in the test items. Two of the instructors who were participants in this study made the following points:

> We do not prepare any special assessment procedures that consider students with visual impairments. We usually use continuous assessment that includes tests. I do not think that these are accommodative to students with visual impairments, but I think they do not create any serious problems either (P22).

> If there were other alternative means I am not aware of them or I am not informed (P25).

On the other hand, SVI themselves expressed their discontent about the existing system of examination administration. They were especially troubled when the examination items were of essay type (P3, P9 & P13). As one of the students put it:

> When the examination includes questions that require writing, you face problems. Your assistants may not write your answers accurately. There may be wrong spelling. Then the instructor may consider it wrong. If you try to tell him your intention, he will tell you that he corrects the papers based on what is written and not on our intentions. Of course they are right. Something has to be done to address our problems (P13).

With regard to the question of how this situation could be improved, SVI couldn't come up with any conclusive suggestions considering some other problems. For example, presenting the questions and giving the answers in Braille format would not be feasible since there were SVI who did not have Braille skills and instructors who could not handle Braille answers. In many countries, examinations are administered using computers to tackle the problems SVI face, which one research participant (P5) also suggested. Another research participant (P17), however, argued that this was not feasible due to the absence of well established computer system in his university as well as the students' lack of enough computer skills.

Regardless of instructors' opinions or students' suggestions, there were certain practices in both universities used to accommodate students with visual impairments. One of these was to substitute essay test items with objective items. In some cases, SVI were exempted from the subjective questions without giving them questions in other formats as a substitution. Similarly,

there were situations where SVI were exempted from test items that required sight or involved mathematical manipulations.

On the contrary, there were certain instructors who seemed to have good knowledge of assessment principles and followed more appropriate strategies to address SVI needs (P23, P24 & P35). The following excerpt from an interview with an instructor illuminates this:

> The assessment I use, although the content is similar, sometimes the way it is presented might be different. I might ask the sighted students to observe visual material and write about it; at this time the scribe might fail to clearly describe the visual material to students with visual impairments in a way that they can have a mental image. Therefore, I prepare a question with a similar content but in a different way. The learning objective will be the same but the questions will be different for both groups of two students (P23).

Examination venue: Students with visual impairments sometimes had to take their examinations outside in corridors, while sighted students took their examinations in the classroom. There was a lot of noise and movement of people outside in the corridors. Sometimes there were problems such as sunshine, wind and rain. Only one department in U2 arranged SVI to take their examinations in offices having realized the problems they faced when taking examinations outside (P11). The following excerpts from interviews with students illuminate this situation:

> We take our examinations in corridors. We may be exposed to sunshine or maybe a lot of noise. We lose focus. Most of the time, other students have to be told to go away from where we take the examination (P1).

> For instance, one day when my scribe was reading the examination question for me I couldn't clearly hear what she was saying because of the shouting and I had to put my ear closer to her mouth to clearly hear what she was saying. We take examinations in a totally noisy situation (P3).

> … you can imagine how disturbing it will be when students are moving up and down the stairs. The place isn't quiet. For one thing, we are disturbing the students in the classroom while our assistants read the questions loudly. In addition, we are being disturbed from the sounds outside (P11).

> Well our problems are endless. We have a problem of examination place. While other students take their examinations in classrooms, we sit outside the classroom facing the wind, sunshine and also the noise of students. It is in such a situation in which we take our examinations (P12).

> While other students take their examinations in classrooms, we are made to take our examinations in corridors. Students passing by the corridor create a nuisance. There are some students who even try to read your examinations while you are seated there working on the examination. There are students who do not listen to your pleas (P18).

Examination time: Examination time refers to the time when an examination is administered and the time allotted to finish the examination. In both cases, SVI expressed some difficulties caused by their instructors and departments. They said that their examinations should be scheduled at a time when they could get scribes and when there would be little noise to disturb them, which they claimed was not the case in many situations (P3, P6, P7, P9 & P16). In addition, instructors' failure to start their examinations at the scheduled time was reported as a problem by certain SVI. This was especially true in short tests (P5 & P16). In the interview conducted with P5, these problems were clearly expressed:

> Instructors fail to start the examination at the scheduled time. They inform you that it will start at 4:00 and they actually come at 4:30. You come with your scribes who also have their courses to deal with. Although they do the task for payment, making them idly seat with you is something that makes you feel bad. ... I do not have a problem if I wait since it is my examination. Another problem is that some instructors arrange the examination during morning time. At this time most of the students have classes and as a result we may not get a scribe. They prefer their classes to the money they are paid. Instructors do not consider this situation. So it would be good if instructors arranged their examinations in the afternoons (P5).

> Our assistant [scribe] might have a class during the time when we also have a class. Cooperative instructors schedule their examinations at a time when we can get assistants. On the other hand there are instructors who give tests when we can't get assistants and only at a time when it is suitable for them. Even if we ask them to change the examination time, explaining our problems, they just tell us that it is not their concern. So we go through a lot of problems to find someone who can assist us. So there are situations in which we face these kinds of problems (P7).

Many students with visual impairments stated that there were some improvements with regard to this problem. They said that many of their instructors now understood their challenges and, as a result, negotiated with them about the appropriate time for giving their tests (P5 & P7):

> One other problem in examinations is the time it is administered. ... Instructors most of the time give us examinations in the mornings and at this time we can't get assistants. ….These days however, instructors understand our problems and arrange our examination time in the afternoons (P9).

This was something the researcher has also confirmed from the interviews with instructors (P22 & P24) and department/school heads (P31 & P32). In addition, in two of his class observations, the researcher encountered a situation where the instructors asked students for convenient time to give tests.

The data collected from students who participated in the study also revealed that they faced a shortage of time in taking examinations. They argued that the time a SVI takes to do an examination is not the same as the time it takes for a sighted student. In many situations they were not given any additional time. As a result, they were forced to submit their papers without completing their work; even if they completed it, it was done in a hurry without sufficient concentration which would negatively affect their performance. As P8 described:

> It takes you a lot of time to have the questions read by another person, then understand the question, and then organize your ideas and tell your ideas to the scribe to be written on the examination paper. We think over the answer, and tell our scribe. We spend a lot of time dictating words. It is very difficult. In addition, the scribe may not be fast enough in writing or he might ask you for correct spelling (P8).

P17 also describes the situation in a similar way:

> Our assistant reads the questions, then we analyze the questions and then dictate the answers to the assistant which takes us more time than the sighted students. We are not given any additional time. Let alone to giving us extra time, they will take our papers before time if the sighted students finish earlier. They sometimes take our papers while there are about 20 or 30 minutes remaining (P17).

International experience shows that, as one positive accommodation strategy, SVI can be given additional time to complete their examinations. In the two institutions where this study was conducted, there were certain instances of giving extra time. An inquiry about the basis of this practice showed that in both institutions there was a general understanding among both students and instructors that extra time was allowed for SVI. It was also found that at U1 the decision was made at university level and all concerned bodies were part of the decision:

> Previously, students with visual impairments were supposed to finish their examinations within the allotted time for all students. Actually, they came with a request and at a university level they were given up to 20 minutes extra. This was done after the Academic Vice President called all leaders up to school level to discuss the issue and decided that they should be given that extra time (P30).

At U2, the decision was made at college levels and communicated to departments:

> It is official but it isn't binding. We have approved it at College Council and circulated it to the departments. But in order to be binding it should be endorsed in the University system. This did not happen and it is one of our problems (P40).

In both institutions, therefore, there was no official policy that provided for such an accommodation and made instructors accountable for failing to provide extra time. Some instructors and even department heads and college deans seemed to have little knowledge about such decisions:

> Whether this is decided by the faculty, or whether it is simply what individual instructors do on their own, I do not have any idea but we just do it. It is well known among us (P28).

> … there is a tendency to add 20 minutes. If an instructor is asked where he has got this from, he will not have any answer. I do not have any knowledge about the existence of any law that provides for extra time (P36).

> I am just hearing it from you that they are given 20 minutes of additional time. I have no knowledge of it. It means that there are instructors who do this normally (P39).

In the absence of an official policy, it is difficult to imagine that the decisions to give SVI extra time in examinations would be effectively implemented and instructors made accountable for failing to implement those decisions without an official policy. Due to this, SVI complained that many instructors did not give them any additional time in examinations. Therefore, the implementation of extra time in examinations depended on the goodwill of individual instructors. As one student put it:

> Actually not all instructors give this extra time. There are instructors who just give some more minutes considering that you cannot do your examination with an equal speed without even knowing that this extra time is going to be allowed. There are also instructors, especially in other departments, who do not give any extra time (P8).

Some instructors confirmed that they did not give SVI any extra time:

> …whether it is my examination or the examination of other instructors, if the given time is over, it is over for everybody (P26).

Another instructor described his experience of allowing SVI some extra minutes in the following way:

> What I do is first I settle the students with visual impairments in their examination venue and then go to the other students. Until I do with the other students [arrange their seats and distribute question papers], students with visual impairments will get some additional time. That will be an advantage. Finally also, I first collect the papers of the sighted students and then go to the students with visual impairments and if they still couldn't finish I give them some more minutes and overall they may have an extra time of about fifteen minutes. So this situation totally rests on individual instructors (P27).

Experiences with scribes: As things presently exist in the two universities in the study, the assistance scribes provide to SVI in doing their examinations is indispensable. However, some SVI described negative experiences in their relationship with the scribes. First, it was not easy for SVI to get scribes. Secondly, scribes sometimes did not clearly read the questions or write the responses. Sometimes their handwriting was not legible which would affect the SVI evaluation results. Thirdly, there was misconception on the part of instructors that scribes help SVI in answering the examination questions. This often led to conflict, with SVI feelings being seriously affected. Fourth, some scribes considered their role was to help SVI and interfered with their examination answers. The following excerpts of interviews are evidence of the problems SVI encountered when doing their examinations with the assistance of scribes:

> It is not easy to get scribes. We have to wait for some time until our scribes come. There are times when a portion of our examination time is wasted (P2).

> … some scribes may not accurately read the examination question (P3).

> It would have been very convenient for us if we could write our answers on our material without any nervousness. When we are dictating our answers, sometimes our ideas are not accurately written. Wrongly written words may distort our ideas. If it had been by our own, we could have accurately expressed our ideas (P3).

> Sometimes there are questions that require the use of some technical terms which the scribe does not know. Therefore, you will have to dictate such words which consumes a lot of time (P5).

> We have to bring [scribes] from other departments. They do not have any knowledge about the concepts we tell them. Let alone knowing how to spell these concepts correctly, they may not write concepts that are similar to the actual words I dictate. Again I spend a lot of time dictating the spelling of the concepts (P8).

> We have to search and come with our assistants. If we fail to do so nobody is going to help us. This is a very difficult task. Sometimes students may be in classes or they may have their own examinations. We have to go through a lot of difficulties to get one. If our assistant has taken the course or any similar course in earlier semesters they will be rejected. In such a situation we either have to search for another assistant or we fail to take the examination (P10).
>
> What makes me dislike the university is because of assistants. There is suspicion that the assistants help us in answering the examination questions. I would have been very happy if I could avoid their help and do my examination by myself. ... Sometimes when they read you the question and they feel that they know the answer, they also tell you that your answer is not correct. If you are not very confident of your answer you get confused and may be moved by his suggestion (P18).
>
> … one day I took a law student as an assistant. But the instructor rejected my assistant saying that law students couldn't be assistants for civics students. ... I countered saying that I was there to handle my own examination, and not to depend on others' minds. As a result we reached a point of conflict. He refused to allow me to take my examination until the final 10 minutes when I was allowed to take my examination with the instructor standing over me to closely supervise (P15).

Examination invigilator behaviour: Many students with visual impairments complained about the unethical and rude behaviour of some examination invigilators. They asserted that this behaviour seriously affected their feelings and even their academic performance. SVI expressed their experiences with the invigilators in different ways such as the following:

> We were taking the examination outside the classroom. Finally the instructor collected students' papers and went to his office leaving me and my assistant behind. Then because there was heavy rain I couldn't go to the office immediately. When we went the instructor refused to accept my paper saying that other students have worked on the examination for me (P1).
>
> Instructors do not want to remain behind invigilating students with visual impairments. So they tell you to be quick and if an instructor tells you to work quicker, you will get upset (P4).
>
> … when one day I was preparing to take an examination I had an assistant from the Accounting Department who was holding a piece of paper. ... The instructor while passing by with the examination papers asked me if the student on my side was the one who was going to read the examination paper for me. When I said yes he told him to go away because of the paper he was holding. But the paper had nothing written on it. In spite of this the instructor still refused to let the student assist me. When I asked him what I should do, he said that it was not his problem. ... Then he himself assigned another student who could barely read. He was a student of Chinese language. ... My assistant

was very poor in his language. He couldn't even correctly pronounce the letters. So with this type of assistant the questions were read to me and my final result was far below my expectations (P13).

5.9.3 Discussion

In this sub-section, findings related to assessment strategies in use, SVI experiences in assignments and examinations and accommodation strategies employed by instructors will be discussed.

5.9.3.1 Assessment strategies

As discussed in the literature chapter, different scholars have emphasized the importance of assessment in the teaching and learning process by playing a role in enhancing students' learning as well as evaluating their level of performance. Tennant *et al.* (2010: 93), for example, have argued that "assessment is a significant lever for change and improvement in students' learning experiences in higher education". Instructors employ different strategies to assess students' learning. There are informal mechanisms such as observations and oral questions used during every session to check students' understanding. There are also more formal strategies like quizzes and final examinations that usually contribute to students' final grades.

The literature chapter of this study summarized evidence that assessment tasks enable instructors to collect meaningful information that will help inform instructional decisions, promote student engagement, and improve student learning. For this to happen, they should follow certain principles, one of which is fairness. According to this principle, assessment needs to provide opportunities for every student to demonstrate what he/she knows, understands and can do. There shouldn't be students that are advantaged or disadvantaged by differences that are not relevant to the knowledge, skills and understandings that the assessment is intended to address. This principle makes it clear that institutions and instructors should make every possible care not to disadvantage SVI in their assessment systems because of their impairment (Shepherd 2006: 50).

Institutions and educators have developed guidelines that help in the use of assessment strategies that are accessible to students with disabilities. In the literature chapter, for example, Salisbury

(2008: 40-41) describes four strategies that could be considered in summative assessments for SVI including modifying assessments, others' support, time allowances, and alternative assessments. An investigation into the assessment system of the two institutions in this study revealed that they did not have any policy that guides instructors to make their assessment practices inclusive. As a result, there was no uniform and well organized practice of assessing SVI in a fair way across all concerned departments and schools as well as across all instructors. The most common assessment strategies (both formative and summative) employed were limited to assignments and tests. The general lack of policy about inclusive assessment practices in the two universities is in accordance with the conclusion reached by Nicole and Macfarlane-Dick (2006: 215), who claim that the changes in formative assessment and feedback in higher education lag behind the shift in the conceptions of learning and teaching.

5.9.3.2 Assignment

In the two universities, many instructors tried to accommodate SVI needs in group assignment by giving them the freedom to join a group they preferred. Individual assignments were found to be very challenging for SVI and as a result they totally depended on the assistance of other students. The majority of instructors used any one of the following strategies to solve or minimize the challenges: making SVI do the individual assignment in groups (P5 & P24); reducing the number of assignments for SVI (P15); exempting SVI from doing individual assignments (P15); helping SVI choose topics that they can easily manage (P22); making sure that there were references for the questions SVI are assigned to do (P26); and giving SVI assignment questions that were of a lower complexity level (P26 & P27). Many scholars (Hadjikakou & Hartas 2008: 111; Madriaga *et al.* 2010: 651-52; Roy 2003: 44-45) agree that students with disabilities need more time to finish learning tasks such as projects and assignments. This was confirmed by some of the research participants in this study. In spite of this, it was found that SVI usually were not given any additional time to do their assignments although there were some instructors who tolerated them for one or two days after the deadline for submission.

5.9.3.3 Examination

The major examination-related challenges students with visual impairments experienced were concerned with examination format, examination venue, examination time, support of scribes and behaviour of invigilators.

Examination formats: In many Western universities, SVI are tested using alternative formats that enable them to respond independently without the support of scribes. This could solve many of the problems associated with the use of scribes discussed earlier. This is also what Burgstahler (2002, cited in Stodden n.d.: 11) refers to when he discusses the advantage of modern technology in maximizing students' with disabilities independence in academic tasks. In the institutions where this study was conducted, however, there was no knowledge about alternative assessment strategies on the part of many instructors. In spite of this, there were certain practices in both universities used to accommodate SVI. In some cases, instructors used objective test items for SVI as a substitute for essay test questions. In other cases, SVI were simply exempted from the subjective questions without any substitutions. Sometimes SVI were exempted from test items that required sight or if they involved mathematical manipulations. Haihambo's study in HEIs of Namibia came up with a similar finding that instructors exempted students with disabilities from certain challenging tasks due to their lack of knowledge and skills about how to design alternative assessment procedures. Sometimes they were simply given class-average grades. Haihambo asserted that this practice was offensive to certain students with disabilities (Haihambo 2010: 380). On the other hand, there were instructors who followed more appropriate testing strategies to address SVI' needs, by designing more suitable test items for the same learning objectives.

Examination venue: In most cases, SVI in the present study took their examinations in venues that were not appropriate for this purpose. This finding supports the idea mentioned in literature that some of the problems that students with disabilities face concerning assessment are caused by the environment where the assessment takes place (Hanafin *et al*. 2007: 439).

Examination time: The study also revealed that SVI had some complaints with regard to examination time. Although there were many instructors who scheduled their examinations at a

time when SVI could get scribes and when there would be little noise to disturb them, some instructors gave little heed to SVI problems.

More importantly, however, students with visual impairments suffered from shortage of time while taking examinations. Although giving additional time is one accommodation strategy practiced worldwide (Salisbury 2008: 40-41; Wolanin & Steele 2004: 38-39), in the universities of this research, decisions were made by individual institutions or instructors and, in many situations, SVI were not allowed additional time. This was caused by the lack of an official policy that makes instructors accountable for failing to provide extra time. Some instructors and even department heads and college deans seemed to have little knowledge about the decisions instructors were making for giving SVI additional time (or not) in examinations. Some instructors considered giving extra time in examinations as contrary to assessment principles. This demonstrates their limitations of awareness in relation to the type of accommodations SVI required and were entitled to. It is also a limitation in instructors' pedagogical knowledge, for one of the principles of educational assessment is fairness. Therefore, the implementation of extra time in examinations depended on the goodwill of individual instructors.

Experience with scribes: This research has found that the only mechanism through which SVI take their examinations is through the assistance of scribes. The literature reviewed also supported this mechanism as one strategy of accommodating SVI in assessment activities. In spite of the crucial role scribes played in SVI assessment, however, there were certain problems SVI faced in this regard. Many SVI found it very difficult to get scribes. Their instructors often did not understand the problem. Secondly, scribes had a problem of clearly reading the examination questions and correctly writing the SVI responses. There is also a general misconception that scribes help SVI in answering the examination questions.

Invigilator behaviour: The unethical and rude behaviour of some examination invigilators seriously affected SVI feelings which had a backwash effect on their academic performance. In general, assessment creates anxiety for all students, but research has revealed that the modes of assessment used in HEIs were most restrictive for students with disabilities (Blundell 2010; Vickerman & Blundell 2010: 28). There is also a lot of research that reports about the lack of improvements in making assessment practices accessible to students with disabilities (Fuller *et*

al. 2008; Healey *et al.* 2006: 40; Vickerman & Blundell 2010: 28). Therefore, it is time for HEIs in Ethiopia to give due attention to the challenges SVI face in assessment activities and consider ways of changing the situation.

5.10 Administrative support

The type of experiences students with visual impairments had in their universities would be, to a large extent, determined by the level of support they get from the institutions. This support could be given in different ways: developing a legal framework that guides the support, making the SVI issue a big item agenda in management discussions, and providing adequate material, financial and human resources.

5.10.1 Legal framework

International experiences tell us that, for the effective provision of support to students with disabilities, institutions should have policies and specific guidelines for their operations. The Higher Education Proclamation of Ethiopia (2009) includes an article on students with disabilities with four general provisions on the accommodations to be in place in HEIs. Therefore, it is the responsibility of universities to develop policies and strategies that guide their support systems. In spite of this, there were no disability policies or any specific guidelines in the two institutions where this study was conducted. The existing support system was based on spontaneous decisions made at different levels of the universities' hierarchy. As one research participant explained:

> If there were such policies, a lot of things could be fixed. …. If there were such policies we could be better be guided. It would make everyone in the leadership of the university to act in a responsible way (P31).

The interviews conducted with instructors and educational managers revealed that some of them did not have knowledge about decisions made by the university regarding the accommodations to be provided to SVI. This implies that the departments/schools and colleges did not communicate these decisions to their members. In such a situation, it is very difficult to implement an effective support system to SVI. Nor would there be accountability for failing to implement those decisions when they were not known by those who were supposed to implement

them. As a result of this situation, the word 'goodwill' was repeatedly mentioned by many interviewees to indicate the basis of whatever support instructors provided. As a result, the accommodation strategies used differed from one instructor to another, and within the different departments/schools:

> Most of the support we get is when we ask for it. There is no rule that facilitates the support we should get. Everything depends on the awareness and goodwill of the person who is assigned as head of an office. If that person has limited awareness about physical impairment, he cannot provide support fully. If there had been any rule, we could have claimed for our rights, but in the absence of such a law, whatever support is provided is by the goodwill of those persons who hold the position (P6).

One research participant preferred the word 'accepted norms' rather than 'goodwill' as a basis for the existing academic support system. He alleged that there were norms respected by the majority of instructors in relation to issues such as timing of examinations, giving handouts, and grouping of students (P31).

One other effect of the lack of a legal framework was delayed decisions on the part of some managers. Students with visual impairments had to go to the concerned officers repeatedly with some problems or requests and, although they were given positive responses, implementation did not happen, or happened only after a long period of time (P6, P7, P9, P16 & P17). As one student who participated in the study put it:

> When we go to some offices, and ask for something, we are given polite responses but the problem is follow-up. What is said is not similar to what is actually done. ... In practice they fail to implement what they promise (P6).

5.10.2 Institutional attention to disability issues and problems

Institutional planning and preparation: In order to provide the support SVI require for their full involvement in the learning process, institutions should consider SVI in their planning and make preparations to accommodate their needs. College deans were asked about the preparations made in their institutions. The responses obtained from the deans and information obtained from other participants of the study did not indicate that much preparation was made with regard to accommodating SVI at any levels of the universities' management body. In U1, there was a

somewhat better condition since there was a disability officer who takes responsibility for all disability-related issues, including preparing plans and monitoring their implementation:

> At the beginning, I prepare and submit my plan to the university like any other officer. Then I follow up on the implementation of the plan. I follow up especially on academic related issues such as provision of materials and payment for readers (P43).

Students with visual impairments also described the role played by the disability centre at U1 in getting them settled on the campus and other aspects:

> ….. at the university level, I can say that we were received with good preparation and we did not face any serious problems. Even after our registration, we got all necessary information from the center. For about a week or two, the center coordinator made the settlement of newly registered students as his priority task (P5).

In U2, however, the task was shouldered by a person who also coordinates all student affairs in the campus. In this situation, it is difficult to expect well-thought-out preparation and planning for SVI-related issues.

All preparations the institutions made were related to allocation of budget to SVI-related activities, purchase of educational materials and other assistive technologies, and the arrangement of dormitories. But here also SVI had a number of issues with which other participants of the study agreed. Due to the lengthy procurement process, the educational materials were not provided on time. There were also a number of cases where SVI were not allocated to their dormitories on time:

> I was assigned to a dormitory in the upper floors with sighted students. Since the student services were not informed about the number of students with visual impairments assigned to the colleges, the ground- floor dorms rooms were allocated to other students. Therefore, we had to go through a complicated process to change our rooms to the ground floor. We faced a lot of hardship in effecting this change of dormitory room (P10).

There was also a general agreement that the universities did not prepare all facilities on time like they did for the rest of students. Most often the facilities and materials were provided after SVI themselves made requests and not from the initiative of the institutions themselves:

> Even those facilities that we get are provided as a result of our own relentless requests and efforts. This is not only in this university. In every university, it is students with

> visual impairments themselves who vigorously push for the purchase of the materials they need. Otherwise, the universities do not prepare the necessary facilities by considering the number of physically impaired students that will be assigned to the university like they do for other students (P14).

This shows that the management bodies of the universities do not give attention to the preparation of facilities necessary for SVI equal to that which they give for other students. The managers who participated in the study agreed with this:

> … it is difficult to say that the attention they get is equal to sighted students. The attitude of the management has to be oriented to that direction [i.e., giving equal considerations to the preparation of materials and facilities to SVI]. I think this requires some more time (P40).

> There is only rhetoric, otherwise there is no plan at the country, university, college or school level regarding what can be provided to support the learning of these students (P36).

System to assess and communicate SVI needs and problems: The data collected from the management bodies also revealed that there was no well-organized system to assess SVI needs and problems and communicate them to concerned bodies. It was the students themselves who came forward with their problems and requests individually and in an organized manner. In addition, students' clubs, students' representatives and students' councils played a key role in conveying SVI issues to management bodies:

> There is no system that monitors how well they are learning, what problems exist, what remains to be fulfilled, etc. (P40).

> There is no structure that reports the problems they face, the materials they need, and the solutions required. .. Mostly it is because of the request that comes from them that many of their facilities are provided (P36).

Students with visual impairments also reported their problems to the disability/students' services centre which, in turn, either discussed the issue with concerned bodies (including instructors) or referred it to higher management bodies:

> They have a representative and there is also a disability centre that works as a liaison between the students with disabilities and the schools. We communicate with them and if they have any problems they inform us. Through this there is a system to solve their problems (P30).

SVI issues as management body agenda: Department/heads and college deans were asked whether SVI-related issues were discussed at department council, college council and senate-level meetings. Although there were certain interviewees who responded in the negative (P29, P33 & P35), the rest of them claimed that there were rare discussions. The issues discussed in these occasions were issues related to library and computer lab, extra time in examinations, course exemption and substitution, session recording and material procurement. It appears that most of these discussions were based on complaints forwarded by the students themselves. In addition, such discussions were made at department/school and college levels. Departments/schools tried to handle most of SVI complaints and forward those that were beyond their capacity, often issues related to facilities, to the college:

> They come and talk about their problems. If it within our capacity we try to solve the problems and if it is beyond our capacity we convey it to the college (P34).

At senate level, no agendas related to students with disabilities were discussed, excepting a general staff conference held at U1 where all leaders up to school head level participated and discussed problems related to students with disabilities (P30). The words of one college dean summarize the general situation:

> As far as I remember, it was only once. Individually we talk with the students. It has never been discussed at DC [Department Council], CC [College Council], and Senate. This is a correct question and it should have been discussed. I have the idea that the students with disabilities issue should be a big issue in the university (P40).

5.10.3 Types of support

The types of support available for SVI in the institutions can be examined in terms of materials and facilities, finance and human resources. With regard to material support, both institutions made similar provisions. These include materials related to Braille (Braille paper, slate and styles) and digital recorders with dry cell batteries in addition to their mobility assistant, white cane. The provision of Braille materials was given little weight by SVI, especially considering the fact that some of them do not have the necessary Braille skills. With regard to the digital recorder, however, all SVI underscored its important role in facilitating their learning:

> … it was very helpful that we are provided with a voice recorder. It has helped us to record our study material on time and efficiently use our study time (P10).

Overall, students of both institutions expressed their satisfaction with the materials they were provided considering the capacity of the institutions. On the other hand, they talked about their dissatisfaction about the delays in the provision of these materials. They said that these materials were given out after a considerable portion of the instructional time has elapsed. The coordinators of the disability/students affairs centres at the universities, as well as department/school heads and college deans, also recognized the problem, but laid the blame on the difficult procurement system of government offices:

> Since the bid system somehow delays the procurement process, they do not get these materials on the first day of classes. They get them after one or two months into their studies, so when there are bid delays there is harm to the students (P40).

P41 also talked about the delay in procurement but gave another dimension to the cause of the problem:

> Of course, there may be a problem in the process of procurement and financing. But the awareness and attention given to facilitating these students with a sense of responsibility is very low. Their studies cannot wait until every necessary material is provided.

With regard to facilities, reading rooms and computer labs in both institutions were opened specifically for SVI, in some cases to serve all students with disabilities. The problem, however, was that these facilities were opened when the number of SVI was small and, as a result, cannot accommodate all SVI in later years. P5 expressed his frustration as follows:

> Well, although it may be difficult to provide computers based on our numbers, there should be better computers. If there are 18 computers, all of them should have JAWS software.

In addition, the reading rooms did not have Braille materials or an audio/digital library. Apart from this, SVI in U1 were given free photocopy services at the disability centre and there were people assigned to help with this service. This type of service was not available at U2.

Concerning financial support, there was a significant difference in the amount and purposes of payment in both institutions. U1 gave a reasonably fair payment as compared to other universities, including U2. It paid Birr 4,000.00/semester for readers, Birr 20.00/hour for scribes

and Birr 1,500.00/year for laundry purposes. On the other hand, U2 paid Birr 1,000.00/year for readers and Birr 600.00/semester for laundry purposes. In spite of the better amount of money they were allowed for readers, some students of U1 (P4, P5 & P6) asserted that it was not sufficient to pay for the total services they require to record their study materials. Therefore, one cannot expect the payment made in U2 to be sufficient for the service.

One big achievement of U1 in relation to supporting SVI and other students with disabilities was the establishment of the disability centre. The centre helped SVI and students with other types of disabilities in various ways including directing (or taking) students with problems to the responsible bodies. It also provided free photocopy services. In addition, P43 listed the following major activities undertaken by his office:

- The disability centre arranges assertiveness training for students with disabilities and other students who interact with SVI, such as class representatives.
- It organizes an annual trip for students with disabilities who are in the graduating class to tourist sites where they can refresh themselves; with them some influential students such as those from the students union, class representatives are also taken so as to enjoy the outings together. This was done with the idea that when they enjoy themselves together and get to know each other, the university representatives will also learn how to assist the students with disabilities.
- When SVI face problems in classes, especially problems related to recording, the disability centre officer discusses the issues with the instructor.
- It organizes one training a year for instructors and staff from offices frequented by students with disabilities (such student services and department secretaries) which, it was hoped, would create awareness of the issues of students with disabilities, including SVI.
- It arranges a dinner program once a year to which department heads and higher management officers are invited. In this program, important issues are discussed that help to sensitize staff about students with disabilities' problems. It is also reported that the university management gives direct orders to departments about their responsibilities to support students with disabilities, including SVI.

This demonstrates the role the disability centre has played in removing the barriers SVI in their academic and social lives. On the other hand, the tasks undertaken by the students' services centre at U2 was mainly limited to the provision of educational materials and arrangement of dorms and classrooms. As the coordinator of that centre (P42) says:

> They need materials such as slate, styles, Braille, voice recorder and many other things. So there are a lot of things with which they have to be supported. They also need assistive materials like crutches and wheelchairs. We provide all these things.

P43 describes the importance of establishing a disability centre in all universities as follows:

> What they [universities] need to do is establish an office that can be responsible for students with disabilities' issues. ... They [SVI] want an office where they can talk about their complaints. They are afraid to go to the office of the president because the president is very busy. He may implement certain decisions. But you cannot go there daily. If there is a disabilities office, however, you are always available to them. So I feel that such office should be opened in all universities.

In the second university, U2, there was no centre specifically established for handling students with disabilities' issues. People interviewed in this university also underlined the importance of establishing such a centre (P41 & P42):

> We do not have the type of disability centre that is found at AAU (Addis Ababa University). This is one big problem. The absence of a center that requests provisions that students with disabilities need is problematic. ... It is not because of no interest to support them, but since you get bogged down by other tasks, there is nobody to take responsibility. This leads to some problems (P42).

One practice in U2 which did not exist at U1 was, that each SVI was assigned to an assistant who resides in the same dormitory to support him or her in different ways. P14 described the role of these assistants as follows:

> … there is what is called an assistant who is assigned to assist us in all matters. ... The university allocates two beds for one student with visual impairment – one for himself or herself and the other for the assistant. ... They bring food to our dormitories and they even wash our clothes. They help in recording our study materials. We move around campus together.

At U1, students with visual impairments were expected to pay for the assistance of students assigned to them with the money they receive, although it was reported that this money was not sufficient to cover for all the services the SVI required.

Overall the research participants agreed that the support provided to SVI was not enough. They claimed that there was a lot of support to be provided. They also agreed that SVI should get the same level of attention and support as all other students if they were to pursue their education with minimum obstacles.

> I do not claim that there is an effective support system. There is enough evidence of this lack. If a student comes to an examination saying that he couldn't get a scribe, this shows that no consideration is made in advance [by the SVI] (P22).
>
> One big setback is that there is no organized system of providing support not only to students with visual impairments but to all students with disabilities (P37).

5.10.4 Institutional effort to build capacity

The effectiveness of the support and accommodations SVI are provided to a large extent depends on the awareness, skills and attitudes of those responsible for providing the support. Therefore, it is important that universities give attention to building the capacity of their academic and support staff. The data collected from participants of the study, however, did not provide evidence of any significant staff capacity building in either of the institutions. The only notable training conducted in both institutions was organized by an external NGO based in Addis Ababa. This training was held on two occasions in both universities and one or two instructors from each department/school and certain support staff participated. One college dean described the role those trainings played in changing the attitudes of participants:

> Well! For two rounds there was a workshop organized by people who came from ECDD [Ethiopian Center for Disability and Development]. For this workshop we invited many people. I think the ideas that were raised in the workshop have played a big role in changing the attitude of the participants. ... So I feel that if such forums are repeatedly organized a lot of change could have come.

There is a one-year Higher Diploma Program for newly employed instructors in both universities. In this training there is a session on social inclusion which helps participants to discuss exclusionary practices and strategies to follow to make their teaching more inclusive.

On the other hand, the coordinators of the disability and students' services centres who are administrative staff at the forefront of organizing and facilitating support for students with disabilities received no specific training:

> There was no training. We get some ideas by asking those who were in the position before us and just by examining related documents (P42).
>
> I did not get any training. I have only gained some experience from my day-to-day activities of supporting them (P43).

Students with visual impairments realized the need for training for the personnel who are assigned to this centre. As P19 explains:

> … the personnel that are assigned to this section have no knowledge about our needs. Unless the request comes from the students themselves, they cannot request facilities that we need by themselves. They are not trained in special needs. They are simply assigned to the position like any other admin workers

Apart from the support in material and facilities, SVI require orientation and training on issues such as ICT skills, assertiveness and the like, for a successful university education. In this regard, the universities organized training on computer skills every year although SVI identified problems in its implementation, which was explained in section 5.6 above.

5.10.5 Institutional challenges and problems

The interviews conducted with the different levels of the university management came up with the finding that the universities and the different levels of their management structure had faced challenges to effectively carry out their responsibilities of rendering necessary support to SVI.

Challenges of departments/schools: Departments and schools are the levels of a university from which SVI can get most of the academic support they require. The department/school heads who participated in the study were asked to describe the major problems they faced in their efforts to provide SVI with reasonable accommodations. The participants expressed three major problems and challenges: resources limitations, budget shortages and instructors' capacities. With regard to resource limitation, department/school heads expressed their disappointment in not being able to satisfactorily respond to the different requests SVI come with:

> The biggest thing is that there are no resources here. We do not have the capacity to solve their problems. Everything is centralized at the university level. The university follows its own processes. It might take a year for a solution to be given (P29).

One specific resource limitation they highlighted was the shortage of classrooms. They said that they were forced to have SVI take examinations outside in corridors since there were no extra rooms in their institutions which they could reserve for this purpose.

Another problem that was repeatedly mentioned was related to finance. The department/schools were allocated limited budgets and as a result could not meet the requests of SVI. They claimed that some of the possible accommodation strategies, like preparing examinations in alternative formats and giving tutorial support, required additional budget which departments could not afford.

A third major challenge raised by the concerned research participants was related to instructors' limitations in awareness (P32), skills (P35 & P36) and attitudes about SVI and their needs (P35). As P35 asserted:

> Some instructors have negative attitudes. ... Even if we decide to assist students with visual impairments within the capacity we have, there are people who support and those who do not support doing this. So attitude is another challenge.

Challenges at college: The challenges posed on the colleges at the two universities appeared to be different. At U1, the main challenge was said to be related to the administration of finances. Colleges cannot make decisions regarding finance since it is administered by the management body at higher levels of the university. They could only request budget allocated for disability-related activities (P39). At U2, the lengthy procurement process and the failure to supply the required materials on time was the main challenge (P33, P40, P41 & P42). In addition, P40 mentioned other challenges at U2:

> The challenge is lack of planning and implementing on time. There is also a budget limitation because of which we couldn't provide enough support for the students since the amount of money allocated is very small. Thirdly, we have been able to do little to bring attitudinal change.

Challenges of disability/students services centre: These centres were established for the sole purpose of addressing students with disabilities' problems. It is to these centres that SVI come to

discuss their problems and request certain services on a daily basis. The coordinators of the centres of both institutions, however, said that they faced a lot of challenges in discharging their responsibilities. According to P43, the major challenge he faced was the imbalance between the multiplicity of the tasks he was required to handle and the human resources assigned to the centre. The coordinator was responsible for implementing all activities of the centre, with only three temporary employees who help him in providing photocopy services and help as library and computer lab attendants. One other major challenge was his inability to persuade the Office of the Student Services to address the students' problems in a timely manner. He claimed that he was summoned to the presidents' office when the students themselves bring their issues to his attention (P43). This claim was supported by the students themselves (P6).

A similar challenge existed in U2 except that it was more serious. The coordinator here was responsible not only for disability-related issues, but for all students services on the campus. He was also chairperson of the campus discipline committee which took much of his working time. Due to this, there was nobody to attend to SVI when they came with problems or any other issues. In addition, he asserted that taking that position without getting any training was a big challenge since he did not know even the materials students with disabilities require. Lack of budget to organize training for instructors and other stakeholders was also mentioned as a challenge (P42).

Both coordinators mentioned the particular difficulty of handling SVI cases. They agreed that the work requires a lot of patience and understanding, since some of the SVI are very sensitive to the responses they are given and the answers to their questions (P42 & P43):

> You do not follow the methods you apply for students without disabilities. If it hadn't been for the experience I have gained from time to time in my work, there would be a lot of challenges (P43).

P43 also argued that the number of SVI assigned to his university was beyond the capacity of the institution. He claimed that since the support system in his university was relatively better than that other universities provided, more and more SVI were applying to his university which, according to him, compromised the quality of services they provided.

5.10.6 Discussion

This section looked at the different kinds of support provided by the two universities' management in creating a conducive learning environment for SVI. The higher level of the university management oversees what might accord with the third layer of Bronfenbrenners' ecosystem since it is responsible for making decisions that determine the interaction between the learner and other elements of the *micro-system* (Berk 2007: 25; Bronfenbrenner 1979: 237). It is the university management that determines the type of support and accommodations that are provided to students with disabilities; university management also develops a legal framework that guides such support. In this sub-section five sub-themes that fit the major findings are discussed.

5.9.6.1 Legal framework

The most important prerequisite for the establishment of an effective support system is the development of policies and guidelines that serve as a legal framework for all their operations. In Chapter Two it was reported that many universities of the Western world have developed institutional policies (Gravestock n.d.; Healey *et al.* 2006; Herrington 2002; Shepherd 2006; Teachability Project 2000; The Quality Assurance Agency for Higher Education 2010). The lack of coherent policy and legal frameworks regarding students with disabilities' rights and entitlements in the HEIs of sub-Saharan Africa was identified as a major problem (Bell 2013: 233; Haihambo 2010: 370; Matshedisho 2007: 695). The findings of this study, likewise, indicated that the HEIs in the study did not have legal frameworks that guided the accommodations to be provided for students with disabilities. In most cases, the existing support system was based on spontaneous decisions made at the department, college or university level - or on the discretion and goodwill of individual academic or administrative staff. This finding somewhat contradicts that of Tirusew *et al.* (2014: 33) who wrote that there were disability-related provisions in the universities' legislations and that the problem was in implementation. Contrary to this, the researcher of the present study is of the opinion that, in the absence of coherent policy, institutions urgently need to develop such policies and guidelines specially related to students with disabilities. General university legislation does not include clear provisions in relation to the accommodations to be put in place for students with disabilities.

Due to the absence of a clear institutional policy, the accommodation strategies used differed from one instructor to another, and from department/school to department/school. As a consequence, decisions on crucial issues regarding accommodation for students with disabilities were either delayed or simply not made. This is one evidence of how the *exo-system* in the ecology of the learning environment influences the interactions in the *micro-system* and, ultimately, in the development of the individual learner (Berk 2007: 25). On the other hand, findings in this study indicated that the *macro-system* did not have much influence on the practices of the *exo-system* and ultimately in the interactions within the *micro-system*. This is because, in spite of the disability-related provisions in different national policies, legislation and strategies (such as the Higher Education Proclamation, FDRE Constitution, National Plan of Action of Persons With Disabilities, Special Needs Education Strategy, Education Sector Development Program and Ethiopian Building Proclamation), the two universities in the study did not develop institutional disability policies which, in turn, would have affected the support and accommodation students with disabilities received.

5.10.6.2 Institutional attention to disability issues and problems

This study also looked into the level of attention the two institutions gave to issues and problems of students with visual impairments in terms of the plans and preparations they made, the system of assessing and communicating SVI needs and problems, and the focus SVI issues and problems were given in management's regular meetings. The findings indicated that at U1, there was better planning and preparation to accommodate SVI than at U2. This can be attributed to the establishment of a disability centre at U1 that takes full responsibility for most of the disability-related issues. In relation to this, P43, a centre coordinator, says:

> At the beginning, I prepare and submit my plan to the university like any other officer. Then I follow up on the implementation of the plan. I follow up especially on those academic-related issues such as the provision of materials and payment for readers.

Most preparations made by the disability centre were related to the allocation of budget, the purchase of educational materials and other assistive technologies, and the arrangement of dormitories. There was no evidence, in this case, of any preparations and planning regarding the accommodations to be made in the classroom. This is an indication that the practices of HEI's

were highly related to the medical model of disability which concentrates efforts to limited level of compensatory intervention to improve the functioning of the human body due to impairments rather than considering more comprehensive solutions to accommodate the diverse learning needs of students with impairments.

It was also established that in both institutions there was no well-organized system to assess SVI needs and problems and communicate them to concerned bodies. The facilities and materials provided were the result of the students' relentless requests, and not from the initiative of the institutions themselves. In this regard, what P4 said, similar to statements of other SVI, was:

> … the problem is the support does not come from their initiative. They do not come with any new ideas about how we can be supported.

In addition, the study results indicate that students with disabilities' issues were not taken as an important agenda item in discussions at the different levels of management of both universities. The lack of attention to disability issues by the universities' management was also highlighted in the study of Tirusew *et al.* (2014: 46).

5.10.6.3 Types of support

In general, the support provided to SVI in both institutions included materials and facilities, financial support and assistants. The level of support differed in the two universities. In terms of material support, both institutions provided digital recorders and Braille materials as well as the white cane, about which SVI expressed satisfaction. In terms of facilities, both institutions have arranged reading rooms and computer facilities for SVI, although they were found to be inadequate. Financially, students of U1 were better supported than those of U2. The most important difference in support between the two institutions, however, was the establishment of a separate centre that is responsible specifically for students with disabilities' issues at U1 (unlike at U2 where students with disabilities are included in the services provided by a general student services centre). Different literature has emphasised the importance of such a specific centre for students with disabilities in HEIs (Joseph 2010; Kachondham 2010). The disability centre at U1provided resources, developed capacity and negotiated with concerned stakeholders

on behalf of SVI. The present study underscores that such a centre should also be established at U2 and at other universities of the country.

The overall support the two institutions in this study provide was not considered to be sufficient by many SVI. This seems a common problem among developing countries for studies conducted in HEIs of sub-Saharan Africa also reported the acute shortage of appropriate resources for students with disabilities (Howell & Lazarus 2003; Matshedisho 2007; Moswela & Mukhopadhyay 2011). Haihambo (2010: 373) comments on the root cause of the lack of support for students with disabilities:

> … it is not so much the lack of knowledge of students' disabilities and the limited budgets, but the culture of provision and the mobilizing of existing resources that hampered the much needed provisions for students with disabilities.

5.10.6.4 Institutional effort to build capacity

The effectiveness of the support and accommodation students with visual impairments are provided, to a large extent, depends on the awareness, skills and attitudes of those responsible for providing it. As was discussed in previous sections, one of the barriers SVI faced in their educational journey was related to their instructors' awareness and attitudes as can be seen in the following interview excerpts which are typical of many other SVI:

> Some instructors do not have any idea about the difficulties we may face in the teaching and learning process. They do nothing different to help us in our learning (P4).

> I want them to understand that we are not asking for their help, only to make things easier for us so that we can be as competent as other students. Their attitudes should be changed. We could have tolerated the other problems. We want the kind of treatment they give to other students. We do not want any special treatment (P6).

This is consistent with the conclusion reached in the research conducted by Tirusew *et al.* (2014: 50). It is not surprising considering the finding that the institutions did very little to develop the capacity of their staff in the area of inclusive teaching and learning. This is why many researchers recommend that academic staff should be provided with appropriate training if they are to make necessary accommodations to students with disabilities (Katsiyannis *et al.* 2009: 42; Redpath *et al.* 2012: 14; Vickerman, & Blundell 2010: 28; Wolanin & Steele 2004: 44).

Similarly, D'Andrea and Gosling (2005: 64) emphasise the need to equip HE instructors with key pedagogical skills through specialized training for, as they write, "The days of the gifted amateur have gone."

5.10.6.5 Institutional challenges and problems

The study also identified challenges faced by department/schools, colleges and disability/students' services centres in discharging their responsibilities with regard to SVI. The sources of challenge to departments/schools were found to be resource limitation, budget shortage and instructors' capacity. With regard to resource limitation, they mentioned shortage of classrooms for SVI during examinations. This could rather be considered as an awareness problem than a challenge. This is because SVI, or any other student group, have the right to equal and fair treatment. It is important that the examination environment that is in place for other students should also be arranged for SVI. They should not be double-disadvantaged. When this is the case, there certainly is not fairness in the assessment system.

In colleges, the main challenges were related to the administration of finances and the lengthy procurement process. With regard to finance administration, P39 says:

> We do not administer finance. It is the upper management body that administers college finances. We can only request budget that can be used for disability-related issues. We cannot make our own decisions regarding finance.

P40 also talks about the difficult procurement process:

> The challenge is internal. It is related to conducting the bidding process on time and providing the materials on time, implementing things in a timely manner.

Coordinators of the disability/students' services centres had challenges related to limitations of human resources, difficulty in persuading higher management bodies to respond to students' requests and lack of training related to their responsibilities. P6 expresses her understanding of the challenges the disability/students services centre officers face when she says:

> The center was established to provide materials ... More or less he (the officer) try to do this. Although the management people give him positive responses, they do not fulfill his requests on time.

In relation to the offices' shortage of human resources, she continues:

> He may not have time because he has to do everything. He is alone.

If a conducive learning environment is to be created for SVI and if they are to be provided with an opportunity to learn equal to their sighted peers, due attention should be given to these challenges. These challenges should be identified, reported and discussed at higher-level management meetings with an emphasis on finding implementable solutions.

5.11 Peer support and perceived problems

Students were asked about the support they got from their sighted friends. Although there were a few SVI who were dissatisfied with the lack of readiness of other students to help them, the majority of SVI said that the support they got from their peers was 'extraordinary'. They declared that their peers provided them with all types of support both in their academic and social lives. One idea that many SVI forwarded was that they couldn't have survived in the university if it were not for the assistance they got from their friends:

> Generally speaking, it is with the help of other students that we are able to live in this university. You cannot say enough about the support we get from other students. They provide us with all sorts of support, including in our social lives (P10).

> They make me forget my family. They take care of me in all aspects of my university life. They are the ones who take me downtown, they read course materials to me, and they find students who can read my examinations. I am surviving in this university with the help of my friends (P13).

One student who participated in the study makes comparisons of the support they got from their friends with the support the university provided:

> The assistance we get from our friends is much more than the support we get from the university management. In fact, this is what enables us to live here. They [fellow students] are the ones who make us happy (P16).

Students indicated different factors determining the level of support and cooperation they got from their sighted peers. One factor that was mentioned by quite a number of them was related to SVI personal behaviour. A SVI has to develop a good relationship with his/her peers if he/she is

to get their unreserved cooperation. He/she has to be patient and approachable (P3, P8, P11, P14 & P17):

> In this university, what matters is your personal approach. If you have good manners, you will have good friends. You should also understand their problems as well. If one day a certain students couldn't positively respond to your request for help, you shouldn't be annoyed. He may have his own priorities. We have to be patient. I can ask for help some other time (P11).

Some students with visual impairments associated the lack of cooperation from some students with the behaviour of those students. They said that some of them were not approachable and were indifferent to SVI challenges. This, they said, was caused by lack of awareness (P1, P2, P4 & P7):

> They have different characters and their level of cooperativeness depends on their characters. There are very uncooperative students. It is difficult to call them evil but there are students who are less cooperative. I asked them to help me in recording but they refused, saying tomorrow or after tomorrow until the examination time was near (P2).

Students with visual impairments of U2 were more satisfied with the support they got from their peers than SVI at U1. It appears that students' support at U2 was more organized. There was a church organization that organized support (P9, P11, P13, P15 & P18). P14 at U2 provided a more illustrative description of the situation:

> It is very difficult for us to describe the efforts they make to support us. For example, there is what is called an assistant who is assigned to assist us in all matters. There is what we call a campus assembly that helps in arranging assistants. ... They bring our food to our dormitories and they even wash our clothes. They help in recording our study materials. We walk around together. For example, I do not use my cane when I am with them. ... Students' interest and readiness to give us support is extremely high. We ask our friends in other universities, and I have also seen the situation at Addis Ababa University, and the support students of MU give is impressive.

This was remarkable considering the fact that students of U2 were paid nothing for such services.

There were some instructors who expressed their concerns about peer support. One concern was that, since these students provide the services on their free will without getting any payment, they doubted that it would continue. They suggested that these services should be well organized with reasonable payments and with some accountability for failing to deliver the services

required (P22 from U2 & P24 from U1). One SVI also stated a similar concern in the following way:

> I am always living in doubt. I may not get students who can help me because of their own workload. They give priority to their own tasks (P12).

The second concern was related to the negative effects of peer support on SVI feelings. Some instructors argued that the peer students, due to their level of awareness and their attitudes, did not render the services on the grounds of equality and fraternity. This, they said, creates a feeling of inferiority on the recipients of the assistance, which is SVI (P40). Similarly, there were SVI who had r opinions with regard to the awareness and attitude of their peers (P3, P6 & P7). For example, P3 commented:

> When we ask students to be our scribes in examinations they interpret it in a different way from how we mean it. They think we are asking them to do the examination for us.

5.12.1 Discussion

One of the elements of the *micro-system* in Bronfenbrenner's ecosystem with which the developing person will have sustained interactions is his or her peers. This peer interaction may have negative or positive influences on the individual's development. The majority of SVI were highly satisfied with the assistance they got from their sighted friends in both their academic and social lives. Research conducted in other contexts also showed that students with disabilities are overall satisfied from the support they get from their peers (Gavila & Morila 2015: 373; Haihambo 2010: 267). For example, Gavira and Morina (2015: 373) based on their research findings in a Spanish university conclude that:

> … the number of peer support identified by participants was much higher than the barriers. Thus, many noted that classmates were an essential support for them, essential for an inclusion in HE.

Many SVI agreed that the main factor that determined the level of support and cooperation they get from their friends depended on their own behaviour, saying that if one student is friendly and approachable, he/she can readily get the assistance of his/her friends. This is in accordance with Darling's proposition that the characteristics of the developing person may "evoke differential responses from the environment or differential reactions to it" (2007: 208). Other SVI

mentioned that the indifference and distance of some sighted friends made it difficult to ask for assistance. One female SVI claimed that peer female students were less approachable than male students:

> Especially females do not make any significant attempts to approach you. But there are some who try to establish a relationship. Beyond initial steps, they do not come closer (P1).

The results of the study indicated that SVI of U2 were more satisfied with the support they got from their peers than those of U1. It also appeared that voluntary peer support at U2 was more organized.

In spite of the importance of this peer support to SVI, there were some concerns about its continuity and psychological effect on the SVI. They had the opinion that if students were not properly paid for the assistance they provide to SVI, there would not be any way they would be held accountable if they failed to provide the service and they might completely stop it:

> Well, the assistance is there. But I have a question as to whether this is continuous. ... I think it is on a voluntary basis and ... I do not think volunteerism is enough to make it continuous. There should be an incentive and those who give the service should assume responsibility and provide all assistance as agreed upon (P22).

The literature also provides evidence of a similar concern about the unreliability of peer support provided on voluntary basis. Opini (n.d.: 75) presents her research findings on the situation of SVI in two Kenyan universities:

> Since they relied on students to serve as volunteer readers, these readers got busy in the middle of the semester and failed to honor their volunteer commitments. This left students with disabilities stranded at times.

With regard to the other concern, the possible negative psychological effects on SVI of receiving voluntary help from their peers, there is an argument that when peer students give help not on the grounds of equality and fraternity, this could create a feelings of inferiority on SVI.

5.13 Concluding remarks

This chapter presented the findings of the research based on the data collected through interviews and observations. The findings were grouped into nine major categories of SVI experiences:

transition to university; teaching and learning; the learning environment; assistive technologies; the use of library services; assessment practices; administrative support; peer support; and perceived problems. Examining these themes involved examining the major factors (policies, institutions and actors) of the ecological system that influenced the experience and learning of SVI in the HEIs. Within the *micro-system*, instructors and their attributes, disability/students' services officers, department/school heads, library and ICT services, curriculum materials and their peers were examined in relation to how they supported or presented a barrier to SVI learning. The relationship and interaction among these elements was studied at the *meso-system* level to understand their influences on the experiences of SVI. At the level of the *exo-system*, the preparation of the university management to accommodate SVI and the support it provided were explored. At the level of the *macro-system*, national policies, legislations and strategies that had provisions in relation to persons with disabilities were examined.

The study revealed that the transition of SVI to university, experience of a new ecology different from what they were used to, was a very difficult process. There was no well-organized or sufficient support to help them get used to the university environment. In addition, some SVI were assigned to departments they did not choose despite the directive that allows them to join the departments of their preference. There were also departments that do not admit SVI on the basis of their impairment.

With regard to the teaching and learning process, SVI did not get much of the accommodation they needed in order to be successful learners. There were many problems associated with this. Most of the instructors did not have awareness and skills necessary for assisting SVI. In some cases, there were attitudinal problems. As a result, many instructors denied SVI permission to record their lectures, failed to consider inclusive teaching practices, and did not give SVI curriculum materials in accessible formats. In general, the learning environment was less conducive for SVI than for sighted peers.

In spite of the fact that there are nowadays different types of assistive technology that help to make curriculum more accessible to SVI, in the two universities where the research was conducted there was minimal utilization of such technologies. This was because, first, the type of

technology available was limited; secondly, the existing technology was not made available in sufficient numbers; and thirdly, SVI did not have the necessary skills to use the technology.

Similarly, the study resulted in the finding that SVI use of library services was very limited. This was due to the absence of Braille materials, limited space and a generally unsuperSVIed atmosphere. In addition, the computer lab had a limited number of electronic resources, including computers with appropriate software. The main reason why SVI went to the library at all was, for the most part, to record their study materials.

The most frustrating experience of SVI was related to assessment practices. Most of the assessment techniques instructors used were designed for sighted students. These created challenges since SVI were required to adjust themselves to assessment strategies for signed students. The major problems SVI faced included: accessing reference materials to do assignments; writing up their assignments; finding scribes; not conducive examination venue; shortage of time in examinations. The attempt of instructors and departments/schools to solve those problems was found to be limited.

Students with visual impairments also expressed their dissatisfaction with the level of support from the university management. The management did not give SVI-related issues the same attention that it gave to issues related to other students. Due to this, preparations and planning for newly assigned SVI was minimal. In spite of the difficult situation of SVI, the different levels of the university management did not make SVI-related issues an agenda priority in their scheduled discussions. The management also did not give timely responses to SVI problems and requests.

Most importantly, however, the institutions did not have policies and official strategies that guided their practices with regard to accommodations to students with disabilities. This was in spite of a provision in the Higher Education Proclamation of the country that supports appropriate accommodations for physically challenged students as well as other national policies, legislation and strategies which include provisions for the support of persons with disabilities. This shows that, in the context of this study, the *macro-system* had little influence on the practices of the lower layers in relation to students with disabilities.

The assistance SVI got from their peers was found to be of great importance in their educational journey, with the exception of a few complaints from some students. Overall, SVI were not happy about their total dependence on other students. There were also concerns about the continuity of such assistance and its psychological impact on SVI.

In the next chapter, the findings that have been discussed are summarised, conclusions outlined and some recommendations forwarded for improving the learning environment in the HEIs of Ethiopia for SVI.

CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

Ethiopia has endorsed inclusive education as a policy in its education system. The purpose of this study, therefore, was related to the inclusivity of education in the HEIs of the country. The researcher undertook this study with the purpose of investigating the learning experiences of SVI in two HEIs of Ethiopia. It was focused on assessing the accessibility of the curriculum and identifying the major barriers SVI faced in their learning journey at their respective universities.

This study focused on the following major objectives:

- to determine the appropriateness of the curriculum objectives and contents to SVI;
- to establish the views of SVI towards their curriculum experiences;
- to specify and describe the main challenges SVI face in their interaction with the curriculum; and
- to assess the appropriateness of the mechanisms employed to assess the learning of SVI.

This study used a qualitative research methodology. Thus, the primary data collection tool employed was an interview schedule. Through this technique, information was collected from the SVI themselves, their instructors, department/school heads, college deans and disability/students' services center coordinators. In addition, observations were conducted in classes and libraries.

This chapter starts with a brief description of the key findings of the study. This is followed by a discussion of the conclusions of the study. After that, recommendations for practice and further research are presented, followed by an outline of the strengths and limitations of the study.

6.2 Summary of key findings

The preceding chapter presented detailed analysis and discussion of the findings that resulted from the extensive data collected in this study through individual interviews and observations. In this section, the findings with respect to the two basic research questions are synthesized. The two basic research questions were:

- What are the views of SVI about the inclusiveness of the objectives, content and assessment strategies of curricula in the HEIs?
- How do SVI experience pedagogy in their classrooms?

6.2.1 Inclusiveness of university curricula

The international literature emphasizes the important role of the curriculum in the development of an inclusive education system. If inclusive education is to be fully realized, the curriculum has to be flexible enough to allow for necessary modifications and adaptations to meet the needs of individual students. This flexibility is introduced during the curriculum design phase and is of critical importance in its implementation (Hockings 2010: 1; UNESCO 2005: 25-26). An education system that does not give students with disabilities full and equal access to the curriculum cannot be called inclusive.

This study arose from indications that HEIs did not adequately consider the needs of SVI in their curriculum. This proved to be the case through the empirical findings of this study in two universities in Ethiopia. The findings of the study showed that the curricula of the different programs in which SVI are enrolled in both institutions were largely not inclusive of all students' needs. SVI encountered different challenges and barriers to accessing the curriculum in a manner equal to their non-disabled peers. The study identified a number of challenges that became barriers to SVI success in higher education.

i. **Assignment to departments**: There is a general conviction that if students study in areas where they have an interest, they have a better chance of being successful in their education. In both institutions, there is a directive that provides for the assignment of SVI

to departments of their choice. In practice, however, the study discovered that those directives do not fully work:

a) In some cases SVI were assigned to departments they did not choose.
b) SVI have limited choice of departments since they are allowed to study only in certain areas (usually social science fields); even those fields are not fully available in one institution.

ii. **Inflexible curriculum design**: The curricula of those programs where SVI are enrolled did not include the needs of SVI in the design. As a result, there are courses with objectives and content which are inaccessible to SVI if necessary adjustments are not made. The instructors, in most cases, do not have the awareness and pedagogical skills to make such adjustments.

iii. **Limited accessibility of resources**: Most of the curriculum materials in these institutions are prepared for sighted students. The findings of the study found that SVI, in most cases, were denied curriculum materials in accessible formats. The major problems SVI faced in this regard included:

a) lack of Braille and digital materials;
b) some instructors' denial of permission to be recorded during class sessions; and
c) most of the instructors' failure to provide handouts in advance.

iv. **Limited use of assistive technology**: Assistive technology could play a decisive role in making the curriculum accessible to SVI. The study established, however, that SVI were provided with limited IT facilities. In addition, most SVI lacked adequate skills of using computers.

v. **Inaccessible assessment practices:** One key principle that should be considered in assessment practices is fairness. Every SVI has the right to be assessed in a fair way in comparison to other students. There are certain strategies commonly used worldwide that help to make assessment activities fair to SVI. The present study, however, maintained that, in the two institutions where the research was undertaken, SVI faced a number of

challenges that hindered them from demonstrating their academic achievement and potential. The most serious of these challenges for SVI were:

- they were not provided with alternative assessment mechanisms;
- they totally depended on other students to do their examinations and assignments;
- in many cases, they took their examinations in environments that are not appropriate for the purpose; and
- in most cases, they were not provided with extra time to do their examinations and assignments.

vi. **Less friendly learning environment**: The study identified some problems that made the learning environment less friendly to SVI which include:

- a less accessible physical environment;
- hostile attitudes of some academic staff; and
- lack of appropriate study space.

vii. **Inadequate and disorganized support:** The support an institution provides to its SVI is crucial in providing accessibility of the curriculum and good quality learning experiences. The level of support and institution provides is determined by many factors, the key to which is the attention it gives to the problems and needs of these students. With regard to the support the two universities provide to SVI, the study resulted in the following findings.

a) **Policy and regulations**: The two universities do not have institutional policies and guidelines that determine their practice with regard to the academic provisions to SVI. As a result, most of the accommodations provided were based on individual academic or administrative staff member's goodwill and discretion. There was, therefore, no accountability for failing to give any accommodations to SVI.

b) **Establishment of a disability centre:** Different experiences and common sense show that the establishment of a dedicated administrative structure responsible for the sole purpose of managing the needs and problems of students with disabilities is crucial for effectively addressing their issues. In this regard, U1 has made a good start in

establishing a disability center which has played an important role in things such as providing a channel for communicating the problems and requests of SVI to concerned bodies and facilitating the procurement and distribution of materials. In U2, on the other hand, there was no structure that specifically handles students with disabilities issues, this function being absorbed into a general student services centre. Due to this, SVI in U2 have faced problems that are more severe than those in U1.

c) **Material and financial support:** Students with visual impairments have expressed some satisfaction about the improvement in material support their universities provide from time to time. In particular, the provision of a digital recorder has helped them a great deal in making the curriculum more accessible. Despite the efforts being made, however, many SVI feel that the material support universities provide was still not adequate. Financially, the support U1 gives to SVI was found to be more satisfactory than what was given in U2. This financial support enabled SVI in U1 to get services, for example, readers to help them in recording their study materials and scribes to help with reading and recording during examinations.

d) **Disorganized support system**: In both institutions, all participants of the study agreed that the support the institutions provide to SVI was not well organized. Due to this, accommodation for SVI is up to the individual instructor or administrator leading to differences within and between departments. There is also no well-established system of communicating SVI needs and problems to the concerned bodies at higher levels of the administration.

6.2.2 SVI experiences of classroom pedagogy

The inclusivity of a curriculum, to a large extent, is determined by what takes place in the classroom when the teacher teaches and the students learn. Instructors should be required to plan and implement inclusive instructional practice that considers the needs of all learners. Instructors' classroom practices will determine the type of learning experience SVI will have during their studies at the university.

The findings of this study showed that instructors, on the whole, make little consideration of the needs of SVI when they prepare their lessons. In the classroom, instructors made little effort to make adjustments in the pedagogy they use to provide SVI with equal access to the curriculum. There were certain practices of instructors such as the following that caused the majority of SVI to have negative experiences.

- Some instructors wrote on the board or used indicative words referring to what they had written (referring simply to "this" or "that") without reading out what was on the board or making the reference clearly understandable to all students.
- In general, instructors do not facilitate learning activities in which students are actively engaged although when activities are used in class; in certain instances SVI remained idle while sighted students were doing activities.
- Some instructors paced their lectures faster than SVI could follow.
- Some instructor spoke too quietly for SVI to hear which also makes it difficult to understand or record.

6.2.3 Cross-case analysis of findings

A close examination of the responses of SVI showed that, except in certain issues where a few SVI have different opinions from the rest of the participants, in the majority of the issues the research investigated SVI had similar views. The occasional difference of opinion was largely due to difference of practice between departments/schools. It was found that certain departments/schools were more considerate to SVI needs than others which is probably due to their previous experience with SVI. In both institutions law students had better opinions of their learning experiences than SVI in other departments/schools, possibly because of a longer history of law accepting SVI.

When we examine students' responses in the two case study institutions, the researcher did not find significant differences in the results. One notable difference identified, however, was that SVI at U1 were more satisfied with the financial support they received. In addition, the establishment of the disability centre at U1 enabled SVI to get more attention and support from the university management. An U2, SVI were more satisfied with the support they get from their sighted peers as compared to those at U1.

6.3 Theoretical framework revisited

The findings of the study demonstrated that the bio-ecological systems theory is an appropriate theoretical framework to help explain the learning experiences of students with disabilities in the HE context. It was made clear that SVI interactions with the curriculum materials, with their instructors, and with their peers (which are elements of the *micro-system*) were determinant in influencing their learning (discussed in 5.4.10.3, 5.7.1 & 5.10.1). The *micro-system* is the layer within Bronfenbrenner's ecological system which is closest to the learner and contains the elements with which the learner makes direct interactions. In situations where SVI had close and interactive relations with these factors, they had positive experiences, and in situations where the relationship was not strong, their experiences tended to be negative. This explains the role of the *meso-system,* which refers to the different relations and interaction between the different structures of the *micro-system,* in influencing the development of the individual learner.

Similarly, the bio-ecological theory maintains that the individual person and his/her characteristics have an important role to play in the process of development (Hirsto (2001: 35; Smith 2011: 2). There is abundant evidence in this study that demonstrates the importance of this proposition. First, SVI previous assumptions and skills greatly affected their learning experiences at university (discussed in 5.4.10.2, 5.6.1 & 5.7.1). Second, SVI assertiveness influenced the levels of support they got from their instructors (discussed in 5.4.10.6 & 5.4.10.9). Third, SVI approaches and socialization skills determined their relationship with their peers and ultimately the support they get from them (discussed in 5.10.1). All these instances are evidence of how the bio-ecological theory was helpful in explaining the findings of the current study.

The findings also demonstrated how the attention and commitment at the *exo-system* level, the wider social system within which the learner is situated but is not directly involved in its activities, affects the interactions within the *micro-system*. It was revealed that the failure of the institutions to develop clearly stipulated policies and guidelines with regard to students with disabilities had led to instructors and other key stakeholders at the *micro-system* level failing to accommodate SVI in a responsible manner. On the other hand, the loose relationship between the *macro-system* and the *exo-system* in this study seems to explain the failure of the institutions to develop disability-related policies and guideline in spite of the fact that the Higher Education

Proclamation sanctioned by the MoE makes clear the need to provide support to students with disabilities (discussed in 5.9.6.1).

Some SVI who participated in the study said that there were some improvements in their respective universities, especially in relation to the provision of material support. This indicates that the *chrono-system,* the layer within the ecological system that refers to the role of time in influencing the changes in the developing person, can also be used to explain SVI experiences of learning in HEIs (discussed in 5.5.1 5.8.2 & 6.2.1).

Another theory which was used to understand the findings of this research was the accommodation model in preference to the Universal Design for Learning (UDL) model. The accommodation model refers to the adjustments and alternative arrangements made in the learning environment so that it does not have a discriminatory effect on certain marginalized groups of students, including students with disabilities. On the other hand, UDL is a model of curriculum design that focuses on reducing the barriers of learning during the designing stage by anticipating the needs of diverse learners. The findings showed that the curricula of HEIs of the country were highly inflexible with little consideration made of the needs of students with disabilities (discussed in 5.4.10.3**)**. Instructors lack the necessary pedagogical skills to plan and implement the curriculum in a way that would equally address the needs of all learners (discussed in 5.4.10.9). In this situation, it is impossible to use UDL as a theoretical model to explain the inclusivity of the curriculum. Therefore, the accommodation model is best for understanding the results of this study and other similar studies that may be undertaken in the country.

The third theory considered in this research was the biopsychosocial model of disability to explain the barriers of learning SVI in their universities and the institutional response to address these barriers. This model attributes the causes of disability to both individual and contextual factors, and not created solely either by impairments (as the proponents of the social model argue), or by the social environment (according to the argument of the social model of disability). The researcher made the decision to use this model in the belief that the widely used social model would be deficient to fully explain the experiences of students with disabilities. The findings of the research, however, demonstrated that the challenges SVI face in universities were

the result of social and environmental barriers, which the universities could have removed if enough attention were given (discussed in 5.5.6). This is clearly consistent with the social model of disability. The findings of the study also showed that institutional response to the barriers was primarily focused on giving material support and little attention was given to what goes on in the classroom. This seems to agree with the outmoded medical model of disability (discussed in 5.9.6.2).

6.4 Conclusions

Considering the findings of the study, the following conclusions can be drawn.

- SVI prior assumptions and perceptions about university education have a strong influence on their academic and social lives once they have joined the university.
- SVI have good self-concept with regard to their capacity to learn any field of study if proper accommodations are provided.
- SVI join the university with different skills and needs which require individualized accommodations.
- Inclusive education has a long way to go to be fully realized in Ethiopia's HEIs. It requires the institutions' well-planned, systematic and aggressive interventions if it is to become a reality. Even in the well-developed countries there is evidence that students with disabilities are still facing a lot of barriers in their educational and social lives.
- Institutional policy and specific guidelines in relation to the accommodations for students with disabilities play an important role in determining the level of inclusivity of a university's educational practice.
- Institutional management staff members have limitations of awareness with regard to the full meaning and dimension of inclusive education.
- A curriculum designed with the needs of SVI taken into consideration will have a better chance of creating a more inclusive teaching and learning process than a curriculum design that ignores these factors.
- Assessment activities are the most painful experiences SVI have in the absence of proper accommodations.

- Instructors are the key stakeholders in determining the type of learning experiences SVI will have in the university.
- The establishment of a disability centre plays a crucial role in facilitating support for students and brings their issues and problems to the attention of university management.
- Students with disabilities' advocacy skills are very important in claiming and securing their rights.
- Instructors' past experience with SVI has an influence on whether and how well they address their needs.
- Although very slow, there is improvement in the practice of inclusive education which resulted in the dramatic increase in enrollment of diverse students.
- Peer support is very important in SVI academic and social lives but SVI over-dependence could have a negative impact on their feelings and self-image.
- SVI do not have learning opportunities equal to those of their sighted peers.
- Instructors' pedagogical skills, disability-related awareness and attitudes determine the level of attention and support they give to SVI

6.5 Recommendations

6.5.1 Recommendations for inclusive policy and practice

i) Recommendations of SVI

Students who participated in the study were asked what could be done by their instructors as well as by the university in general to improve the challenges they face in their learning and create a more supportive learning environment. Their responses are presented below summarizing SVI recommendations for instructors and their recommendations for the universities.

a) Recommendations for instructors

Students with visual impairments spoke about a number of changes which they want their instructors to make so that their learning needs could be better addressed. These changes are related to instructors' teaching behaviour, making curriculum materials accessible, instructors' assessment practices, and instructors' awareness, skills and attitudes.

Instructors' teaching behaviour: With regard to instructors' behaviour during class teaching, SVI brought up the following ideas:

1. Instructors should consider SVI and all students with disabilities when they are teaching their lessons. They have to be mindful of the expressions they use and, for SVI, explain things that require sight. They also suggested that instructors ask questions every few minutes to make sure that students are following the lesson. They stressed that they do not want any special treatment; just some additional support to fill the gaps created any their visual impairment. They strongly insisted that their instructors treat them equally to other students. As one participant put it, they *"do not want any over consideration or any under consideration" (P4)*.
2. Instructors should encourage SVI to participate in class activities (P13).
3. Instructors should adjust the pace of their lessons so that some students are not left behind (P13 & P18).

Accessibility of learning materials: in order that learning materials are accessible, SVI suggested the following in their instructors:

- Instructors should provide learning materials in accessible formats. They stressed that there should be enough materials in Braille, and other reading materials should be provided in electronic formats (P1, P5, P10, P11 & P19).
- Instructors should give handouts very early so that SVI can get enough time for recording (P5, P7, P10, P11 & P13). Some also spoke about the need for summarized notes (P7, P9 & P15).
- Instructors should allow the recording of their lessons without any restriction (P14).

Examination condition: In order to create a more conducive examination environment, SVI requested that their instructors consider the following changes:

- The content and format of examinations should consider the condition of SVI and the type of learning experiences they were provided during class teaching (P1 & P11).
- Instructors should treat scribes properly (P14).

Instructors' understanding, skills and attitudes: Students with visual impairments suggested the following with regard to instructors' knowledge, skills and attitudes as important conditions for more inclusive teaching and learning:

- Instructors should have a good understanding about the conditions of students with disabilities. They should serve, as P4 put it, as their "eyes", in the case of SVI.
- Instructors should have skills in Braille if they are to provide sufficient support to SVI.
- Instructors should believe that SVI can perform as equally to sighted students and should avoid using words that hurt SVI feelings. As P6 irritably says, "If they could change their attitudes, others [problems] would have been tolerable. I want them to understand that we are not asking for their help, rather, to make things easier for us in order that we can be as competent as other students".

b) Recommendations for the university

With regard to what the university should do in order to meet their academic requirements better, SVI made the following suggestions:

- The university should provide SVI with facilities such as libraries with enough resources, a sufficient number of computers with JAWS software, photocopy services, an embosser and a scanner. In addition, a responsible person should be assigned for maintaining the computers and attending to the library (P2, P6, P7, P14, P15, P17 & P18).
- SVI should be given adequate training on computers (P11, P18 & P19).
- SVI should be provided with adequate materials for studying on time; the university should make the necessary preparations to ensure that all materials are ready before the start of classes. These include Braille books, electronic resources and books in audio formats (P2, P4, P9, P11, P12, P14, P16, P17, P18 & P19).
- Some adjustment should be made in the examination administration to SVI, including the examination venues, provision of extra time, assignment of scribes by the institution (P10, P14 & P19), and making computerizing examinations. (P17).
- SVI should be given tutorial support (P11, P13 & P18).

- Pathways around the campus should be made suitable for SVI so that they can walk around to classes, dormitories and different service centers without endangering obstacles (P9, P11, P14 & P17).
- There should be specific regulations that focus on students with disabilities in order that the services they get do not depend on the goodwill of individuals (P5).
- Newly assigned SVI should be given sufficient orientation about the university (P14).
- SVI should be allowed to enroll in any department of their choice (P19).
- There should be a separate unit for handling issues related to students with disabilities (P5 & P14).
- The university should make special efforts to raise the awareness of instructors about the learning needs of SVI (P17).

ii) Researcher's recommendations

Based on the findings of the study and informed by relevant literature, the researcher suggests the following recommendations which, he believes, if properly implemented, will make a significant contribution to the development of a more inclusive education system in the institutions where the study was conducted. The majority of the recommendations refer to both institutions, but in certain cases recommendations are specific to one institution. When this is the case, it is so indicated.

- The findings of the research have shown that the lack of institutional policy and guidelines was a big limitation that seriously affected the practice of these institutions in addressing the learning needs of SVI and all other students with disabilities. In the absence of a legal framework that guides instructors and other concerned bodies in terms of how they should provide the necessary support and that makes them accountable for failing to follow the guidelines, it will be very difficult, if not impossible, to remove the barriers SVI encounter in their learning. This is also what scholars recommend in other contexts (Tugli 2013: 165-166; Haihambo 2010: 391; Moswela & Mukhopadhyay 2011: 318). Therefore, it is an urgent need for these two universities (and any other university in the country, for that matter) to develop a disability policy that encompasses all aspects of students with disabilities' academic

and social lives in the institutions with clearly stipulated consequences for those who fail to implement the provisions.

- Many researchers, including Bell (2013: 260-261), Tugli (2013: 136), FOTIM (2011: 92-93) and Haihambo (2010: 219), have highlighted the key role of a disability unit in organizing and facilitating the support for students with disabilities in HEIs. The disability centre established at U1, in spite of its limitations, has made some difference in attending to the challenges SVI face in the teaching and learning process. This is evidence of the need for establishing a unit or centre that is entrusted with the sole responsibility of managing the support students with disabilities require in the universities. This unit should be authorized with wider powers and responsibilities, including facilitating the support students with disabilities need in the teaching and learning process. In addition, the unit should be facilitated with adequate budget, facilities and human resources. The staff of this unit should also be well qualified and therefore be given training relevant to the responsibilities they are required to handle.

- A system should be established for assessing students with disabilities' problems and needs and for monitoring the implementation of policy. It should also be recognized that SVI have diverse needs. It is necessary, therefore, that the students themselves be consulted about the types of support each of them requires.

- The findings of the research have demonstrated that most of the problems SVI face are caused by instructors' lack of awareness about SVI problems and rights and instructors' responsibilities for addressing those problems. Therefore, it is necessary that instructors and other concerned support staff be given a regular training focused on improved and relevant pedagogical skills, and improved awareness, attitudes and skills for providing necessary support.

- The literature underlines the role of modern technology in making curriculum more accessible to students with disabilities. Therefore, as far as capacity allows, SVI should be helped with all possible modern technology that will ease their challenges

in the teaching and learning process and minimize their dependence on sighted students. They should also be provided with training on how to use the available technology effectively.

- SVI should have libraries with sufficient space and necessary facilities and reference materials – both Braille and electronic.

- The study has shown that SVI face the most disheartening experiences during examinations. This is related to examination venues, examination times and examination assistants. It is an urgent requirement for the universities to create a fair examination environment for SVI. A clear and detailed examination administration guideline should be developed and implemented in relation to SVI that works for all departments. This guideline should include provisions on adequate examination venues, provision of extra time, and the provision of competent examination assistants. A system should be developed through which SVI will be assigned capable scribes while, at the same time, ensuring that academic integrity is maintained. Departments should also consider the use of alternative formats such as computers and audio devises in administering examinations to SVI.

- Immediate attention should be given to those physical facilities that create problems to SVI but could be easily managed without incurring much cost – such as improved pathways around the campus and better classroom arrangements.

- When curricula are designed or revised there should be representatives of SVI involved who can give input to the preparation of a curriculum that is more accessible to SVI.

- SVI should be given full freedom to enrol in the departments of their choice and their choice should be expanded by creating an environment in which they can also study in fields other than those which were traditionally reserved for SVI. It is time to break the barriers of this questionable tradition.

- SVI should be given advice and information that help them to choose the best university for them. Within the university to which they are assigned they should be provided with adequate orientation and a support system to get settled in the university. In addition, SVI should be provided with a manual in appropriate format with all necessary information including their rights.

6.5.2 Recommendations for future research

This research has contributed to the body of knowledge in the area of inclusive education. However, inclusive education is a recent phenomenon and little has been accomplished towards understanding its theory and, particularly, its practice in settings such as Ethiopia. Therefore, the field is a fertile ground for researchers and for practitioners who are interested in conducting research. As this research was delimited to investigating the curriculum experiences of students with visual impairments in two public universities, there are many areas that could be recommended for further research. Some of these are mentioned below:

- The present research was conducted on students with profound visual impairments who cannot depend on their eyes for learning. Therefore, further research should be conducted that considers the learning experiences of students with moderate and severe visual impairments. Likewise, other research should be undertaken that include all students with disabilities in HEIs.

- This research was focused on the academic life of SVI, but it is obvious that students' social lives also affect their learning experience. Therefore, further research should give attention to studying the social lives of SVI and all students with disabilities in higher education.

- This research was conducted taking two Ethiopian universities as case studies. It is important that its findings be replicated by conducting similar research in other HEIs of the country.

- This research was mainly concerned with the learning experiences of SVI. It would be important that any further research endeavours focus on their academic performance as well.

- One important mission of HEIs is preparing students for the world of work. It is obvious that students with disabilities will find it challenging to get employment opportunities unless they are well prepared. Hence, future research should give attention to the relevant preparation for the world of work and the job prospects of students with disabilities who graduate from HEIs in Ethiopia.

6.6 Strengths, contributions and limitations of the study

6.6.1 Strengths and contributions

This study is believed to have the following strengths and contributions:

- The findings of this research were based on data collected from different sources though multiple methods. This has enabled the researcher to reach valid conclusions.

- This research was conducted at a time when inclusive education has become an important policy in Ethiopian education. The findings here have brought to the surface the extent to which inclusive education, although a policy is not yet understood or implemented well, at least in the two universities studied here. This will serve as a signal for HEIs in the country to reconsider their practices with regard to creating equal opportunities of learning for students with disabilities.

- This research is expected to serve as an important reference material in a country where little has been written in the area.

- It is also hoped that this research will serve as an important springboard for others who are interested to pursue similar research in other contexts.

6.6.2 Limitations

It is also important that the major limitations of this research be acknowledged.

- In spite of the fact that the findings of the research were based on rich textual descriptions of the research participants' views, these findings cannot be generalized to other universities of the country since they are based on data collected from a small number of participants from only two case universities.

- It is also important to acknowledge the researcher's lack of previous experience in in-depth qualitative research methodology that might have resulted in certain drawbacks in the research.

- The limitations in the availability of related research literature in the country limited the researcher's ability to compare the findings of this study with those of other similar studies carried out in Ethiopia.

- This research would have been more robust if it had included all SVI as well as students with other types of impairments. The fact that the study was limited to students with profound visual impairments was a limitation.

- The researcher was to some extent moved by the emotional responses of the SVI when they narrated their experiences. As a result, the findings of the study inclined towards the barriers SVI face in their educational journey, giving little focus to their positive experiences.

6.7 Concluding remarks

This study investigated the learning experiences of students with visual impairments in two HEIs in Ethiopia. In this chapter, the main findings of the study that give answers to the basic research questions were synthesized. With regard to the accessibility of the curricula, it was found that SVI choice of fields of study was limited; the curriculum was largely inflexible; SVI access to curriculum materials was very limited; SVI use of assistive technology was limited; assessment practices that SVI experienced were full of challenges; the learning environment for SVI was

less friendly; and the support system from the university for SVI was disorganized and inadequate. The teaching and learning approaches instructors used in the classroom was also found to be insufficiently inclusive and often did not meet the needs of SVI. In spite of the barriers they face, the study revealed that SVI have strong self-concepts and are confident of their capacities of learning; they believed that what mattered most for success was their individual efforts.

These findings led to conclusions which include: SVI in HEIs face a number of barriers in learning; the curriculum of HEIs is highly inflexible and does not allow inclusive teaching and learning; assessment practices are highly unfair to SVI; institutional policies and guidelines that might have a crucial role in implementing inclusive practices are mainly missing; limitations in awareness and skills, as well as in the attitudes of instructors and other support staff, are serious challenges to inclusive practice; and the establishment of a unit solely responsible for students with disabilities' affairs is crucial for providing better accommodations for those students.

The chapter also forwarded some recommendations as a way forward for the development and strengthening of inclusive institutional culture and practices in HEIs of the country. These recommendations included suggestions based on the interview data from SVI and from the researcher himself based on the findings of the study. In addition, areas where future research in relation of inclusive education in higher education could productively focus were recommended.

The chapter ended by identifying strengths and possible contributions of the research to policy and practice. It also acknowledged limitations that might have affected the study.

References

Acedo, C, Amadio, M & Opertti, R (eds) 2008, Defining *an Inclusive Education Agenda: Reflections around the 48th session of the International Conference on Education*. UNESCO. [O]. Available: unesdoc.unesco.org/images/0018/001868/ 186807e.pdf (Accessed 09/25/2010).

Adams, KS & Proctor, BE 2010, 'Adaptation to College for Students with and Without Disabilities: Group Differences and Predictors', *Journal of Postsecondary Education and Disability,* Vol. 22, N0. 3, pp. 176-202.

Adams, M & Holland, S 2006, 'Improving access to higher education for disabled people' In Mike Adams and Sally Brown (eds), *Towards Inclusive Learning in Higher Education: Developing curricula for students with disabilities*, London: Routledge, pp. 10-22.

Ainscow, M 1999, *Understanding the Development of Inclusive Schools*, Falmer Press, London.

Ainscow, M, Both, T & Dyson, A 2006, Improving *Schools, Developing Inclusion*, London and New York: Routledge.

Akker, J 2003, 'Curriculum Perspectives: an Introduction', In, J Akker, U Hameyer & W Kuiper (eds), *Curriculum landscapes and trends,* Dordrecht, Kluwer Academic Publishers , pp. 1-10.

Albert B. 2004, *Briefing Note: The social model of disability, human rights and development*, Disability Knowledge and Research. [O]. Available: www.diabilitykar.net (Accessed on 02/19/2012).

Ali, MA & Yusof, H 2011, Quality in Qualitative Studies: The Case of Validity, Reliability and Generalizability, *Issues in Social and Environmental Accounting*, Vol. 5, No. ½, pp. 25-64.

Allan, J & Clarke, K 2007, 'Nurturing Supportive Learning Environments in Higher Education Through the Teaching of Study Skills: To Embed or Not to Embed?', *International Journal of Teaching and Learning in Higher Education*, Vo.19, No.1, pp. 64-76. [O]. Available: http://www.isetl.org/ijtlhe/ (Accessed on 02/22/2012).

Altbach, PG, Reisberg, L & Rumbley, LE 2009, *Trends in Global Higher Education: Tracking an Academic Revolution*. A Report Prepared for the UNESCO 2009 World Conference on Higher Education UNESCO, UNESCO. [O]. Available: unesdoc.unesco.org/images/0018/001831/183168e.pdf (Accessed on 11/18/2011).

American Council of Education 2004, *Public Accountability for Student Learning in Higher Education*. Washington: Business-Higher Education Forum. [O]. Available: http://www.acenet.edu/programs/ bhef/ home.cfm. (Accessed on 12/29/2012).

Ashwin, P 2006, 'The development of learning and teaching in higher education: the changing context', In P Ashwin (ed.) Changing *Higher Education: The development of learning and teaching*. London & New York: Routledge, pp.1-16.

Athanasios, K, Konstantisnos, P, Doxa, P & Eleni, K (n.d.), *Students with Visual Impairments in Higher Education Institutes*. www.icevi-europe.org/dublin2009/ ICEVI2009_Paper_33.doc (Accessed on 02/22/2012).

Barnard-Brak, L, Lechtenberger, B & Lan, Y 2010, 'Accommodation Strategies of College Students with Disabilities', *The Qualitative Report,* Vol. 15 No.2 pp. 411-429. Accessed on 2/29/2012 http://www.nova.edu/ssss/QR/QR15-2/barnard-brak.pdf (Accessed on 02/29/2012).

Barnes, C 2012, *The Social Model of Disability: Valuable or Irrelevant?* [O]. Available: http://www.leeds.ac.uk/disability-studies/archiveuk/index.html (Accessed on 19/02/2012).

Barnett, DR 2011, 'Partnering Industry and Education for Curricular Enhancement: A Response for Greater Educational Achievement', *Online Journal of Workforce Education and Development,* Vol. V, Issue 2. [O]. Available: opensiuc.lib.siu.edu (Accessed on 10/24/2012).

Beech, M 2005, Accommodations and Modifications for Students with Disabilities in Career Education and Adult General Education, Florida Department of Education. [O]. Available: www.fldoe.org/ese/pdf/311201_acmod-voc.pdf (Accessed on 10/27/2011)

Beech, M 2010, *Accommodations: Assisting students with disabilities*, 3rd ed, Florida Department of education.

Bell, D 2013, Investigating teaching and learning support for students with hearing impairment at a university in the Western Cape, DEd Thesis, Stellenbosch University.

Bentley-Williams, R 2005, Exploring Biographies: The Educational Journey Towards Becoming Inclusive Educators of Children with Disabilities, PhD Thesis, University of Sydney.

Berk, LE 2007, *Development through the Lifespan, 4/E*, Allyn & Bacon: Boston.

Billett, S & Henderson, A (eds) 2011, *Developing Learning Professionals: Integrating Experiences in University and Practice Settings*, London: Springer.

Birenbaum, M, Breuer, K, Cascallar, E, Dochy, F, Ridgway, J, Dori, J & Wiesemes, R 2006, 'A learning integrated assessment system', *Educational Research Review*, 1, pp.61-69. [O]. Available: edu.technion.ac.il/...**education**/.../no12_... (Accessed on 02/22/2012).

Bloom, D, Canning, D & Chan, K 2005, *Higher Education and Economic Development in Africa*, Harvard University.

Booth, T & Ainscow M 2002, *Index for Inclusion: Developing Learning and Participation in Schools*. CSIE.

Boud, D 2006, '"Aren't we all learner-centred now?": the bittersweet flavour of success', In P Ashwin (ed.), *Changing Higher Education: The development of learning and teaching*. London & New York: Routledge, pp.19-32.

Bourke, PE 2008, *The Experience of Instructor Aides who support Students with Disabilities & Learning Difficulties: A Phenomenological Study,* PhD Thesis, Queensland University of Technology. [O]. Available: http://eprints.qut.edu.au/25910/ (Accessed 05/11/2010).

Brantlinger, E, Jimenez, R, Klingner, J, Pugach, M & Richardson, V 2005, Qualitative Studies in Special Education. In *Exceptional Children,* Vol. 71, No.2, pp. 195-207.

Bridges, D 2000, 'Back to the Future: the higher education curriculum in the 21st century', *Cambridge Journal of Education, Vol. 30, No. 1, pp.37-55.*

Bronfenbrenner, U 1979, *The ecology of human development: Experiments by Nature and Design,* Cambridge: Harvard University Press.

Bronfenbrenner, U 1994, 'Ecological Models of Human Development', In *International Encyclopedia of Education*, Vol. 3, 2nd edn, Oxford, Elsevier.

Bronfenbrenner, U 2005. 'The bioecological theory of human Development', In U. Bronfenbrenner (ed.), *Making Human Beings Human: Bioecological perspectives on human development PP 3-15),Thound Oaks, CA: Sage.*

Bronfenbrenner, U, & Morris, PA 2006, 'The bioecological model of human development', In W. Damon & R. M. Lerner (eds), *Handbook of child psychology, Vol. 1: Theoretical models of human development,* 6th edn, pp. 793 – 828, Wiley, New York.

Burton, D and Bartlett, S 2009, *Key Issues for Educational Researchers,* SAGE Publications [O]. Available: http://0-dx.doi.org.oasis.unisa.ac.za/ 10.4135/9781446269480.n2 (Accessed on 10/11/2013).

Cameron, C 2008, 'Further towards and affirmation model', In *Disability studies: emerging insights and perspectives,* Leeds: Disability Press, pp. 12-27. [O]. Available: eresearch.qmu.ac.uk/1441/ (Accessed on 02/19/2012).

Candido, JP 2008, *Visual Impairment in Visual Medium Perspectives of online learners with Visual impairments*. PhD Thesis, Drexel University. [O]. Available: idea.library.drexel.edu/bitstream/1860/.../1/Candido_Jacqueline.pdf (Accessed on 06/03/2010).

Carson, G 2009, *The Social Model of Disability*. Glasgow: Scottish Accessible Information Forum. [O]. Available: www.tsoshop.co.uk (Accessed 11/15/2010).

Cohen, D, Crabtree, B "Qualitative Research Guidelines Project." July 2006. [O]. Available: http://www.qualres.org/HomeInte-3516.html (Accessed on 12/10/2013).

Cohen, L, Manion, L, & Morrison, K 2007, *Research Methods in Education*, 6th edn, London: Routledge Falmer.

Corbetta, P 2003, *Social Research*: *Theory, Methods and Techniques,* SAGE Publications, London: Thousand Oaks.

Cousin, G 2009, *Researching Learning in Higher Education: an Introduction to Contemporary Methods and Approaches Staff and Educational Development Series*, New York and London: Taylor & Francis Routledge.

Craddock, D & Mathias, B 2009, 'Assessment options in higher education', *Assessment & Evaluation in Higher Education,* Vol. 34, No. 2, pp.127–140.

Creswell, JW 2009, *Research Design: Qualitative, Quantitative, and Mixed Methods approaches, 3rd.* USA: SAGE Publications.

Crosling, G, Thomas, L & Heagney, M 2008, 'Student success and retention', In G Crosling, L Thomas & M Heagney (eds), *Improving Student Retention in Higher Education: The role of Teaching and learning,* New York: Routledge.

D'Andrea, V & Gosling, D 2005, *Improving Teaching and Learning: A Whole Institution Approach*, England: Society for Research into Higher Education & Open University Press.

Darling, N 2007, Ecological Systems Theory: The Person in the Center of the Circles, *Research in Human Development*, Vol. 4, No. 3–4, pp. 203–217.

Davis, P 2003, *Including Children with Visual Impairment in Mainstream Schools: A Practical Guide*, London: David Fulton Publishers.

DeCoste, DC n.d, *Universal design for Learning in the Classroom, High Incidence Accessible Technology (HIAT*). [O]. Available: http://montgomeryschoolsmd.org/departments/hiat (Accessed on 08/03/2013).

Department for Education and Skills (dfes) 2003, *The Future of Higher Education*, The Stationary Office Limited. [O]. Available: www.bis.gov.uk/assets/BISCore/corporate/.../F/future_of_he.pdf (Accessed on 12/22/2012)

Department for Innovation, Universities and Skills 2009, *Students with disabilities and Higher Education*. Higher Educational Analysis. DIUS Research Report. [O]. Available: www.bis.gov.uk/assets/biscore/corporate/.../d/dius_rr_09_06.pdf (Accessed on 2/24/2012).

Dezure, D 2002, 'Innovations in the Undergraduate Curriculum', In *Encyclopaedia of Education,* 2nd edn, The Gale Group, pp. 509-514.

Eleweke, CJ. & Rodda, M 2000, *Enhancing Inclusive Education in Developing Countries* (Paper presented at International Special Education Congress, 2000, University of Manchester). [O]. Available: www.isec2000.org.uk/abstracts/ papers_e/eleweke_ 1.htm (Accessed 10/25/2010).

Ethiopian Ministry of Education (EMoE) 1994, *Education and Training Policy,* Addis Ababa: MoE.

Ethiopian Ministry of Education (EMoE) 1997, *Education Sector Development Program I (ESDP I) - 1997/1998 – 2001/2002: Program Action Plan*, Addis Ababa: EMOE.

Ethiopian Ministry of Education (EMoE) 2005, *Education Sector Development Program III. (ESDP III) - 2005/2006 – 2010/2011: Program Action Plan*, Addis Ababa: EMOE.

Ethiopian Ministry of Education (EMoE) 2006. *Special Needs Education Program Strategy*.

Ethiopian Ministry of Education (EMoE) 2010, *Education Sector Development Program IV (ESDP IV) - 2010/2011 – 2014/2015: Program Action Plan*, Addis Ababa: EMOE.

Ethiopian Ministry of Education (EMoE) 2011, *Education Statistics Annual Abstract: 2010/2011, EMIS*, Addis Ababa: Planning and Resource Mobilization Directorate.

Ethiopian Ministry of Social Affairs 2012, National Plan of Action of Persons with disabilities (2012 – 2021), Addis Ababa.

Federal Democratic Republic of Ethiopia (FDRE) 2003, *Higher Education Proclamation, Proclamation No. 351/2003*, Addis Ababa: Negarit Gazette.

Federal Democratic Republic of Ethiopia (FDRE) 2009, *Higher Education Proclamation No. 650/2009*, Addis Ababa: Negarit Gazette.

Federal Democratic Republic of Ethiopia (FDRE) 2011, *Ethiopian Building Proclamation No. 624/2009*, Addis Ababa: Negarit Gazette.

Fell, B & Wray, J 2006, 'Supporting students with disabilities on placement', In M Adams & S Brown (eds), *Towards Inclusive Learning in Higher Education: Developing Curricula for Students with disabilities,* London: Routledge Falmer.

Finley, L 2008, *Introducing Phenomenological Research*. [O]. Available: lindafinlay.co.uk (Accessed 09/07/2010).

Foundation of Tertiary Institutions of the Northern Metropolis (FOTIM) 2011, Disability in higher education project report. [O]. Available: http://www. uct.ac.za/usr/disability/reports/ progress_report10_11.pdf (Accessed on 02/23/2015).

Fraenkel, JR. & Wallen, NE 2009, How to design and evaluate research in education . 7th edn, New York: McGraw-Hill.

Fry, H, Ketteridge, S & Marshal, S 2009, 'Understanding Students' Learning', In H Fry, S Ketteridge & S Marshal, (eds), *A Handbook for Teaching and Learning in Higher Education: Enhancing Academic Practice*, 3rd edn, London: Routledge.

Fuller, M, Bradley, A & Healey, M 2004, 'Incorporating students with disabilities within an inclusive higher education environment', *Disability & Society*, Vol.19, No.5, pp. 455-468.

Fuller, M, Georgeson, J, Healey, M, Kelly, K, Roberts, H, Oddy, G, Riddell, Weedon, E, Peelo, M, & Hurst, A 2008, Students with disabilities in Higher Education: Experiences and Outcomes. Centre for research in Education, Inclusion and Diversity. *Teaching and Learning Research Briefing*. No. 46. [O]. Available: www.tlrp.org (Accessed on 2/22/2012).

Fuller, M, Healey, M, Bradley, A & Hall, T 2004, 'Barriers to learning: a systematic study of the experience of students with disabilities in one university', *Studies in Higher Education*, Vol.29, No.3, pp. 303-318.

Garner, F 2009, *Special Educational Needs: The Key Concepts*. New York: Routledge.

Gavira, RL & Morina, A 2015. Hidden voices in higher education: inclusive policies and practices in social science and law classrooms. International Journal of Inclusive Education, Vol. 19, No. 4, 365–378. [O]. Available: http://dx.doi.org/10.1080/13603116.2014.935812 (Accessed on 01/04/15).

Geelan, D 2007, *Weaving Narrative Nets to Capture Classrooms: Multimethod Qualitative Approaches for Educational Research,* Alberta: Springer.

Giangreco, MF, Carter, EW, Doyle, MB & Suter, JC 2010, 'Supporting students with disabilities in inclusive classrooms: personnel and peers', In R. Rose (ed.), *Confronting Obstacles to Inclusion: International responses to developing inclusive education*, London: Routledge.

Glatthorn, A, Boschee, F & Whitehead, BM 2005, *Curriculum Leadership: Development and Implementation*, Thousand Oaks: SAGE Publications.

Golafshani, N 2003, Understanding Reliability and Validity in Qualitative Research. *The Qualitative Report,* Vol. 8, No. 4, pp. 597-607. http://www.nova.edu/ssss/QR/QR8-4/golafshani.pdf (Accessed on 07/02/14).

Gravestock, P n.d, *Developing an Inclusive Curriculum: a guide for lecturers of Geography, Earth and Geo-environmental Sciences*. [O]. Available: http://www2.glos.ac.uk/gdn/icp/dlecture.pdf (Accessed on 3/14/2011).

Groenewald, T 2004, A Phenomenological Research Design Illustrated. *International Journal of Qualitative Methods 3 (1)*. http://www.ualberta.ca/~iiqm/ backissues/31/ pdf/groenewald.pdf (Accessed on 07/09/2010).

Guba, EG & Lincoln, YS 1998, 'Competing Paradigms in Qualitative Research', In NK Denzin & YS Lincoln (eds), *The Landscape of Qualitative Research : Theories and Issues*, Thousand Oaks: Sage Publications. PP. 195-220.

Hadjikakou, K & Hartas, D 2008, 'Higher education provision for students with disabilities in Cyprus', *Higher Education*, Vol. 55, pp.103–119.

Haihambo, CK 2010, Inclusive Education: Challenges of Students with Disabilities in Institutions of Higher Education in Namibia, DEd Thesis, University Of South Africa. [O]. Available: http://hdl.handle.net/10500/3702 (Accessed 11/05/2010).

Hall, T, Healey, M & Harrison, M 2002, 'Fieldwork and students with disabilities: Discourses of exclusion and inclusion', *Transactions of the Institute of British Geographers, New Series*, Vol. 27, No.1. PP 213-231.

Hammersley, M 2012, Methodological Paradigms in Educational Research, *British Educational Research Association on-line resource*. [O]. Available: www.bera.ac.uk (Accessed on 11/10/2013).

Hanafin, J, Shevlin, M, Kenny, M & McNeela, E 2006, 'Including young people with disabilities: Assessment challenges in higher education', *Higher Education*, (2007) 54, pp. 435–448.

Hanley-Maxwell, C, & Brian B 2006, "Reconceptualizing and Recentering Research in Special Education." *The SAGE Handbook for Research in Education,* SAGE Publications. [O]. Available: http://0-www.sage-ereference.com.oasis.unisa.ac.za/hdbk_researchedu/Article_n10.html (Accessed on 07/25/2012).

Hartley, S & Muhit, M 2003, Using Qualitative Research Methods for Disability Research in Majority World Countries, Asia *Pacific Disability Rehabilitation Journal,* Vol. 14, No. 2, pp. 103-114.

Harwell, MR 2011, Research Design in Qualitative/Quantitative/Mixed Methods. In Clifton F. Conrad & Ronald C. Serlin, *The SAGE Handbook for Research in Education: Pursuing Ideas as the Keystone of Exemplary Inquiry*, *Second Edition.* pp. 147-163. www.sagepub.com/upm-data/41165_10.pdf (Accessed on 10/15/2010).

Hass, G 1987, *Curriculum Planning: A new approach*, 5th edn, Boston: Allyn & Bacon.

Hatch, JA 2002, *Doing Qualitative Research in Education Settings,* Albany: State University of New York.

Heagney, M 2009, 'Student success and student diversity, In G Crosling, L Thomas & M Heagney (eds), *Improving Student Retention in Higher Education: The role of Teaching and learning,* New York: Routledge.

Healey, M, Bradley, A, Fuller, M & Hall, T 2006, 'Listening to students: the experiences of students with disabilities of learning at university, In M Adams and S Brown (eds), *Towards Inclusive Learning in Higher Education: Developing Curricula for Disabled Students,* London: Routledge Falmer.

Healey, M, Jenkins, A, Leach, J & Roberts, C 2001, *Issues in Providing Learning Support for Disabled Students Undertaking Fieldwork and Related Activities*, Gloucestershire: Geography Discipline Network. [O]. Available: http://www.glos.ac.uk/gdn/ (Accessed on 2/22/2012).

Hemingway, L 2007, *Emerging Insights and Perspectives within Disability Studies*. [O]. Available: http://disability-studies.leeds.ac.uk/files/library/Campbell-Emerging-insights-book.pdf (Accessed on 04/15/2013).

Henard, F 2010, *Learning our Lesson: Review of Quality Teaching in Higher Education,* OECD. [O]. Available: *www.sourceoecd.org/education/9789264079274* (Accessed on 12/31/2012).

Herrington, M (ed.) 2002, *Making Reasonable Adjustments with Disabled Students in Higher Education*, University of Nottingham.

Hewitt, TW 2006, *Understanding and Shaping the Curriculum: what we teach and why,* Thousand Oaks: Sage Publications.

Hirsto, L 2001, *Children in their Learning Environments: Theoretical Perspectives*, Helsinki: Unit of Educational Psychology of the University of Helsinki. [O]. Available: http://ethesis.helsinki.fi (Accessed on 03/28/2013).

Hodgson, V 2006, 'Participative assessment and the learners' experience', In P Ashwin (ed.), *Changing Higher Education: The development of learning and teaching*. London & New York: Routledge, pp.33-46.

Holbrook, MC & Koenig, AJ 2000, *Foundations of Education: Instructional strategies for teaching children and youths with visual impairments Learning* (4th edn). New York: Holt, Rinehart and Winston.

Holloway, S 2001, 'The Experience of Higher Education from the Perspective of Disabled Students', *Disability & Society*, Vol.16, No.4, pp.597-615. [O]. Available: http://dx.doi.org/10.1080/09687590120059568 (Accessed on 2/21/2012).

Hooker, M 2007, *Concept note: Developing a model for inclusive education and assistive technology appropriate for teaching and learning contexts in developing countries*. [O]. Available: www.gesci.org/old/files/docman/model_ie_at.pdf (Accessed on 10/24/2012).

Howell, C & Lazarus, S 2003, 'Access and participation for students with disabilities in South African higher education: Challenging accepted truths and recognizing new possibilities, *Perspectives in Education*, Vol. 21, No.3, 59-74.

Howell, C 2006, 'Disabled students and higher education in South Africa', In B Watermeyer et al (eds), *Disability and Social Change: A South African Agenda*, Human Sciences Research Council, Cape Town, pp.164-178.

Howes, A, Davies, SMB & Fox, S 2009, *Improving the Context for Inclusion: Personalising instructor development through collaborative action research*, London: Routledge.

Hunt, L, Bromage, A & Tomkinson, B (eds) 2006, *The Realities of Change in Higher Education: Interventions to promote learning and teaching*, London & New York: Routledge.

Hutton, RS 2009, *Enhancing Instructor Learning in Inclusion,* PHD Thesis, Massey University, New Zealand.

Izzo, MV, Hertzfeld, J, Simmons-Reed, E & Aaron, J 2001, 'Promising Practices: Improving the Quality of Higher Education for Students with Disabilities', *Disability Studies Quarterly*, Vol. 21, N0 1. [O]. Available: http://dsq-sds.org/ (Accessed on 10/30/2012).

Jacklin, A, Robinson, C, O'Meara, L & Harris, A 2007, *Improving the experiences of disabled students in higher education*, The Higher Education Academy.

Johnson, DM & Fox, JA 2003, 'Creating Curb Cuts in the Classroom: Adapting Universal Design Principles to Education', In J.L. Higbee (ed.) *Curriculum Transformation and Disability: Implementing Universal Design in Higher Education*, USA: Center for Research on Developmental Education and Urban Literacy.

Johnson, RB & Onwuegbuzie, AJ 2004, 'Mixed Methods Research: A Research Paradigm Whose Time Has Come', In *Educational Researcher*, Vol. 33, No. 7, pp. 14-26. [O]. Available: http://www.jstor.org/stable/3700093 (Accessed on 10/15/2013).

Joseph, MM 2010, *A Phenomenological Study Exploring the Educational, Vocational and Social Experiences of College Educated Individuals Who are Visually Impaired,* PHD Thesis, Ohio University.

Kachondham, P 2010, Disabled Students Services (DSS) in Higher Education in Thailand, *NTUT Education of Disabilities,* Vol.8.

Katsiyannis, A, Zhang, D, Landmark, L & Reber, A 2009, 'Postsecondary Education for Individuals with Disabilities: Legal and Practice Considerations', In *Journal of Disability Policy Studies, Vol,* 20, No. 35, pp. 1-11. [O]. Available: http://dps.sagepub.com/content/20/1/35 (Accessed on 03/02/2012).

Kearney, AC 2009, *Barriers to School Inclusion: An investigation into the exclusion of Disabled Students From and Within New Zealand Schools,* PhD Thesis, Massey University, New zealand. [O]. Available: http://hdl.handle.net/10179/876 (Accessed 11/05/2010).

Kelly, AV 2004, *The Curriculum Theory and Practice*, 5th edn, London: Sage Publications.

Khan, MS 2007, *School Curriculum*, New Delhi: APH Publishing Corporation.

Kneale, P 2009, 'Teaching and learning for employability: knowledge is not the only outcome', In H Fry, S Ketteridge & S Marshall (eds) *A Handbook for Teaching and Learning in Higher Education: Enhancing Academic Practice*, 3rd edn, New York: Routledge.

Knight, P & Yorke, M 2004, *Learning, Curriculum and Employability in Higher Education*, London & New York: Routledge Falmer.

Koga, N 2004, *Curriculum Modification: Curriculum Enhancement*, National Center on Accessing the General Curriculum.

Koga, N, & Hall, T 2004, *Curriculum modification.* Wakefield, MA: National Center on Accessing the General Curriculum. [O]. Available: http://aim.cast.org/learn/historyarchive/backgroundpapers/curriculum_mod... (Accessed on 10/19/2011)

Koganuramath, MM & Choukimath, PA 2009, *Learning Resource Centre for the Visually Impaired Students in the Universities to Foster Inclusive Education*. [O]. Available: crl.du.ac.in/ical09/papers/index_files/ical-104_215_458_2_RV.pdf (Accessed on 04/04/2011)

Konecni-Upton, G 2010, A Descriptive Analysis of Students with Disabilities' Experiences in an Inclusive Setting: A Phenomenological Study of Belonging and Self-Esteem, PhD Thesis, Walden University. [O]. Available: http://hdl.handle.net/10500/3731 (Accessed 05/11/2010).

Konur, O 2007, Computer-assisted teaching and assessment of disabled students in higher education: the interface between academic standards and disability rights, *Journal of Computer Assisted Learning*, **23**, 207–219. [O]. Available: 10.1111/j.1365-2729.2006.00208. (Accessed

on 02/29/2012).

Kouwenhoven, W, n.d., *Competence-based curriculum development in higher education: some African experiences*. [O]. Available: http://dare.ubvu.vu.nl/bitstream/handle/1871/15816/7 (Accessed on 01/09/2012).

Krauss, SE 2005, Research paradigms and meaning making: A primer. *The Qualitative Report, vol.10*, No. 4, pp. 758-770. [O]. Available: http://www.nova.edu/ssss/QR/QR10-4/krauss.pdf (Accessed on 05/02/14).

Krefting, L 1991, Rigor in Qualitative Research: The Assessment of Trustworthiness, *The American Journal of Occupational Therapy,* Volume 45, Number 3, pp. 214-222.

Kridel, CA (ed.) 2010, *Encyclopaedia of Curriculum Studies*, Vol. 1. Thousand Oaks: SAGE Publications.

Kuno, K 2008, *Concepts around Disability and Disabled People*. [O]. Available: www.detforum.com/files/DET_Book1_Part4.pdf (Accessed on 04/15/2013).

Lacey, A & Luff, D 2007, *Qualitative Research Analysis. The NIHR RDS for the East Midlands/ Yorkshire & the Humber*. [O]. Available: www.rds-eastmidlands.nihr.ac.uk (Accessed 02/01/2011).

Lang, R 2001, *The Development and Critique of the Social Model of Disability,* www.ucl.ac.uk/...lang/DEVELOPMMENT_AND_CRITIQUE_OF_THE_... *(*Accessed on 04/15/2013).

LeCompte, MD & Goetz, JP 1982, Problems of Reliability and Validity in Ethnographic Research, *Review of Educational Research,* Vol. 52, No. 1, Pp. 31-60.

Leville, DE 2005, *An Emerging View on Accountability in American Higher Education*, Berkeley: Center for Studies in Higher Education. [O]. Available: http://cshe.berkeley.edu/ (Accessed on 10/24/20112).

Lewis, B, Jackson, LB, Ryndak, DL & Wehmeyer, ML 2008-2009, *The Dynamic Relationship Between Context, Curriculum, and Student Learning: A Case for Inclusive Education as a Research-based Practice*, Research & Practice for Persons with Severe Disabilities, Vol. 33-4, No. 4-1, 175–195.

Lewis, I 2009, *Education for Disabled People in Ethiopia and Rwanda*: Paper commissioned for the EFA Global Monitoring Report 2010, Reaching the marginalized: Paris: UNESCO. [O]. Available: **unesdoc.unesco.org**/images/ 0018/ 001865/186564e.pdf (Accessed on 11/04/2010).

Lincoln, YS & Guba, EG 1985, *Naturalistic Inquiry,* Newbury Park: SAGE.

Luke, SD & Schwartz, A 2007, Assessment and Accommodations, *Evidence for Education*, Volume 2, Issue 1.

Mace, R 1997, *What is Universal Design? Center for Universal design*, USA: NC State University. [O]. Available: http://www.design.ncsu.edu/cud/univdesign/ud.htm (Accessed on 04/15/2013).

Mack, N, Woodsong, C, MacQueen, KN, Guest, G & Namey, E 2005, *Qualitative Research Methods: A Data Collector's Field Guide*. Family Health International. [O]. Available: http://www.fhi.org (Accessed on 09/11/2010).

Mackenzie, N & Knipe, S 2006, 'Research dilemmas: Paradigms, methods and methodology', *Issues in Educational Research*, Vol.16, No. 2, pp.193-205. [O]. Available: http://www.iier.org.au/iier16/mackenzie.html (Accessed on 10/20/2010).

Madriaga, M, Hanson, K, Heaton, C, Kay, H, Newitt, S & Walker, A 2010, 'Confronting similar challenges? Disabled and non-disabled students' learning and assessment experiences', *Studies in Higher Education*, Vol. 35, No.6, pp. 647-658.

Madriaga, M, & D Goodley 2010, 'Moving beyond the minimum: Socially-just pedagogies and Asperger Syndrome in UK higher education', *International Journal of Inclusive Education* 14,

No. 2: pp.115–31.

Mahlo, FD 2011, Experiences of learning support instructors in the foundation phase, with reference to the implementation of inclusive education in Gauteng, DEd Thesis, University of South Africa.

Marshak, L Van Wieren, T, Ferrell, DR, Swiss, L & Dugan, C 2010, 'Exploring Barriers to College Student Use of Disability Services and Accommodations', *Journal of Postsecondary Education and Disability,* Vol. 22, No. 3, pp.156-175.

Martin, OE n.d., *Running Head: Guidelines for Accommodations*, Liberty University. [O]. Available: higherlogicdownload.s3.amazonaws.com/.../CEC%20Art%206%20Marti... (Accessed on 10/16/2012).

Matshedisho, KR 2007, 'Access to higher education for disabled students in South Africa: a contradictory conjuncture of benevolence, rights and the social model of disability', *Disability & Society*, Vol.22, No. 7, pp. 685-699. [O]. Available: http://dx.doi.org/10.1080/09687590701659535 (Accessed on 02/24/2012).

Maxwell, JA 2005, *Qualitative Research Design: An Interactive Approach,* London: SAGE Publications.

Maxwell, JA 2009, Designing a qualitative study, In Leonard Bickman & Debra J. Rog (Eds), *The Sage handbook of applied social research methods* (2nd edn, pp. 214–253), Thousand Oaks, CA: Sage.

McGuire, JM, Scott, SS & Shaw, SF 2006, 'Universal Design and Its Applications in Educational Environments', *Remedial and Special Education*, Vol. 27, No. 3, pp. 166-175, ProQuest Education Journals.

Mcinnis, C 2006, 'Assessment and change in higher education', In L Hunt, A Bromage & B Tomkinson (eds), *The Realities of Change in Higher Education: Interventions to promote learning and teaching,* London & New York: Routledge.

McKenzie, AR 2009, *Self-Reported Barriers to Enrollment and Retention of Students with Disabilities at Institutions of Higher Education in the State of Florida*.

Mckerna, J 2008, *Curriculum and Imagination: Process theory, pedagogy and action research*, London & New York: Routledge.

Midwestern Higher Education Compact, 2009, *Completion-based Funding for Higher Education*, Minneapolis: Midwestern Higher Education Compact. [O]. Available: www.mhec.org (Accessed on 10/24/2012).

Miles, MB & Huberman, AM 1994, *Qualitative Data analysis: an expanded resource book, 2nd edn,* Thousand Oaks: Sage Publications.

Ministry of Education (MOE) 2009, *A Guide to Adaptations and Modifications British Colombia*, www.bced.gov.bc.ca/.../adaptations_and_modifications_guide.pdf (Accessed on 10/27/2011)

Mnyanyi, CBF 2008, *From teaching to learning: Involving pupils with visual impairment in ordinary primary school classroom teaching and learning process*. (A Paper presented in the ECER 2008 Conference 8-12 September, Sweden: Göteborg University). [O]. Available: www.eera-ecer.eu/fileadmin/user_upload (Accessed 06/03/2010).

Morrow, SL 2005, Quality and Trustworthiness in Qualitative Research in Counseling Psychology, *Journal of Counseling Psychology*, Vol. 52, No. 2, pp. 250-260.

Moswela, E & Mukhopadhyay, S 2011, 'Asking for too much? The voices of students with disabilities in Botswana', *Disability & Society*, Vol. 26, No. 3, pp. 307-319.

Murphy, E, Dingwall, R, Greatbatch, D, Parker, W, & Watson, P 1998, Qualitative Research methods in health technology assessment: a review of the literature, *Health Technol Assessment* 1998; **2**(16). [O]. Available: http://www.hta/ac.uk (Accessed 9/11/2010).

National Mental Health Consumer & Carer Forum, 2011, *Unravelling Psychosocial Disability, A Position Statement by the National Mental Health Consumer & Carer Forum on*

Psychosocial Disability Associated with Mental Health Conditions, Canberra: NMHCCF. [O]. Available: www.nmhccf.org.au (Accessed 02/16/2013).

Neuman, WL 2000, *Basics of Social Research: Qualitative and Quantitative Approaches, 2nd edn,* Boston: Pearson Education.

Nicol, DJ & Macfarlane-Dick, D 2006, 'Formative assessment and Self-regulated learning: a model and seven principles of good feedback practice', *Studies in Higher Education, Vol. 31, No. 2, pp.199-218.*

Norton, L 2007, 'Using assessment to promote quality learning in higher education', In A Campbell, & L Norton (eds), *Learning, Teaching and Assessing in Higher Education: Developing Reflective Practice,* Great Britain: Learning Matters Ltd.

Norton, L 2009, 'Assessing Student Learning', In H Fry, S Ketteridge & S Marshall (eds) *A Handbook for Teaching and Learning in Higher Education: Enhancing Academic Practice*, 3rd edn, New York: Routledge.

O'Donoghue, T 2007, *Planning Your Qualitative Research Project: an introduction to interpretivist research in education*, London: Routledge.

Okumbe, MA & Tsheko, GN n.d., *The Need for Curriculum Modifications for Special Needs Learners in Botswana*. [O]. Available: www.iaea.info/documents/paper_1162a204e4.pdf (Accessed on 10/27/2011).

Oliva, PF 1992, *Developing the Curriculum, 3rd edn*, New York: Harper Collins publishers.

Oliver, M 2004, 'The social model in action: If I had a hammer', in Barnes, C. and Mercer, G. (eds), *Implementing the social model of disability: Theory and research*, Leeds.

Opini, B n.d, Barriers to Participation of Women Students with Disabilities in University Education in Kenya, In *Journal of Postsecondary Education and Disab*ility*, 25*(1)*, 65 - 79*

Paquette, D & Ryan, J n.d., *Bronfenbrenner's Ecological Systems Theory*. [O]. Available:

http://www.dropoutprevention.org/sites/default/files/paquetteryanwebquest_20091110.pdf (Accessed on 11/10/2011).

Patton, AQ 2002. *Qualitative Research and Evaluation Methods. 3rd edn,* Thousand Oaks, New York: Sage Publications.

Pedelty, M 2003, 'Making a Statement', In J.L. Higbee (ed.) *Curriculum Transformation and Disability: Implementing Universal Design in Higher Education*, USA: Center for Research on Developmental Education and Urban Literacy.

Peters, SJ 2003, *Inclusive Education: Achieving Education for All by Including Those with Disabilities and Special Education Needs*. Prepared for the Disability Group, The World Bank.

Popham, WJ & Baker, E 1970, *Systematic Instruction*, Eaglewood Cliffs, NJ: Prentice-Hall.

Powell, S (ed.) 2003, *Special Teaching in Higher Education: Successful Strategies for Access and Inclusion,* London and Sterling: Kogan Page.

Print, M 1993, *Curriculum Development and Design, 2nd edn,* Australia: Allen & Unwin.

Redpath, J, Kearney, P, Nicholl, P, Mulvenna, M, Wallace, J & Martin, M 2012, 'A qualitative study of the lived experiences of disabled post-transition students in higher education institutions in Northern Ireland', *Studies in Higher Education*, pp.1-17. [O]. Available: http://dx.doi.org/10.1080/03075079.2011.622746 (Accessed on 02/22/2012).

Riddell, *et al.* 2007, 'Managerialism and equalities: Tensions within widening access policy and practice for disabled students in UK universities', *Higher Education, Vol.* 54, No 4:615–628.

Rodrigues, J 2007, *Quick reference Manual: Making modifications, Accommodations and Variations for Students Success.* [O]. Available: www.jimrodslz.com/sped.html (Accessed on 10/21/2011).

Patton, AQ 2002, *Qualitative Research and Evaluation Methods. 3rd edn,* Thousand Oaks, New York: Sage Publications.

Rose, D, Harbour, W, Johnston, CS, Daley, S & Abarbanell, L 2007, *Universal Design for Learning in Postsecondary Education: Reflections on Principles and their Application*, National Center on Universal Design for Learning. [O]. Available: www.udlcenter.org (Accessed on 07/03/2013).

Rose, R 2006, "Curriculum considerations in meeting special educational needs" In *The SAGE Handbook of Special Education,* SAGE Publications. [O]. Available: <http://0-www.sage-ereference.com.oasis.unisa.ac.za/ hdbk_specialedu/Article_n23.html>. (Accessed on 07/25/2012).

Roy, AWN 2003, 'Students with Visual Impairment', In S Powell (ed.), *Special Teaching in Higher Education: Successful Strategies for Access and Inclusion,* London and Sterling: Kogan Page.

Rubin, A & Babbie, E 2010, *Research Methods for Social Work, 7th edn,* Cengage Learning.

Russell, D & Demko, R 2010, *Accommodating Learners with Disabilities in Post-Secondary Education in Alberta: A Review of Policies, Programs, and Support Services*

Sachs, D & Schreuer, N 2011, 'Inclusion of Students with Disabilities in Higher Education: Performance and participation in student's experiences', *Disability Studies Quarterly*, Vol. 31, No 2. [O]. Available: dsq-sds.org/ (Accessed on 10/30/2012)

Saint, W 2004, *Higher Education in Ethiopia: The Vision and Its Challenges*, JHEA/RESA, Vol. 2, No. 3, pp.83–113.

Saldana, J 2009, *The Coding Manual For Qualitative Researchers,* London: Sage Publications.

Salisbury, R (ed.), 2008, *Teaching Pupils with Visual Impairment: A guide to making the school curriculum accessible*, London: Routledge.

Saylor, JG, Alexander, WM & Lewis, AJ 1981, *Curriculum planning for better teaching and Learning,* 4th edn, New York: Holt, Rinchart & Winston.

Schiro, M 1978, *Curriculum for Better schools: The Great Ideological Debate*, Eaglewood Cliffs: Educational Technology Publications.

Schneider, M 2006, 'Disability and the Environment', In B Watermeyer, L Swartz, T Lorenzo, M Schneider & M Priestley, *Disability and social Change: a South African Agenda*, Cape Town: Human Sciences Research Council, www.hsrcpress.ac.za pp. 8-17.

Seale, C & Silverman, D 1997. Ensuring rigour in qualitative research, *European Journal of Public Health*, Vol. 7, No. 4, pp. 379-384.

Shenton, AK 2004, Strategies for ensuring trustworthiness in qualitative research projects, *Education for Information*, Vol. 22, pp. 63–75.

Shepherd, IDH 2006, *Developing an Inclusive Curriculum for Visually Disabled Students*, University of Gloucestershire.

Shevlin, M, Kenny, M & Mcneela, E 2004, 'Participation in higher education for students with disabilities: an Irish perspective', *Disability & Society*, Vol.19, No.1, pp. 15-30.

Singal, N 2007, *Conceptualizing disability and education in the SOUTH: challenges for research, Research Consortium on Educational Outcomes and Poverty,* RECOUP Working Paper No. 10.

Skelton, A 2005, *Understanding Teaching Excellence in Higher Education: Towards a critical approach,* New York: Routledge.

Skilbeck, M 1984, *School-Based Curriculum Development*, London: Harper & row Ltd.

Sloan, D, Stone, S & Stratford, J 2006, 'Creating engaging, accessible multimedia for learning', In M Adams & S Brown (eds), *Towards Inclusive Learning in Higher Education: Developing Curricula for Disabled Students,* London: Routledge Falmer.

Smart, JC & Michael, PB (ed.) 2011, *Higher Education: Handbook of Theory and Research,* Vol. XXVI, London & New York: Springer.

Smith, L 2011, 'Applying the Bio-ecological Theory of Human Development to learning: Enhancing student engagement in online learning', In J. Skalicky, A. Adam, D. Abbott, & G. Kregor (eds), *Proceedings of the 10th Teaching Matters Annual Conference. Sharing practice* [online], Hobart: Centre for the Advancement of Learning and Teaching, University of Tasmania.

Sopko, KM 2009, *Universal Design for Learning: Policy Challenges and Recommendations, Project Forum*. [O]. Available: http://www.projectforum.org (Accessed on 04/15/2013).

Stake, RE 2010, *Qualitative Research: Studying how Things Work*. New York: The Guilford Press.

Staller, KM 2010, Qualitative Research. In Neil J. Salkind, *Encyclopedia of Research design*. SAGE Publications. PP. 1159-1164. [O]. Available: http://0-dx.doi.org.oasis.unisa.ac.za/10.4135/9781412961288.n350 (Accessed on 10/15/2010).

Stodden, RA, Chang, WC & Harding, T 2001, 'Current status of educational support provision to students with disabilities in postsecondary education', *Journal of Vocational Rehabilitation*, Vol. 16, pp. 189–198. [O]. Available: http://www.rrtc.hawaii.edu (Accessed on 03/11/2011).

Su, SW 2012, 'The Various Concepts of Curriculum and the Factors Involved in Curricula-making', *Journal of Language Teaching and Research*, Vol. 3, No. 1, pp. 153-58. [O]. Available: ojs.academypublisher.com (Accessed on 01/09/2012).

Swart, E & Greyling, E 2011, 'Participation in higher education: experiences of students with disabilities', *Acta Academica,* Vol. 43, No.4. [O]. Available: *http://www.ufs.ac.za/ActaAcademica* (Accessed on 03/11/2015).

Taba, H 1962, *Curriculum development: Theory and practice,* New York: Harcourt Brace Jovanovich.

Teachability Project 2000, Creating *an Accessible Curriculum for Students with Disabilities,* Glasgow: University of Strathclyde [O]. Available: http://www.teachability.strath.ac.uk/ (Accessed on 03/12/2011).

Tennant, M, McMullen, C & Kaczynski, D 2010, *Teaching, Learning and Research in Higher Education: A Critical Approach,* New York: Routledge.

Teshome Yizengaw 2005, *Policy development in higher education in Ethiopia and the role of donors and development partners*. (Paper presented at the International Expert Meeting- "Formulas that work: Making Higher education Support More effective; The Hague, The Netherlands, 23-24, May, 2005).

The Constitution of the Federal Democratic Republic of Ethiopia, Proclamation No 1/1995, Addis Ababa: Negarit Gazette.

The Higher Education Academy, 2006, *Embedding Success: Enhancing the learning experience of disabled students*. [O]. Available: www.heacademy.ac.uk/assests/documents/resources/database/id594 (Accessed on 02/24/2012).

The Quality Assurance Agency for Higher Education 2010, *Code of practice for the assurance of academic quality and standards in higher education*, Gloucester.

The World Bank 2002, *Constructing Knowledge Societies: New Challenges for Tertiary Education,* Washington DC: World Bank.

Thomas, L 2008, Learning and teaching strategies to promote student retention and success. In G Crosling, L Thomas & M Heagney (eds), *Improving Student Retention in Higher Education: The role of Teaching and learning,* New York: Routledge, pp. 69-81.

Tinklin, T, Riddell, S & Wilson, A 2004, 'Policy and provision for disabled students in higher education in Scotland and England: the current state of play', *Studies in Higher Education*, Vol. 29, No.5, 637-657. [O]. Available: http://dx.doi.org/10.1080/0307507042000261599 (Accessed on 02/21/2012).

Tirusew T, Daniel D, Alemayehu T, FAntahun A, sewalem T, Tilahun A, Yirgashewa B & Yeshitila M 2014, Assessment of the situation of students with disabilities in the Ethiopian universities, Unpublished research report, Addis Ababa University.

Tirusew Teferra 2005, *Disabilities in Ethiopia: Issues, Insights and Implications*, Addis Ababa: Addis Ababa University Printing Press.

Toma, J 2006, Approaching Rigor in applied Qualitative Research, *The SAGE Handbook of Research in Education,* SAGE Publications. [O]. Available: http://0-www.sagereference.com. (Accessed on 09/11/2010).

Tomlinson, CA 2003, 'Deciding to teach them all', *Educational Leadership, Vol.61, No.*2, pp. 6-11.

Tudge, JRH, Mokrova, I, Hatfield, BE & Karnik, RB 2009, 'Uses and Misuses of Bronfenbrenner's Bioecological Theory of Human Development', *Journal of Family Theory & Review* 1, pp.198–210.

Tugli, AK 2013, Challenges and needs of learners with disabilities in an inclusive institution of higher education in the Limpopo province of south Africa, DEd Thesis, University of South Africa.

UNESCO 1994, *The Salamanca Statement on Principles, Policy and Practice In Special Needs Education,* Paris: UNESCO. [O]. Available: http/www.un.org/documents/ga/res/48/a48r096.htm. (Accessed 11/11/2010).

UNESCO 1999, *Provisions for Students with Disabilities in Higher Education,* Paris: UNESCO. [O]. Available: http:/unesdoc.unesco.org/images (Accessed on 11/11/2010).

UNESCO 2000, *The Dakar Framework for Action, Education for All: Meeting our Collective Commitments,* Paris: UNESCO. [O]. Available: www.unesco.org/education/efa/.../dakfram_eng.shtml (Accessed 11/11/2010).

UNESCO 2001a, *Open File on Inclusive Education: Support Materials for Managers and Administrators,* Paris: UNESCO [O]. Available: www.ibe.unesco.org/fileadmin/user.../ethiopia_inclusion_07.pdf (Accessed on 01/14/2011).

UNESCO 2001b, *Understanding and Responding to Children's Needs in Inclusive Classrooms: A Guide for Instructors,* Paris: UNESCO. [O]. Available: www.unesco.org. (Accessed on 11/11/2010).

UNESCO 2003, *Overcoming Exclusion through Inclusive approaches in Education*: A challenge and a vision. Conceptual paper. Paris: UNESCO.

UNESCO 2004, *Changing Teaching Practices: Using curriculum differentiation to respond to students' diversity,* Paris: UNESCO. [O]. Avalable: unesdoc.unesco.org/images/0013/001365/136583e.pdf (Accessed on 11/11/ 2010).

UNESCO 2005, *Guidelines for Inclusion: Ensuring Access to Education for All*, Paris: UNESCO.

UNESCO 2007, Regional Seminar "Poverty Alleviation, HIV and AIDS Education and Inclusive Education: Priority Issues for Inclusive Quality Education in Eastern and Western Sub-Saharan Africa", Nairobi, Kenya, 23 – 27 July 2007.

UNESCO 2007, *Education for All by 2015: Will We Make It? EFA Global Monitoring Report of 2008,* Paris: UNESCO Publishing.

UNESCO 2009a, *Global Education Digest 2009: Comparing Education Statistics across the World.* [O]. Available: http://www.uis.unesco.org. (Accessed on 03/17/2012).

UNESCO 2009b, *Policy Guidelines on Inclusion in Education,* Paris: UNESCO. [O]. Avalable: www.unesco.org/education/efa/.../dakfram_eng.shtml (Accessed on 03/17/2012).

UNESCO 2009c, *Towards Inclusive Education for Children with Disabilities: A Guideline*, Bangkok: UNESCO Bangkok.

UNICEF 2007, Promoting the Rights of Children with Disabilities, *Innocenti Diges*t, No. 13. [O]. Available: www.unicef.org. (Accessed on 08/07/2010).

Vickerman, P & Blundell, M 2010, 'Hearing the voices of disabled students in higher education', *Disability & Society*, Vol. 25, No.1, pp. 21-32. [O]. Available: http://dx.doi.org/10.1080/09687590903363290 (Accessed on 02/24/2012).

Waddell, G & Aylward, M 2010, *Models of Sickness and Disability*, London: Royal Society of Medicine Press.

Wahyuni, D 2012, The Research Design Maze: Understanding Paradigms, Cases, Methods and Methodologies. *JAMAR* Vol. 10, No. 1, PP. 69-80.

Walton, EL 2006, The Extent and Practice of Inclusion in the Independent Schools (ISASA Members) in Southern Africa, DEd Thesis, University of South Africa.

Waterfield, J & West, B 2005. Meeting the specific requirements of Blind and Partially Sighted Students studying in Higher Education in the UK: A guide to support academic staff to help meet the anticipatory and positive duties under the DDA.

Waterfield, J West, B & Parker, M 2006, 'Supporting inclusive practice', In M Adams & S Brown *(*eds), *Towards inclusive learning in higher education: Developing curricula for disabled student,* London: Routledge, pp. 79-94.

What is a research Design [n.d.] [O]. Available: www.nyu.edu/classes/bkg/methods/005847ch1.pdf (Accessed on 19/10/2013).

Wiles, J & Bondi, J 1989, *Curriculum Development: A Guide to Practice*, 3rd edn, New York: Macmillan Publishing Company.

Willig, C 2008, *Introducing Qualitative Research in Psychology: Adventures in Theory and Method, 2nd edn,* New York: Open University Press.

Wolanin, TR & Steele, PE 2004, *Higher Education Opportunities for Students with Disabilities: A Primer for Policymakers,* The Institute for Higher Education Policy.

World Health Organization (WHO), 2001, *International Classification of Functioning, Disability and Health (ICF)*, WHO, Geneva.

Yin, RK 2009, *Case Study Research: Design and Methods, 4th edn,* Sage Publications: London.

Yin, RK 2011, *Qualitative Research From start to Finish*, New York: The Guilford Press.

Zhou, L, Smith, DW, Parker, AT & Griffin-Shirley, N 2011, 'Assistive Technology Competencies of Instructors with Visual Impairments: A comparison of Perceptions', *Journal of Visual Impairment and Blindness*, Vol.105, No.9, pp.533-47.

Appendices

Appendix A: Letter requesting permission to conduct research in public universities

Date: 26 February 2014

To: The Office of the Vice Minister for Higher Education

Federal Ministry of Education

Addis Ababa

From: Yohannes Gebretsadik Gebrehiwot

Tel. 0914767833(mobile)

E-Mail: gts.yohannes@yahoo.com or 47262702@mylife.unisa.ac.za

Subject: Request for permission to Conduct Research in Public Higher Education Institutions

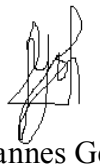
Dear Sir,

I am an instructor at Mekelle University pursuing my PhD studies at UNISA in Inclusive Education. As a main requirement of my study, I am conducting research on a topic "Towards More Inclusive University Curricula: the Learning Experiences of Visually Impaired Students in Higher Education Institutions of Ethiopia". The study will be conducted in two universities to be selected based on the availability of the desired number of study participants, i.e students with visual impairments.

I am writing this letter to request for a permission to conduct research on the above topic in public higher education institutions of Ethiopia. I pledge to treat all information I may obtain in the course of this research with the highest confidentiality. I also pledge to follow all procedures set by institutions and by so doing, and as far as possible, not disturb any institutional programmes.

I therefore am requesting for a written response for purposes of facilitating my identification and self-introduction to institutions, and also for recordkeeping. Thank you very much for taking time off your hectic schedule to attend to my request.

Yours truly,



Yohannes Gebretsadik Gebrehiwot

Appendix B: Letter of authorization from EMoE to conduct research

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የትምህርት ሚኒስቴር
The Federal Democratic Republic of Ethiopia
Ministry of Education

☎ 0111 55 31 33
✉ 1367
ቁጥር No. 7/m-259/2136/06
ቀን Date 19/7/06
አዲስ አበባ
ADDIS ABABA

ለሐዋሣ ዩኒቨርስቲ
ለመቀሌ ዩኒቨርስቲ
ባለበት፡

ጉዳዩ፡- መረጃ ለመሰብሰብ ፈቃድ ስለመጠየቅ

በመቀሌ ዩኒቨርስቲ መምህር የሆኑት አቶ ዮሐንስ ገ/ፃድቅ ዩኒቨርስቲውና ትምህርት ሚኒስቴር በሰጣቸው የትምህርት ዕድል በUNISA ተመዝግበው የPhD ትምህርታቸውን እየተከታተሉ ስለሆነና የመመረቂያ ጽሑፋቸውን እየሰሩ በመሆኑ በዩኒቨርስቲያችሁ መረጃዎችን እንዲያሰባስቡ የትብብር ደብዳቤ እንዲጻፍላቸው መቀሌ ዩኒቨርስቲ በቁጥር መ.ዩ/8682/1-118 Dec.2/2013 በተጻፈ ደብዳቤ ጠይቋል።

ስለሆነም መምህሩ በትምህርት ሚኒስቴር ስፖንሰርነት ትምህርታቸውን እየተከታተሉ መሆኑ ታውቆ ለመመረቂያ ጥናታቸው መረጃዎችን ማሰባሰብ እንዲችሉ አስፈላጊው ትብብር እንዲደረግላቸው እንጠይቃለን።

ከሰላምታ ጋር

ፍርድላ ጀበሳ አጋ (ዶ/ር)
የከፍተኛ ትም/የምርምርና አካዳሚክ ጉዳዮች
ጄኔራል ዳይሬክተር

ግልባጭ ፡-
- ለከ/ትም/ምር/አካ/ጉ/ጄነራል ዳይሬክቶሬት
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e-mail- moe.heducation@gmail.com

Appendix C: Letter requesting authorization to conduct research in one university

Date: 28 March 2014

To: The Office of the Vice President for Academics

Hawassa University

Hawassa

From: Yohannes Gebretsadik Gebrehiwot

Tel. 0914767833(mobile)

E-Mail: gts.yohannes@yahoo.com or 47262702@mylife.unisa.ac.za

Subject: Request for Authorization to Conduct Research at your University

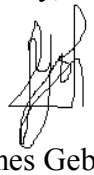
Dear Sir/Madam

I am an instructor at Mekelle University pursuing my PhD studies at UNISA in Inclusive Education. As a main requirement of my study, I am conducting research on a topic "Towards More Inclusive University Curricula: the Learning Experiences of Visually Impaired Students in Higher Education Institutions of Ethiopia". I have selected Hawassa University as one sample higher education institution to conduct my research. With this letter, I seek your permission to conduct the above research with students with visual impairments in your institution.

The research will involve two types of data collection procedures. The first is an interview schedule which will include 10 students with visual impairments, five instructors who teach students with visual impairments, heads of departments where students with visual impairments are enrolled, and the disability officer of the University. The second strategy is through observations of situations where students with visual impairments are expected to have interactions with the curriculum including classes and libraries.

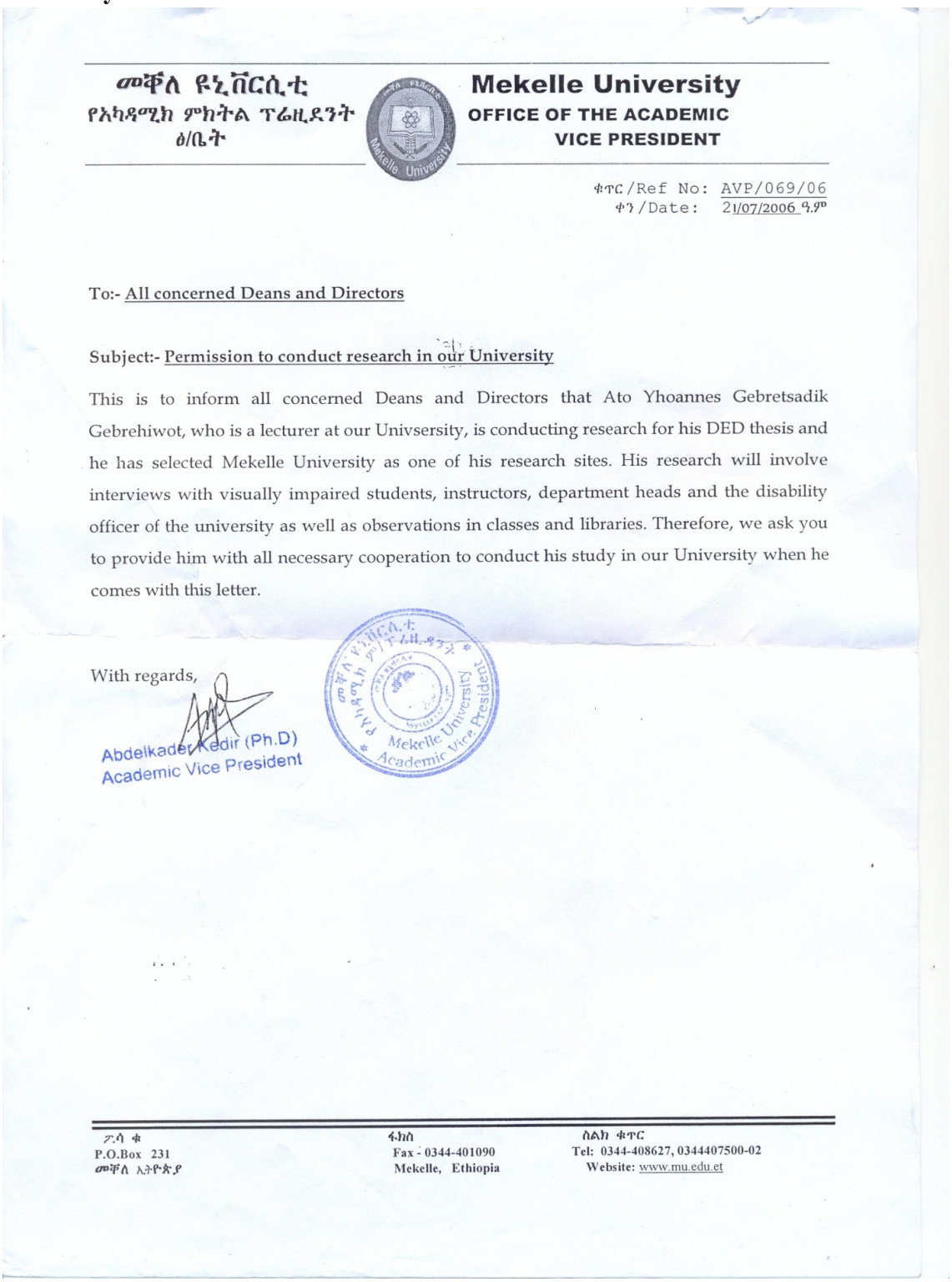
Please be assured that all ethical issues relating to research will be observed, and that I commit myself to limit any obstructions of academic or other activities to the minimum. I therefore request for your written response, at your earliest convenience, to enable me to start with this long process. Thank you for your attention to this matter.

Yours truly,



Yohannes Gebretsadik Gebrehiwot

Appendix D: Letter of permission to conduct research from one university



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ፅ/ቤት

Mekelle University
OFFICE OF THE ACADEMIC
VICE PRESIDENT

ቁጥር/Ref No: AVP/069/06
ቀን/Date: 21/07/2006 ዓ.ም

To:- All concerned Deans and Directors

Subject:- Permission to conduct research in our University

This is to inform all concerned Deans and Directors that Ato Yhoannes Gebretsadik Gebrehiwot, who is a lecturer at our Univsersity, is conducting research for his DED thesis and he has selected Mekelle University as one of his research sites. His research will involve interviews with visually impaired students, instructors, department heads and the disability officer of the university as well as observations in classes and libraries. Therefore, we ask you to provide him with all necessary cooperation to conduct his study in our University when he comes with this letter.

With regards,

Abdelkader Kedir (Ph.D)
Academic Vice President

Mekelle University
Academic Vice President

ፖ.ሳ ቁ
P.O.Box 231
መቐለ ኢትዮጵያ

ፋክስ
Fax - 0344-401090
Mekelle, Ethiopia

ስልክ ቁጥር
Tel: 0344-408627, 0344407500-02
Website: www.mu.edu.et

Appendix E: Research participants consent form

Research participants consent form

Research Title: *Towards More Inclusive University Curricula: the Learning Experiences of Visually Impaired Students in Higher Education Institutions of Ethiopia*

Yohannes Gebretsadik Gebrehiwot

Mekelle Univesity

Institute of Pedagogical Sciences

You are being asked to participate in research. For you to be able to decide whether you want to participate in this project, you should understand what the project is about, as well as the possible risks and benefits in order to make an informed decision. This form describes the purpose, procedures, possible benefits, and risks. It also explains how your personal information will be used and protected. Once you have read this form or has been read to you and your questions about the study are answered, I will ask you to confirm your informed consent for the interview on the tape. This will allow your participation in this study.

Purpose of this Research Project

The purpose of this study is to investigate the learning experiences of students with visual impairments in higher education institutions of Ethiopia. The investigation will examine the current status of curriculum practices in the classrooms of Ethiopian public universities in terms of the extent they accommodate the learning needs of students with visual impairments.

Research Process

The study will involve two types of data collection procedures – interviews and observations. Interviews will be conducted with students with visual impairments, instructors, department heads and disability officers of the University. The interviews will be conducted on an individual basis. The interview with each student with visual impairment will take approximately an hour and the interviews with each of the other participants will be about half an hour long. There will be another visit where you will have to check whether the transcription of the interview you have given exactly expresses your ideas. After the interviews, observations will be conducted in classes where SVI are attending. A total of five class observations with different instructors involved will be conducted. In addition, observations will be conducted in libraries. All interviews will be held in places and time convenient to the research participants.

You should also know that the interview will be audio taped to ensure that valuable information elicited during the interview is captured and the context of the information can be reviewed in detail. Following the interview, the recorded material will be transcribed.

Risks and Discomforts
Students with visual impairments may find it upsetting when they recall and describe their personal experiences. Instructors may feel nervousness during class observations, especially when they realize that they were not doing much to help SVI. In addition, participants will have to sacrifice a portion of their precious time during the interview sessions.

Benefits
A potential benefit of this study includes the advancement of research in the area of visual impairment. An additional potential benefit of this study is the enhancement of the knowledge of higher education professionals, higher education institutions and university disability support service personnel in the areas of education of individuals who are visually impaired. A soft copy of the final research report will be given to all research participants and a hard copy to the universities where the research is conducted.

Confidentiality
The information you provide in the interview will be kept as strictly confidential, and only myself will have access to the information. No data published in dissertations and journals will contain any information through which any participant of the research may be identified. Your anonymity is therefore ensured.

Compensation
There will be no form on compensation for participation in this study. Participants will be asked to participate on a voluntary basis.

Contact Information
If you have any questions regarding this study, please contact me via my email gts.yohannes@yahoo.com (or alternatively 47262702@mylife.unisa.ac.za)
or via telephone 0914767833

I **agree/disagree** (tick the appropriate) to the terms

Respondent _____ Date _____

I agree to the terms:

Researcher _____ Date _____

Appendix F: Ethical Clearance certificate

UNISA | college of education

Research Ethics Clearance Certificate

This is to certify that the application for ethical clearance submitted by

YG Gebrehiwot [47262702]

for a D Ed study entitled

Towards more Inclusive University Curricula: the learning experiences of visually impaired students in Higher Education institutions in Ethiopia

has met the ethical requirements as specified by the University of South Africa College of Education Research Ethics Committee. This certificate is valid for two years from the date of issue.

Prof KP Dzvimbo
Executive Dean : CEDU

Dr M Claassens
CEDU REC (Chairperson)
mcdtc@netactive.co.za

Reference number: 2014 MARCH/47262702/MC

18 March 2014

Appendix G: Interview guide for SVI

Introduction

- Thanking the participant for his/her willingness to participate in the research.
- Reminding him/her of the purposes and procedures of the study, the importance of his/her participation to the study and his/her rights.
- Reminding them that the interview will be audio-taped.

Background Information

- What is your name?
- What is your Department?

Main questions

1. How does it feel to be a university student?
   What things did you observe different from your secondary school years?
2. How do you describe the situation you have encountered when you first entered the university?
3. How did you join the department? Was it based on your free choice?
   - Do you like the department? Please describe your reasons.
   - Is there any department you would have loved to join but denied?
   - Do you feel that you could have succeeded in other departments provided that all necessary accommodations are in place?
4. How do you describe the teaching/learning process in the classroom from the perspective of your situation?
   - Do you feel that your instructors do enough to consider your learning needs as a SVI?
   - What kind of support do they provide you in/outside the classroom?
   - What experiences can you tell me where instructors have neglected your specific learning needs?
   - Were there situations where your instructors have presented a learning material which you couldn't understand because of your impairment?

- Have you ever discussed about your challenges with any of your instructors? If so, how do you describe their reaction?
- Are there instances where some instructors give due considerations to your disability? If so, what did they do in this respect?
- What would you like to see your instructors doing to accommodate you better in their lectures?

5. Do you feel that you have equal access to learning environments as your sighted peers? Explain.
6. How do you describe the difficulties you encounter:
    - in lecture rooms,
    - in doing your assignments,
    - during your study hours, and
    - during exams?
7. Tell me about the most challenging experience you have faced during the learning process.
8. Is there any challenge you face from the nature of the courses you take? If so, how do you think this challenge could have been reduced?
9. What kind of support do you get from your department and the University at large towards facilitating your learning?
10. What provisions would you like to see in your institution that will be helpful to you in meeting academic demands better?
11. How do you describe the support you get from your sighted peers?
12. Can you tell me about how you use the library?
    - How often do you use the library?
    - Are there any problems or limitations that hinder you from going to the library? Please specify.
        - Are there enough books in Braille?
        - Is there a separate and convenient place for SVI to use?
        - Do the library staff members provide you with the necessary support in using the library?

- What do you do when there is an assignment or any other task if you do not get a reference material in Braille? Can you remember any of such specific circumstance and describe how you felt at the time?

13. Where else do you study apart from the library and why do you prefer this place?
    - Are your dormitories convenient for doing academic related activities? If not what are the problems?
14. Any other challenges you would like to add, or anything else you would like to say?

Closure: Thanking the interviewee for the valuable information he/she has provided and that I will meet him/her again after the interview is transcribed for checking if they are actually his/her own ideas.

Appendix H: Interview Guide for Instructors

Introduction

- Thanking the participant for his/her willingness to participate in the research.
- Reminding him/her of the purposes and procedures of the study, the importance of his/her participation to the study and his/her rights.
- Reminding him/her that the interview will be audio-taped.

Background Information

- What is your name?
- What course do you teach to students with visual impairments?
- How long have you taught the course?
- Did you have any SVI in your classes before?

Main Questions

1. Can you tell me of some specific situations where SVI will have difficulty to fully participate in the learning process?
2. What efforts do you make to consider SVI needs when you plan your daily lessons?
    - Do you make your lecture notes available in an accessible format for SVI in advance before the class?
    - Do you ask SVI for any adjustments they may require in teaching and assessment activities?
3. If some of the teaching and learning methods you traditionally employ are not accessible to SVI, do you provide appropriate alternative means for these students to participate? Explain.
4. When preparing assignments, what efforts do you make to identify the barriers SVI may face with specific tasks and take this into account by considering adjustments?
    - Do you check whether there are any books in Braille in the library or elsewhere in the University facility?
5. How do you describe the flexibility of the assessment strategies and methods you use to give SVI an opportunity to meet the objectives of your course?
    - Do you provide assessment tasks to SVI in alternative formats?

- Do you give time allowances?

6. Is there a system where SVI could be supported by their sighted peers?
7. Do you believe that SVI can really perform academically as well as the sighted students? Explain.
8. Is there any part of the course you teach which you consider specifically difficult for SVI?
    - What made this element of the course difficult for SVI?
    - What do you do to make this part of the course easier for SVI?
    - Do you think that this part of the course could have been made easily learned by SVI if appropriate provisions were available in the University?

Closure: Thanking the interviewee for the valuable information he/she has provided and that I will meet him/her again after the interview is transcribed for checking if they are actually his/her own ideas.

Appendix I: Interview Guide for Department/school Heads

Introduction

- Thanking the participant for his/her willingness to participate in the research.
- Reminding him/her of the purposes and procedures of the study, the importance of his/her participation to the study and his/her rights.
- Reminding them that the interview will be audio-taped.

Background Information

- What is your name?
- What is your Department?
- How long have you held this position?

Main questions

1. Are you aware of the fact that there are SVI in your department?
2. Do you have any awareness as to how SVI should be supported in the teaching and learning process?
3. Do you have a system by which you can establish communications with SVI (or with all students with disabilities in general) so as to understand their learning needs as well as their problems?
4. What kind of accommodations are in place in your department for SVI?
    - Are any assistive technology available in the department that can be used in the teaching and learning of SVI?
    - Is there a system in place in the department to provide information in alternative formats?
    - Are SVI given time allowances when doing their exams?
5. By what method do staff members become aware of the implications of a visual impairment on an individual student's teaching and learning needs, and in particular the 'reasonable adjustments' required for lectures?
6. To what extent are course instructors aware of the need to consider the accessibility of learning, teaching and support elements of courses to SVI?

- Are they given any support on how to accommodate the learning needs of students with disabilities in general and SVI in particular?

7. Do SVI come to your office requesting for support or to complain?
    - What was your reaction?
8. What are the common challenges of SVI that are brought under your attention?
    - What have you done to reduce those challenges?
9. Have you ever discussed the situation of SVI (or students with disabilities in general) within your department or in college council?
    - If so can you tell me the details about it?
10. Can you tell me the challenges SVI will face in the learning process considering the existing situation?
11. What are the main challenges of your institution regarding support and service provision for students with disabilities?
12. How do you describe the availability of learning resources for SVI at your department?
13. Is any considerations made to the needs of SVI when the curriculum of your department was designed and during the validation process?
14. Any other challenges you would like to add, or anything else you would like to say?

Closure: Thanking the interviewee for the valuable information he/she has provided and that I will meet him/her again after the interview is transcribed for checking if they are actually his/her own ideas.

Appendix J: Interview Guide for Disability Officer

Introduction

- Thanking the participant for his/her willingness to participate in the research.
- Reminding him/her of the purposes and procedures of the study, the importance of his/her participation to the study and his/her rights.
- Reminding them that the interview will be audio-taped.

Background Information

- What is your name?
- How long have you held this position?
- Why did you take this position?

Main questions

1. How do you feel to be a disability officer of the University?
2. Can you tell me your roles and responsibilities in relation to students with disabilities?
3. Were you given any training on how to help SVI? If so, do you feel that it was enough?
4. Do you provide or organize any training to the university's instructors or any other staff who deal with SVI? If so, can you tell me about the specific issues addressed by the trainings offered?
5. What type of support is in place in the university for students with disabilities in general and SVI in particular in relation to facilitating the teaching and learning process?
6. How do you consider the procedures followed to settle SVI in the campus?
7. Can you tell me the type of follow up you make on how SVI are learning?
8. How do you describe the availability of learning resources for SVI at the University?
9. Do SVI come to you to request for any academic related assistance or to complain about any problems they might have faced?
    - What are the common challenges they face that are brought under your attention? What did you do to reduce those challenges?
10. What is your major problem in providing any necessary support to SVI?
11. Any additional comments in relation to the learning of SVI in the university?

Closure: Thanking the interviewee for the valuable information he/she has provided and that I will meet him/her again after the interview is transcribed for checking if they are actually his/her own ideas.

Appendix K: Class observation guide

SN	Element of Observation	Comment
	Classroom Observation	
1	Sitting placement of SVI such as presence of electric power outlet, convenience for hearing instructor's presentation, etc	
2	Provision of modifications (changes on what a SVI is expected to know) as needed - example	
3	Instructor's mode of lesson presentation including explaining visual material (including projected ppt presentations)	
4	Attention instructor gives to participate SVI in lesson interaction	
5	Clarity and audibility of instructor's presentation to SVI	
6	Usage of any adaptive technology by SVI	
7	Instructors efforts to understand SVI special educational needs	
8	Evidence of the provision of any material to SVI in advance	
9	Use of any tactile material during lesson presentation (if necessary)	
10	Pace of lesson presentation	
11	Appropriate modifications on activities for SVI's sensory needs - Examples	
12	SVI participation in instructional activities - Examples	
13	Changes how a SVI demonstrates learning as needed – example	

Additional observations or comments ----------

Appendix L: Library and reading room observation guide

SN	Elements of Observation	Comments
1	Availability of computers with appropriate software	
2	Support provided to SVI by library staff	
3	Separate and well-located reading room for SVI	
4	Availability of enough Braille reading material	
5	Convenience of shelving for access by SVI	
6	Availability of SVI in library and what they do	

Any additional observations or comments ----------

Appendix M: Sample interview transcript

Q. Please tell me your name, your department and the year of your enrollment.
A. My name is XXXX and I am a first year Sociology student.

Q. What did you feel when you joined a university and what things did you find different from high school especially from the way lessons are delivered?

A. At the beginning I had the imagination that university education would be frightening. When I started my education although it is not as frightening as I had initially imagined, the secondary school years are much better in terms of the lesson delivery, grading, etc. At secondary level, instructors have the tendency to support you at individual level and be humane. This doesn't exist here. Once they have finished their classes they don't show any interest to help you individually.

Q. Can you remember and tell me the circumstances you have encountered when you first entered the university compound – tell me about the registration process, and other conditions of how you were settled in the campus.

A. You wonder! There is nobody to attend to your problems when you first come to the campus. They don't provide you with a dormitory on time. There was a situation where I stayed a night at the area known as Darfur at the third floor. This was because we were not given our dorms on time. At the time I had a feeling of frustration. I thought 'How am I going to get used to this situation?'. If I hadn't my sight problem, I would have immediately quit the university and search for work. But gradually I got used to the situation and the challenges became my family members. You know when you are living with problems every day, you become accustomed to them. From time to time conditions were getting better and I also got used to the problems. Even during registration you have to jostle against a lot of students in order to register. Especially, starting this year registration is conducted online. You need to have someone who is trustworthy to help you register otherwise you can't register. ..

Q. How did you join Sociology? Was it your choice or assigned by the university?

A. When I joined the university I had planned to learn either Sociology or Law. I had difficulty to decide which department I should choose. Therefore I started collecting information for my decision. When I learned that Law lasts seven years and Sociology lasts three years I chose Sociology. My decision was based on the years and because of difficulty. Since I am from a poor family I wanted to support my family as early as possible. But I was able to join the department not by special considerations rather because of my good academic results.

Q. Once you have joined the department, do you like it?

A. Yes, what we learn there is very interesting. In spite of some problems, what we learn in Sociology is exciting.

Q. What is the reason you liked Sociology?

A. Well as we are members of the society, studying the society you belong to is interesting. You will learn to solve human problems. From these perspectives the courses we learn are exciting.

Q. Is there any other department which you were interested but didn't choose because of any reason?

A. There is something which I didn't elaborate earlier. The department of Sociology had decided not to accept SVI. The reason I was assigned into the department was because of my academic results without knowing my condition. So when another SVI applied to the department, he was denied. The student persisted with his appeal arguing that he should be accepted as far as the department is accepting XXXX. It was after a lot of pressure that he was accepted. They accepted him not because of their willingness, rather because of the student's persistence. The department had a decision not to accept SVI applicants. Therefore it is because of these reasons that the department was forced to accept two SVI.

Q. In a situation where all necessary accommodations are in place, do you believe that you could succeed in any department?

A. I am interested to study Law through any modality available. I am interested to give justice to my society. I hope I will realize this one day in the future.

Q. How about other fields of study?

A. I have never thought about other fields. I am more inclined towards compassion.

Q. Let's focus to the condition in the classroom. How do you describe the teaching and learning process from the perspective of your visual problem?

A. Basically, our classroom is on the fifth floor. Imagine how a SVI can go up and down. It was very recently that I managed to make my class changed to the first floor after I complained to the department. During the first semester I had to attend all may classes on the fifth floor. During the class time it is your personal efforts that matters since you get no support from your instructors. You don't get handouts on time; they don't give you softcopies of their teaching materials. This is specifically so in our department. In other department there is some support. In our department however it is my effort and the support I get from my friends that has made me manage my education. There is nothing from an instructor.

Q. Are you telling me that instructors make little effort to help you?

A. No effort except our own efforts. If you ask me why, from the very beginning they didn't have the readiness to accept SVI.

Q. What do you think is the reason why this is happening?

A. I think when the department first accepted SVI, the instructors including the so called department head were making some pressures on them. The SVI complained about the situation which reached up to the president level. As a result discussions were held on the issue and ultimately the department head was removed from his position. From this time on all SVI in the succeeding batches were penalized because of what happened earlier, like what the saying says 'ait bebela dawa temeta'.

Q. How do you see the awareness and skills of instructors to help SVI?

A. I don't think they have any awareness problems. They know what we need, and at least they could have considered when we tell them. They don't have the interest to help. Otherwise, even if they don't have the knowledge we are telling them. They are making us to spend a lot of money for photocopying materials while a photocopy machine is in their office.

Q. Can you tell me any specific examples where your instructors neglected your needs?

A. First when I joined the department, I was well oriented by SVI of the preceding batches regarding how I should behave and as a result I was psychologically ready for everything. I was informed about the type of relationship I should have with my instructors and the distance I should maintain in this relationship. Therefore, as far as I am ready for everything - For example I asked a certain instructor to give me a softcopy. Then he told me to back off [used strong words] and I just laughed and went back. This didn't make me feel because I was prepared for it. Similarly when one day I was preparing to take exam I had an assistant from Accounting Department who was holding a piece of paper. Before the beginning of the exam session students have started entering the exam room. The instructor while passing by with the exam papers asked me if the student on my side was the one going to read the exam paper for me. When I said yes he told him to go away because of the paper he was holding. But the paper had nothing written on it. In spite of this the instructor still refused to let the student assist me. When I asked him what I should do, he said that it was not his problem. After I persistently asking him, he told me to call another student by phone, and I managed to get a student who was in class. Again he told me to phone to the student and inform him to go back. I said 'Oh God' and did what I was told. Then he himself assigned another student who can barely read. He was a student of Chinese language. The course was Anthropology. It was a very easy course. My assistant was very poor in his language. He even couldn't correctly pronounce the letters. So

with this type of assistant the questions were read to me and my final result was far below my expectations. However, since I was psychologically ready it didn't affect my feelings.

Q. Did you encounter any lessons which you couldn't understand because of your visual impairment?

A.It happens many times. Instructors present some visual materials without explaining. When this happens I interrupt them and ask them to create some mental image so that I can understand what they are presenting. For example, one day when we were learning Logic, the instructor wrote some statements on the board and asked 'which one is the premise and which one is the conclusion'. When I say this I am not referring to all instructors. There are instructors who, calling my name, tell me what they are doing when they present some visual material. I remember in my pre-university years one instructor in order to make understand the concept of cell came to the classroom with a CD.

Q. Have you ever discussed about your problems with your instructors?

A. Nothing. Honestly speaking we are afraid of them. There are instructors who are not willing to be approached. They don't give you any chance. Therefore you can do nothing.

Q. Are there any instructors who showed some considerations to your academic needs?

A. Of course there are certain considerate instructors. For example there was a Psychology instructor who used to give any material I asked for. Our grades were posted on line and this instructor took me to his office and helped me to see my grades. In order to save me from additional expenses there were situations where he helped me.

Q. When do instructors give you handouts?

A. It depends on the instructor. Some instructors gives before the lesson and there are also instructors who give their handouts long after the lesson is delivered. We are given after the chapter is finished and we copy it.

Q. What do you want to see your instructors doing so as to deliver effective instruction?

A. Hmm! Actually, there are instructors who are too fast to follow. Therefore such instructors should be slow in their pace. Secondly, they should ask questions every few minutes to make sure that we are following the lesson. This is helpful to check our understanding . Instructors can also ask us to summarize the main points of the lesson. This will help us to be strong. In addition….ehh sometimes when there are presentations it is good if we are given the opportunity. Generally, as far as possible it is good if we are made to participate in the lesson activities.

Q. In general terms do you feel that SVI are given equal opportunities to learn with their sighted peers?

A. It is very good for us to learn with our sighted friends. We share a lot of things with them. We can make a lot of social interactions. You live with different types of people and you gain a lot of experience from it. It is one other additional learning that we gain from such interactions.

Q, But do you have the conclusion that you are having equal opportunities in the learning process?

A. I don't feel anything. Rather I am happy.

Q. Can you any additional problems you have faced with regard to classroom conditions?

A. As I have mentioned earlier we learn in fifth floors. This makes to require others assistance. There is no problem in the classroom. My friends arrange a seat at the front where it is nearer to the place where the instructor stands. I use a voice recorder. In other departments there are some situations where instructors hold the voice recorder [so as to make clear recording] but in our department this is unthinkable. There are instructors who do not allow recording. They order us 'You want to stand against my livelihood! Stop of the recorder'. In such situations we put our recorders in our jacket pocket and do the recording without the knowledge of the instructor. As I have told you, instructors in our department are untouchable. [laughing] So this is a difficult situation and therefore we either have to listen to the lectures and go out or secretly record and use it later on.

Q. How about the problems you face during assignments?

A. If it is a group assignment there is no problem. If it is individual, you will have to get someone who can help you in writing based on the ideas you collect from the internet or other sources.

Q. Do you get references?

A. In most cases you Google from the internet. If it is from books it becomes a little problematic.

Q. How did you manage to use the internet?

A. In the computer there is special software called Jaws specially uploaded for SVI. It helps us to search through the internet. Even in this condition we need the support of our friends. It is because of their support that we have reached this level.

Q. Were you given any training on how to use the software and the computer in general?

A. Yes we were given some training. It was organized by a certain NGO called ECDD. Of course it was not enough. But here we share our skills. Even what we have recorded share to one another. I don't have any information about whether the university has given any such training.

Q. Did you have any computer skills before you joined the university?

A. Yes I had some skills when was at high school. Here I am still practicing those skills, and I hope in the near future I will be a real professional [laughing]. Any way it is your efforts that matters.

Q. Where do you study?

A. I study in my dorm. As you can see we are small in number and there is not noise to disturb my study. Especially when I record, my roommates lock the door to avoid any interference. My dorm mates also help me in my study when they get some spare time.

Q. So you are telling me that there is no problem in studying?

A. Of course when my friends are busy with their own study, it is difficult to get any help. In such a situation I get frustrated and I beg my friends to spare me some minutes either in giving highlights of what I should have studied or record our notes. In this way I try to solve my problems.

Q. What problems do you face in exams?

A. You did not easily get a reader [scribe]. You know exam readers assist us from humanitarian perspective; they are not paid. Especially those students who are church members dutifully help us in all aspects including recording learning materials, in exams and in washing our clothes - they are always at our side.

Q. The university itself does not assign exam readers?

A. No. It is only the church members who do all the help. One notable help from the university is that, the proctor assigns a one assistant in the dormitory. The university provides bed for my assistant as well. When we are not interested to go to the cafeteria, our assistants bring the food to the dormitory. We sleep on the lower bed and our assistants sleep on the upper bed.

Q. XXX did you encounter any distressing experience during your stay at MU?

A. Hmm! I don't know. I most of the time take the problems I face very slightly. I have developed my psychological make up very well and I don't easily get upset… Of course there are many problems. I have accepted my status as a VI. It was at the beginning that I suffered much.

Nowadays however I feel nothing. There was a situation where my eyeglasses were broken in the middle of a conflict with others, but I felt nothing.

Q. Can you tell me one or two as an example?

A. One day [laughing] I was denied to enter the university by the campus guards saying that I am not VI and that they are capable of differentiating a thug from a blind person. I didn't have my ID card with me since we are not required to show and I had to put out my eyeglass to prove that I am a VI. [laughing]So when I encounter any annoying situation I convert it into a laugh.

Q. Any challenges in relation to the teaching and learning process.

A. Sometimes I have the feeling that I should have quit the university when my friends informed about the whole situation at the university. You know there are times when you frustrate when the academic work (the reading, the exam, the assignments) creates too much pressure on you. Sometimes I tell myself that I should have joined other departments.

Q. Are you telling me that the academic tasks in Sociology are more demanding than in other departments?

A. Yes. Even their exams are not good. Exam rules say that alternatives of multiple choice items should not go beyond 'D' but here they are up to h and sometimes you ask yourself whether the exam is counting the alphabet.

Q. So the problem is created by the instructors and not a problem of the subject area.

A. Yes I joined the department with my interest and I still like it. It is the extraneous problems that are creating the challenges, There is no problem with the courses.

Q. How do you see the support you get from the university management?

A. OK! Since the department does nothing let's bypass it. The students' support unit gives us some facilities such as a voice recorder (which costs more than 3000.00 birr) and recently they gave us rechargeable battery and the charger itself (we were buying the battery by ourselves before). We are also given Braille (4 ream per year). Thus the support unit as its name implies supports us. Although the support is not sufficient, it is praiseworthy as compared to others.

Q. Do you go to the department for any complaints or for any other issues, or you prefer to go to the College?

A. You know Gashe Yohannes! We are not bold enough to go to the upper management for any complaints. We don't want to face the consequences of our actions. Even in the classroom

students are very terrified. Since there is unlimited freedom of instructors in the campus we just ignore things.

Q. What do you want to see fulfilled in your department?

A. First of all instructors should try their best to clarify their lessons. Secondly, we need to get handouts before the lesson so that we can record the material. In addition, it would be good if our seniors support us by giving tutorials. This is not only for the SVI but for all students.

Q. How do you see the support you get from your sighted friends?

A. I don't know! They make me forget my family. They take care of me in all aspects of my university life. They are the ones who take me downtown, they read me course materials, and they find students who can read my exams. I am surviving in this university with the help of my friends.

Q. Let me take your attention to the library. How did you use the library? How frequently do you visit the library?

A. OK! I don't visit the library. The reason for this is because the department is new and therefore there are no relevant materials in Braille in the library. There are only books for the sighted and as far as I have handouts I study by recording them.

Q. So you are telling me that there are nor relevant resources in Braille in the library.

A. Yes. In addition there are no softcopy materials uploaded in the computers. You can read from the computer, but there is no softcopy.

Q. When your instructors give you an individual assignment for which you couldn't get any resources, what do you feel?

A. When I encounter such a problem, I usually go to the GC [graduating class]. I ask them to share me anything they know about the task at hand.

Q. Do you go back and tell your instructor about the problem?

A. Since there will not be any solution, there is no need of doing that.

Q. How did you come to this conclusion? Was there any similar experience?

A. There are two batches before our batch and You have enough information about how SVI are treated. So there is no benefit of getting into conflict with your instructors.

Q. So where is your commonly used study area?

A. I usually study in my dorm.

Q. Is there any other place where you study?

A. Sometimes at the computer class.

Q. What do you do at the computer class?

A. I use internet. I also check my knowledge using some exercises I get in the computers.

Q. Is there anything else you would like to add?

A. I don't know! I think I have talked about everything that is important. But the walkways and buildings in the campus should consider SVI. It on paper that a lot of things is written about disability rights. In actual practice there is nothing. Because of the walkways most SVI are forced to eat their meals in their dorms.

Appendix N: Codes derived from data

Code-Filter: All

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File: [C:\Users\Student\Documents\Scientific Software\Atlantic\TextBank\DEd project.hpr7]
Edited by: Super
Date/Time: 2015-02-04 09:26:21

Accessibility of curriculum materials
Accommodations dependent on individual's good will
Activities undertaken by disability centre/student support
Adjustments and modifications in assessment activities
Adjustments in teaching
Aspirations of SVI
Assessment strategies
Assignment to department
Assignment to university
Assistive technology
Attitudinal change
Availability of educational materials and facilities
Braille materials
Braille skills
Budget issues
Challenge of department
Challenge of instructors
Challenge with curriculum content
Challenges in the classroom
Challenges of College
Challenges of disability centre/student support
Challenging journey to University
Change of classrooms as a problem
Choice of university
Clarity and audibility of presentation
Communication system about SVI issues and problems
Comparison with secondary education
Competition in education
Complaints handling
Consideration of SVI needs in curriculum design
Credibility of SVI claims
Dean's attitude
Dean's awareness
Delayed decisions
Delayed provision of materials and facilities
Department choice vs. academic performance
Department choice vs. accommodations
Department choice vs. braille and computer skills

Department choice vs. disability
Department choice vs. duration of study program
Department choice vs. employment opportunity
Department choice vs. fear of challenge
Department choice vs. interest in field of study
Department choice vs. interest in profession
Department choice vs. peer support
Department heads' beliefs and attitudes
Department heads knowledge and awareness
Department resistance to accept SVI
Dependence on sighted students
Difference among SVI
Difference between departments
Difference between instructors
Difference between universities
Difficult pathways
Disability centre/student support coordinator's attitude and feelings
Disability issue as agenda
Effects of instructors' behaviours on students learning
Establishment of disability centre
Exam formats
Exam invigilator behaviour
Exam time
Exam venue
Exemption of SVI from some content/courses
Extra time in assignments
Extra time in exams
Failure to implement promises
Fear of revenge
Feeling of frustration
Financial decisions
Financial support
Frequency of assessment activities as a challenge
Gaps to be filled
Gender related problems
Getting used to new environment
Giving substitute courses as a curriculum adjustment
Grouping in assignments
Improvement of SVI situation over time
Information gap in management bodies
Initial reception at university
Institutional efforts to raise instructors' awareness and skills and change attitudes
Institutional norms
Institutional planning and preparation
Institutional support system
Internet use
Issues and problems SVI commonly take to management

Learning environment
Legal framework
Library facilities and resources
Library space
Library support system
Library usage
Limited choice of department
Location of classrooms
Location of library
Mode of lesson presentation
Modifications on learning activities
Monitoring system on SVI situation
Number of SVI in a class
Number of SVI vs. quality of services
Orientation on how to use materials
Pace of presentation
Peer attitude
Peer support
Preparing SVI for employment
Previous experience with SVI shaping current awareness
Problem with readers
Problems in doing assignments
Problems in recording
Problems with exam questions
Problems with scribes
Procurement process
Provision of study material
Quality of learning
Registration process
Relationship with peers determining support
Relationship with instructors
Role of clubs
Role of disability/student support office
Role of personal effort for success
Role of students' council
School background of SVI determining their skills
Segregation of SVI
Students' awareness
Study space
Study time
Studying through listening to recording
Support from church based student’s communions
Support with one another
System for assessing SVI needs and problems
Instructors' accountability
Instructor’s attention to SVI needs
Instructors' attitudes

Instructors' awareness
Instructors' behaviours
Instructors' beliefs on role of a recorder in learning
Instructors' experience with SVI
Instructors' lesson preparation
Instructor’s pedagogical skills
Instructors' perspective on required support
Instructors' resistance to consider SVI demands
Instructors' support
Time shortage in exams
Tradition dictating practice
Training content
Training on computer skills
Training to disability officer
Training to support staff
Unequal opportunity of learning
Use of adaptive technology
SVI academic performance
SVI assertiveness
SVI behaviours
SVI complaints
SVI concerns
SVI demands for accommodations
SVI expectations from the university
SVI expectations from their instructors
SVI feelings of becoming a university student
SVI initial assumptions about university education
SVI participation in learning activities
Vies participation in management decisions
SVI perceptions towards field of study
SVI perceptions towards inclusion
SVI seating position
SVI self-concept
SVI skills in using technology
SVI strategies of learning

Appendix O: Code families

Code Families

HU: DEd project2
File: [C:\Users\Student\Documents\Scientific Software\ATLASti\TextBank\DEd project.hpr7]
Edited by: Super
Date/Time: 2015-04-12 18:57:57

Code Family: assessment practices
Created: 2015-02-03 17:33:32 (Super)
Codes (15): [adjustments and modifications in assessment activities] [assessment strategies] [cheating in exams] [exam formats] [exam invigilator behaviour] [exam time] [exam venue] [extra time in assignments] [extra time in exams] [frequency of assessment activities as a challenge] [grouping in assignments] [problems in doing assignments] [problems with exam questions] [problems with scribes] [time shortage in exams]
Quotation(s): 207

Code Family: attitude and awareness of management body
Created: 2015-02-03 20:09:41 (Super)
Codes (9): [credibility of SVI claims] [dean's attitude] [dean's awareness] [department heads' beliefs and attitudes] [department heads knowledge and awareness] [department resistance to accept SVI] [Disability centre/student support coordinator's attitude and feelings] [information gap in management bodies]
Quotation(s): 42

Code Family: Challenges of management
Created: 2015-02-03 19:58:01 (Super)
Codes (8): [budget issues] [challenge of department] [challenges of College] [challenges of disability centre/student support] [financial decisions] [number of SVI vs. quality of services] [procurement process]
Quotation(s): 56

Code Family: curriculum adaptations
Created: 2015-02-03 17:12:40 (Super)
Codes (6): [accessibility of curriculum materials] [challenge of too much content] [challenge with curriculum content] [consideration of SVI needs in curriculum design] [exemption of SVI from some content/courses] [Giving substitute courses as a curriculum adjustment]
Quotation(s): 49

Code Family: Differences in practice
Created: 2015-02-03 21:09:07 (Super)
Codes (3): [difference between departments] [difference between instructors] [difference between universities]
Quotation(s): 17

Code Family: Effect of university environment on SVI feelings
Created: 2015-02-03 17:00:10 (Super)
Codes (5): [fear of revenge] [feeling of frustration] [segregation of SVI] [SVI feelings] [SVI self-concept]
Quotation(s): 62

Code Family: Institutional attention to disability issues
Created: 2015-02-03 20:17:37 (Super)
Codes (8): [assignment to department] [communication system about SVI issues and problems] [complaints handling] [delayed decisions] [disability issue as agenda] [establishment of disability centre] [institutional planning and preparation] [system for assessing SVI needs and problems]
Quotation(s): 129

Code Family: institutional efforts to build capacity
Created: 2015-02-03 18:23:22 (Super)
Codes (5): [institutional efforts to raise instructors' awareness and skills and change attitudes] [training on computer skills] [training to disability officer] [training to support staff]
Quotation(s): 55

Code Family: Institutional support system
Created: 2015-02-03 19:36:17 (Super)
Codes (13): [activities undertaken by disability centre/student support] [delayed provision of materials and facilities] [failure to implement promises] [financial support] [institutional norms] [institutional planning and preparation] [Institutional support system] [legal framework] [role of disability/student support office] [instructors' accountability] [tradition dictating practice] [SVI participation in management decisions]
Quotation(s): 191

Code Family: Learning environment
Created: 2015-02-03 18:56:11 (Super)
Codes (19): [challenges in the classroom] [dependence on sighted students] [effects of instructors' behaviours on students learning] [internet use] [learning environment] [problems in recording] [provision of study material] [quality of learning] [segregation of SVI] [study space] [study time] [studying through listening to recording] [unequal opportunity of learning] [SVI participation in learning activities] [SVI seating position] [SVI strategies of learning]
Quotation(s): 241

Code Family: library usage and condition
Created: 2015-02-03 18:54:33 (Super)
Codes (5): [library facilities and resources] [library space] [library support system] [library usage] [location of library]
Quotation(s): 108

Code Family: physical environment
Created: 2015-02-03 18:11:33 (Super)
Codes (3): [change of classrooms as a problem] [difficult pathways] [location of classrooms]
Quotation(s): 36

Code Family: problems with and support from student community
Created: 2015-02-03 19:48:25 (Super)
Codes (9): [establishment of disability centre] [peer attitude] [peer support] [problem with readers] [relationship with peers determining support] [role of clubs] [role of students' council] [students' awareness] [support from church based students communions]
Quotation(s): 85

Code Family: provision and utilization of facilities
Created: 2015-02-03 19:28:42 (Super)

Codes (8): [assistive technology] [availability of educational materials and facilities] [Braille materials] [Braille skills] [problems in recording] [training on computer skills] [use of adaptive technology] [SVI skills of using technology]
Quotation(s): 127

Code Family: suggestions for Way forward
Created: 2015-02-03 17:23:25 (Super)
Codes (5): [SVI expectations from the university] [SVI expectations from their instructors]
Quotation(s): 49

Code Family: Instructors' attributes
Created: 2015-02-03 16:32:07 (Super)
Codes (9): [challenge of instructors] [previous experience with SVI shaping current awareness] [instructors' accountability] [instructors' attitudes] [instructors' awareness] [instructors' beliefs on role of a recorder in learning] [instructors pedagogical skills] [instructors' perspective on required support]
Quotation(s): 127

Code Family: Instructors' classroom practices
Created: 2015-02-03 16:48:33 (Super)
Codes (13): [adjustments in teaching] [challenge of instructors] [clarity and audibility of presentation] [difference between instructors] [mode of lesson presentation] [modifications on learning activities] [pace of presentation] [instructors attention to SVI needs] [instructors' behaviours] [instructors' lesson preparation] [instructors' resistance to consider SVI demands] [instructors' support]
Quotation(s): 228

Code Family: SVI attributes
Created: 2015-02-03 21:04:48 (Super)
Codes (5): [aspirations of SVI] [influence of community attitude] [SVI assertiveness] [SVI behaviours] [SVI self-concept]
Quotation(s): 34

Code Family: SVI choice of field of study
Created: 2015-02-03 18:46:47 (Super)
Codes (11): [Department choice vs. academic performance] [department choice vs. accommodations] [department choice vs. Braille and computer skills] [department choice vs. disability] [department choice vs. duration of study program] [Department choice vs. employment opportunity] [department choice vs. fear of challenge] [department choice vs. interest in field of study] [department choice vs. interest in profession] [department choice vs. peer support] [limited choice of department]
Quotation(s): 34

Code Family: SVI participation in learning and performance
Created: 2015-02-03 20:55:25 (Super)
Codes (8): [difference among SVI] [effects of instructors' behaviours on students learning] [grouping in assignments] [quality of learning] [role of personal effort for success] [unequal opportunity of learning] [SVI academic performance] [SVI participation in learning activities]
Quotation(s): 90

Code Family: SVI perceptions and concerns
Created: 2015-02-03 20:39:40 (Super)
Codes (7): [segregation of SVI] [unequal opportunity of learning] [SVI concerns] [SVI feelings of becoming a university student] [SVI initial assumptions about university education] [SVI perceptions towards field of study] [SVI perceptions towards inclusion]
Quotation(s): 57

Code Family: SVI pre-university experiences and assumptions
Created: 2015-02-03 17:42:05 (Super)
Codes (4): [challenging journey to University] [comparison with secondary education] [school background of SVI determining their skills] [SVI initial assumptions about university education]
Quotation(s): 37

Code Family: SVI proactive engagement
Created: 2015-02-03 19:13:44 (Super)
Codes (5): [issues and problems SVI commonly take to management] [SVI assertiveness] [SVI complaints] [SVI demands for accommodations] [SVI participation in management decisions]
Quotation(s): 36

Code Family: SVI transition to University
Created: 2015-02-03 17:41:27 (Super)
Codes (11): [assignment to department] [Assignment to university] [choice of university] [comparison with secondary education] [department resistance to accept SVI] [getting used to new environment] [initial reception at university] [limited choice of department] [Registration process] [support from church based students communions] [support with one another]
Quotation(s): 112

Code Family: SVI/instructor relationship
Created: 2015-02-03 21:31:17 (Super)
Codes (4): [fear of revenge] [relationship with instructors] [instructors' behaviours] [instructors' resistance to consider SVI demands]
Quotation(s): 85