Academic Barriers That Prevent the Inclusion of Learners With Visual Impairment in Ethiopian Mainstream Schools

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Abstract

This article explored the academic barriers that prevent the inclusion of learners with visual impairment in mainstream schools. It is a purposive study that was conducted in two schools in Tigray Regional State in Ethiopia. The data were collected through interviews and focus group discussions from 2 school principals, 4 teachers, and 12 learners with and without visual impairment. The findings reveal a lack of books in braille, a shortage of computers with “Job Access With Speech” (JAWS) software, few audio-recorded materials, and minimal curriculum adaptation to suit learners with visual impairments. It was discovered that these academic barriers affect the teaching and learning as well as the implementation and actualization of inclusive education. Therefore, this article calls for the Ministry of Education (MoE), schools, communities, governmental, and non-governmental organizations to intervene and ensure the balance between accessibility of education and availability of resources to cater to all learners with visual impairments.

Keywords

inclusion, inclusive education, visual impairment, barriers to learning, academic barriers

Introduction

Visual impairment is regarded as highly prevalent among children in sub-Saharan countries, including Ethiopia. In Ethiopia, visual impairment prevalence amongst school-aged children is estimated between 4% and 9% (Demissie & Demissie, 2014; Mehari, 2014; Nebiyat et al., 2015). The main causes of visual impairment and blindness have been identified as diseases like trachoma, cataract, or refractive error. However, some contributory factors are regarded as man-made, these are minefields, social, economic, and regional dynamics (Merrie et al., 2019). Other studies have established that in Ethiopia, 2.8 million people have low vision, 1.2 million lost their vision, and 9 million children 1 to 9 years old have active trachoma. The prevalence of active trachoma in children is estimated at 40.1%. Trachoma is the leading cause of blindness resulting from repeated trachoma infection (Reda et al., 2020; Wale et al., 2019). The World Health Organization (WHO) also estimated that over 1.8 million or 1.6% of the Ethiopian population is blind and 4.1 million or 3.7% live with low vision. WHO found these statistics fall significantly above the world average of 1.2% and 3.4%, respectively.

The prevalence of visual impairment, especially among school-going children, indicates a need for structured support from various Ethiopian organizations. Particularly, in 2010 Ethiopia ratified the United Nations Convention on the Rights of Persons with Disabilities (UN: General Assembly, 2008), which includes provisions for the right to education. However, Ethiopia, like other low-income countries in Africa, may be presented with challenges in providing necessary resources for school-going children with visual impairment. The reports that analyze education provision for learners with visual impairment across sub-Saharan Africa (UNESCO, 2020) have painted a bleak picture when outlining these challenges. The reports point to the educational disadvantage experienced by learners with visual impairment as the infrastructure still proves to be inaccessible as well as lacks assistive technology. Some legal frameworks have indicated that...
these learners require special education support, yet they are educated in less-resourced mainstream schools where it becomes difficult to address their requirements or special and specific needs (Limaye, 2016; MoE, 2016; Naude & Meier, 2019; UNICEF, 2012). MoE (2012), Asrat (2013), Assefa (2008), and Girma (2007) highlighted that some learning hindrances affect learners with visual impairment in Ethiopia. Among those are the lack of equipment, limited trained personnel, inadequate and inappropriate resources, limited supervision of schools, and limited collaboration within the special needs education support system. These learning hindrances are negatively affecting the practice of inclusion and the inclusion of learners with visual impairment.

Although there is a plethora of literature on the general predicaments of inclusive education in Ethiopia, very little research has been conducted on what is happening inside the classrooms and which resources hamper the full inclusion of learners with visual impairment. The weight that is placed on the government to ensure an inclusive education system that culminates individual inclusion is noticeable. But the emphasis on balance between an inclusive education system with adequate and appropriate resources seemed to be overlooked. Notwithstanding the need to focus on the system and infrastructure to provide full access, academic barriers also pose a threat to the academic performance of learners with visual impairment and need to be addressed. Although this article is limited in scope to the Ethiopian context, it is globally relevant, more so in the global south, as the academic needs of many learners with visual impairment are still neglected. As a result, this article exposes academic barriers that are posing a threat to learners with visual impairment and discusses the research findings. It may ultimately provide a guide, support, and information to schools and the government.

This article is thus guided by the following research question: What are the academic barriers that prevent the inclusion of learners with visual impairments in mainstream schools?

**Academic Barriers Posing Threat to Learners With Visual Impairment**

Teachers are key role players and main resources for the realization of inclusive education (Mariga et al., 2014). However, to teach learners with diverse backgrounds, teachers need to have the relevant knowledge, skills, and best attitude for diversity (Demetros, 2007). Furthermore, Mariga et al. (2014) and Negash (2017) discuss that the effective practice of inclusive education is highly dependent on the attitudes and skills of the teacher, but teachers may not have enough previous knowledge and skills about inclusive education and how to implement it. Some may have little previous experience in teaching learners with disabilities. A study by Mwakyeya (2013), on the teaching of learners with visual impairment in inclusive classrooms, reveals that although teachers recognize the importance of inclusive education, they do not have knowledge of reading and translating braille, adapting and modifying teaching methods, teaching resources, and implementing Individualized Education Program (IEP). This indicates that teachers should be trained on how to teach learners with disabilities in general and those with visual impairment in particular.

Tirussew (2005) and Negash (2020) affirm that some teachers are required to teach learners with disabilities including learners with visual impairment without receiving any kind of training and administrative assistance. In addition, Awetash (2015) argues that some teachers do not have the competence and do not receive training to teach learners with visual impairment. Awetash (2015) recommends that teachers should get both in-service and pre-service professional training. In support, Mutisya (2010) and Salisbury (2008) say that teachers’ training in pre-service and in-service helps considerably in bringing educational change. In other words, teachers are the main actors to bring educational transformation to the classrooms. Hence, the OECD (2009) and Loreman et al. (2010) emphasize that teachers should receive continuous professional development training. Asrat (2013) also believes that teachers must have competence and confidence in their profession. He states that teachers who are not professionally prepared to teach learners with disabilities, will face challenges because they may not even feel confident enough as they do not have relevant knowledge about disabilities. Some teachers may become concerned that they might end up doing something unacceptable.

Stofile and Green (2007) also argue that if teachers are not trained in inclusive education, the probability of accepting it is low. But Lemma (2000) cautions that if those concerned with education do not invest in professional training and knowledge of teachers, they are hindering the future of all learners. In acknowledgment, Mariga et al. (2014) say although pre-service training is mandatory for inclusive teachers, those who are already serving should also get in-service training in inclusive education. The contents of the training should cover the educational needs of the learners and the teaching approaches they would use in inclusive classrooms.

Mafa and Chaminuka (2012) pronounce that teachers in mainstream schools have problems differentiating work for learners with different learning needs. This difficulty translates to actual lesson delivery, where teachers are not sure of the level at which to pitch their lesson delivery. Whatever level they choose to pitch lesson delivery at, leaves a good number of learners not catered for. Although teachers have the autonomy to adapt and modify the curriculum to make it suitable to their learners’ needs, lack of adapted curriculum still prevails in some schools, which has become one of the many factors influencing the implementation of inclusive education (Asrat, 2013; Dano, 2018). Mutisya (2010) believes that a flexible curriculum is crucial for the inclusion of learners with visual impairment. There has to be flexibility in providing for learners’ diverse educational needs. If the
curriculum is not designed according to the needs of the learners or is not learner-centered, as Fraser and Maguvhe (2008) say, it will hinder learners with visual impairment from learning and benefitting from their education as well hamper their full participation in education.

Lujan (2009) states that professional collaboration is not common in schools and is seen as an exception. Furthermore, Lujan (2009) argues that there are some teams of teachers who prefer to work together but some never like to collaborate with others. Ertesvåg (2011) finds it odd that some teachers question the effectiveness of collaboration. It becomes a challenge if teachers are not interested in sharing or communicating with other teachers and value independence. In defense, Lujan (2009) proclaims many factors that hinder professional collaboration among teachers, for example, time, the isolated nature of teaching, and teachers’ divergent points of view. In addition, Friend (2011) states that time is the main barrier affecting professional collaboration. Professionals do not either have the time to plan together or spend a minimal amount of time planning collaborative activities. Friend adds that collaborative activities in themselves are complex since designing collaborative activities brings together professionals from different fields. Contributing different ideas makes it more challenging and time-consuming.

Kearney (2009) asserts that assessment is an important element of learning. However, some types of assessment such as norm-referenced assessment exclude learners with disabilities including learners with visual impairment. Michel (2008) posits that the purpose of assessment is not to decide which learners should continue their education and which should not. It is also not about putting learners in different ranks based on random criteria. Assessment should focus on the learners’ progress and consider the different learning paces of individual learners. It has been debated that if assessment standards are rigid uninformed and not purposeful, they will influence the performance of learners with visual impairment (Barton, 2009; Fraser & Maguvhe, 2008). Muluken (2006) explains that there is an agreement on the idea that teachers’ low interest or negative attitudes toward assessment have contributed to poor assessment practices. This could emanate from the challenges to access enough information about the type of assessment they could use.

According to Salvia and Ysseldyke (2004), five factors can affect learners’ assessments. First, when an assessment is prepared in a way that learners with a disability cannot understand or read, for example, the assessment materials that are prepared in normal print. Second, assessments that do not consider sensory limitations such as visual impairment, for example, tests that require written responses. Third, norm-referenced tests without modifications since these learners with visual impairment results cannot be compared to the performance of the norm group. However, criterion-referenced and qualitative interpretations of such tests can be acceptable. Fourth, tests which do not match the age level of learners. Fifth, assessment on the content not suitable or understood.

Walther-Thomas et al. (2000) proclaim the importance of resources and support for the implementation of inclusion. They maintain that admitting learners with disabilities to general education programs without adequate support is not appropriate as effective inclusion demands adequate resources. Lewis and Doorlag (2011) explain that resources such as taped textbooks, computer adaptations, and services such as peer tutoring should be provided to learners with disabilities for them to succeed in inclusive classrooms. Studies by Asrat (2013), Assefa (2008), Anto (2004), and Knouwds (2010) found that a lack of resources such as instructional materials and equipment hampers the implementation of inclusive education. Michel (2008) also indicates that the lack of emphasis given to support services is becoming an obstacle to the implementation of inclusive education in many countries. A good example is a study conducted in Australia by Brown et al. (2013) on the adequacy of regular early education classes for learners with visual impairment. They found that the support and resources provided for the staff, teacher training, adult involvement, access to visual aids and inclusive attitudes were inadequate. This is in line with Habulezi (2012) who conducted a study on the provision of learning support for learners with visual impairment in Botswana. Habulezi found that both human and material resources scarcities negatively affect learners with visual impairment academic achievement. Hence, lack of resources together with no support services, as Stubbs (2008) stresses, are the primary barriers to the practice of inclusive education in general and the inclusion of learners with visual impairment in particular.

Including learners with disabilities in general classrooms demands extra time and individualized support. Stoffile and Green (2007) argue that teachers are not functioning well due to the large class sizes rather they have become managers of the classrooms. It is important that the class should be small to satisfy every learners’ educational needs. If the number of learners in the classroom is high, teachers cannot individualize classroom activities and will not be able to work in teams with other professionals (Loreman et al., 2005; Ludago, 2020). MoE (1995) states that the number of learners assigned to a class should not be more than 40 in a classroom of 46.08 m² but Girma (2007) gives the real Ethiopian context when saying more than 70 learners in a classroom are being taught. As a result, there are shortages of textbooks, reference books, and other school facilities. Wormnaes (2006) states that a small number of learners in a classroom has a positive correlation with learner achievement. For the teacher to cope with the individual learner’s needs, a small class size is required. This is because learners learn at different rates and they require their teacher’s undivided attention. At the same time, teachers need time to give attention to those learners. It is also believed that when the class size is large, some learners, especially those with a disability, may feel neglected by
their teachers and feel lost in an overcrowded classroom. Blatchford (2003) also emphasizes that small class size will help to create a strong interaction between the learners and the teacher. When there is small class size, the interaction between the teacher and learners will increase and there will be enough time for both to work on tasks and feedback. Teachers have been observed to be more active in smaller classes than in larger classes. Therefore, small class size is preferable to having more inclusive, learner-centered teaching. The purpose of this study is to expose academic barriers that are posing a threat to learners with visual impairment.

Research Method

Research Approach and Selection of Participants

This article emanates from the data that were collected from the study for the fulfillment of a doctoral degree. The initial study which investigated the inclusion of learners with visual impairment in Ethiopian secondary schools used a mixed-method approach. The participants were drawn from two schools, School A and School B. They consisted of 2 school principals (1 in each school), 4 teachers (2 teachers from each school), 12 learners with visual impairment (6 in each school), and 12 sighted learners (6 in each school). The principal in School A has 28 years of teaching experience and a second degree whereas the one in School B has been in service for 21 years and also holds a second degree. Both teachers in School A have been in service for 15 years, one teacher in School B has been in service for 24 years whereas the other one has 20 years of teaching experience. All four teachers hold a bachelor’s degree. The learners were in Grade 9 and 10 and their age ranges were between 16 and 20. It can be noted that these learners seem to be over the age of schooling according to other countries’ standards but those are the dynamics of most underdeveloped countries. All the participants were purposefully selected from the two schools located in Tigray Regional State in Ethiopia. These two schools were selected because they are the first mainstream schools to have inclusive classrooms. However, specifically for this article, only qualitative data from the above participants were used.

Data Collection Process

The data were collected from two school principals, and four teachers through face-to-face interviews whereas the data from learners (12 learners with visual impairment and 12 sighted learners) were collected through focus group discussion. The interview questions were developed by the researchers using the main research question and literature as a guide. The developed questions were verified by an expert in the field. They were written in English and translated to Amharic by a qualified local translator. One of the researchers was responsible for fieldwork as he was familiar with the site and local language. He visited the site after gaining permission from relevant gatekeepers. After all the participants had given consent and understood that they participate voluntarily and their anonymity guaranteed, the data collection began. The participants also permitted the interview proceedings to be recorded and notes taking. For the entire duration of data collection, research ethics protocols were followed and upheld.

Data Analysis

The data obtained through face-to-face interviews and focus group discussions on which the main theme of academic barriers emanated was transcribed verbatim into textual data. The transcribed data were coded, categorized and themes generated by the two researchers. Seven themes emerged from the data that were collected from the participants: (1) professional training; (2) availability of inclusive and flexible curriculum; (3) collaboration among professionals; (4) appropriate educational assessment; (5) the school environment and its accessibility; (6) availability of resource and support; and (7) teacher-learner ratio and class size. In addition, the unedited comments of the respondents were extracted verbatim to avoid misrepresentation. However, where there was potential for negative connotations or devaluing the participant’s contribution, minor editing was done. The trustworthiness of the data was ensured by interview reflections, triangulation, comparing the voice recording and field notes as well as member checks.

Research Findings

The themes that emerged are discussed below.

Professional Training

UNESCO (2005) argues that inclusive learning has a direct relationship with teachers’ training. Therefore, professionals who have roles in the learning of the learners should receive appropriate training. Ainscow and Haile-Giorgis (1998), as well as Mutisya (2010), support this idea when saying that teachers’ training in pre-service and in-service helps in bringing about educational change. Therefore, it was appropriate to ask the principals of both schools if they had done any training on managing and implementing inclusive education. The principals responded that they had received training at different service times. School A principal responded, “I took an inclusive education course in my undergraduate studies whereas” School B principal said, “I received in-service training by an NGO called Sun Way Ethiopia and some other teachers received Training of Trainers (ToT) training.” School A principal reported that the course he took was helpful to handle learners with visual impairment and other types of impairments. School B’s principal also stated that now he can write and read in braille after he received the training.
Regarding teachers’ training, School A principal indicated that two teachers from his school received training in inclusive education by Tigray Region Education Bureau for 2 weeks. He also added that other 70 teachers participated in a 2-day training course organized by Mekelle University on how to handle learners with visual impairment. The interviewed teachers from both schools, however, reported that, except that they took Special Needs Education in their undergraduate degrees, they did not receive any training on how to include learners with visual impairment in their classrooms. A teacher from School A (T1) indicated that he faced challenges in teaching learners with visual impairment in his general classrooms though he said that he was taught how to teach those learners while doing his undergraduate degree. In addition, a teacher from School B (T4) said that “In my experience, it was challenging to me. How can I assist them? How can I help them? How can I provide material prepared based on the educational needs of the learners. The textbooks which are available for all types of learners have pictures.” As a result, they believe that the inclusion of learners with visual impairment had not been successful. To solve the problem, the interview participants recommended that learning materials such as textbooks written in braille should be available for the learners with visual impairment to realize their inclusion in education.

Collaboration Among Professionals

The interview participants were asked whether they consulted or collaborated with professionals. School A principal reported that there was one counselor and two coordinators who consulted and collaborated with his school community. A teacher from his school (T1) also stated that there was a counselor who specialized in Special Needs Education in the school. He said that the counselor had helped him give information about learners with visual impairment. School B’s principal reported that his school collaborated with professionals from School A because School A had a better experience of teaching learners with visual impairment. He also indicated that his school received professional support from the Regional Education Bureau and Sun Way Ethiopia, but the three teachers and School B principal reflected that the teachers did not collaborate with other professionals in teaching learners with visual impairment. The reasons are reported as follows. The second interviewed teacher (T2) from School A said that he did not consult anyone since there were no professionals in Special Needs Education or Inclusive Education at his school. Another teacher (T4) from School B also said that “. . .there is nobody who collaborates with me to help the learners with visual impairment. . . .” Most of the interviewed teachers reported that since most of the teachers in the schools did not receive training, they did not consult, co-teach, or collaborate with another or other professionals. The respondents also explained that the outside school stakeholders collaborate only with school principals and very few teachers are involved. This coincides with what Ertesvag (2011) argues regarding the none existence of professional collaboration among professionals and teachers. In support, Lujan (2009) explains that there are teachers who do not like to collaborate with others. This could emanate from a lack of training given to teachers on collaboration (Stolarski, 2011).

Appropriate Educational Assessment

The interviewed teachers confirmed that they assess learners with visual impairment similar to other learners such as sighted learners. For example, T2 said the following on how he assesses learners with visual impairment: I assess the learners with visual impairment like the sighted learners. I give 5 minutes to sighted as well as to learners with visual impairment, but what is different between them is when I read for the sighted learners, I read one or two times if I am
assessing them on choosing, matching, and so on. Then when I read for learners with visual impairment, I do it two or more times. Otherwise, there is no difference in the types of questions for them. This challenges Salvia and Ysseldyke’s (2004) proclamation that assessments should consider learners’ conditions because this can affect the assessment of their skills and abilities. In addition, T1 reported that “the learners with visual impairment choose sighted learners to read questions and write answers for them. But some teachers read exams to the learners with visual impairment repeatedly. Sometimes invigilators may read and write answers for the learners with visual impairment,” but the problem that this teacher mentioned is that the invigilators become tired because they read many times for these learners.

All the interviewed participants from School B indicated that the learners with visual impairment especially those learners who are visually impaired did not have braille books. The teachers said that when they gave tests, the teachers themselves and sighted learners helped learners with visual impairment by reading. T3 reported that “learners with visual impairment do not have textbooks written in braille. So, I give alternative assignments to the learners with visual impairment than that from the normal textbook,” but the teachers explained that they do not have enough time to do this properly. Regarding allocating extra or additional time for learners with visual impairment, the participants said that they did not allocate additional time to the learners for various reasons. T1 stated that “because the time limit is 40 minutes for the class, we teach for half of the time and use the other half for a test. So, it’s not enough for us, but I try to fulfill their needs as much as possible.” The other teacher (T4) from School B declared that teachers have to do work other than teaching to survive, that is the reason why he did not allocate extra time for learners with visual impairment during an assessment. The statements uttered by the participants about not allocating extra time can be detrimental to the learners with visual impairment. Allocation of extra time is very important in supporting learners with disabilities (Loreman et al., 2005).

The teachers added that they had never prepared assessments in braille or other means by which learners with visual impairment could do the assessment by themselves. The participants indicated that during tests or exams either teachers, invigilators or sighted learners read and write for the learners who are visually impaired. The teachers also stated that there were no books in braille for learners who are visually impaired, and this lead them to face problems in doing assignments on their own. This becomes a challenge as Overton (2012) emphasizes that assessment plays a crucial role in the determination of learners’ outcomes. Their inappropriately assessed learning signifies their exclusion from the school setting.

It was important to ask learners about their assessment during focus group discussions. The discussants reported that teachers did not use an appropriate educational assessment that considered learners with visual impairment conditions. A learner who has a visual impairment said, “most of the time there are pictures or maps in our tests, homework, and group work. We are unable to see tests that have pictures or maps, and this affects our assessment. Another learner reported that “...although teachers promise us to give alternative test items, they sometimes forget.” Learners who are visually impaired also complained that they always need the help of others because assessments were not prepared in braille or other means. They said those teachers or sighted friends who read for them did not read properly. A learner who has a visual impairment said, “for final and midterm exams, teachers read for us and we are given enough time but for short tests, sighted learners read for us after they have finished their test. During this time, noise disturbs us because others talk about the test. Again, we do not get enough time. Teachers also hurry us to finish the test.” The other challenge that the discussants mentioned was that the time allocated for short tests is not enough. This is inconsistent with what MoE (2012) and Loreman et al. (2005) say regarding extra time allocation for all learners with disabilities.

Learners with visual impairment in School B also complained about the quality of assessments. They said that teachers design close-ended questions, “Most of our teachers assess us by giving tests. The quality of assessment is very low. The assessment methods they use cannot assess our knowledge and skills. Most of the test items are multiple-choice and true or false questions. There are no questions that demand explanation or discussion.” The discussants reported that the learners with visual impairment’s success in learning and assessments are due to their efforts not because of the teachers’ commitment.

The School Environment and Its Accessibility

School A is located among residential houses. It is also surrounded by three roads, one of which is the main road, but the school principal said that “there is no disturbance from cars except that the school compound that is too narrow to accommodate around three thousand learners.” For this reason, he said that his school had informed the Regional Education Bureau that they need additional classes to cater to all the learners. Similarly, the School B principal said, “my school is not suitable for the learners with visual impairment. Even our compound and outside the compound are not suitable for them. The school is built like a tower. I don’t know why the government of the regional state built them [like this]. Even the toilets or the compound itself are not suitable for them. The principal added that there were big trucks that passed by the school. Despite, the noise coming from those trucks, they are dangerous to those learners who are crossing the street. In addition, the participants reported that “the school environment is not comfortable for learners with visual impairment. Some of its facilities such the classrooms and toilets are not accessible.” According to the
School B principal, his school lacks many facilities. The school has a shortage of water. There are no toilets suitable for learners with visual impairment. They have only one common toilet for all learners. T3 indicated that the buildings have four floors and learners with visual impairment are put in classrooms on the upper floors. A similar study by Mateusi and Naong (2014) revealed that inappropriate infrastructural resource is one of the factors affecting learners with visual impairment learning.

Learners were also asked about the school environment and accessibility. Learners with a visual impairment from School B said, “first of all, the school was not built for us or to include us. The experience of the school concerning teaching learners with visual impairment is not that much. It started accepting us in 2006. We also knew that the school was not constructed to include us. Facilities were not provided or built considering our impairment, but we hope that things will be adjusted in time.” In addition, a sighted learner from School B said, “when we are learning in the classroom, there is disturbing noise. This is due to the architecture of the classroom. The classrooms face the main roads. So, when big trucks pass by, there is noise. Even a little noise directly echoes in our classroom. This is in line with what Donohue and Bornman (2014) clarify that if classroom and school environments are not conducive they create barriers to the inclusion of learners. Furthermore, MoE (2010) as well as Demetros (2007) also concurs that environmental problems are the main challenges to the practice of inclusive education in schools.

Learners in both schools explained that facilities such as toilets, water, playgrounds, light, laboratory rooms, and ICT rooms were not functioning, accessible, and of poor quality. Regarding laboratory rooms, School A learners stated that while they were expected to do four or five tasks in the laboratory rooms, they end up doing only two because most of the equipment are not working. One learner explained, “. . . there is no light, we are facing difficulties when the classroom is dark.” A sighted learner from School B said, “There are many environmental barriers. There is a big problem concerning water and toilet. There is only one water tap in our school compound and many learners stood in line to drink from it during break time.” This is a big concern as Kaplan (2007) explicates that the lack of such facilities can affect learners learning.

Regarding the library, the sighted learners said that the library was good and had enough books, but learners did not have an interest in reading. By contrast, learners with visual impairment said that there are not enough materials available in the library for them. In general, all the discussants agreed that the schools did not have inclusive environments and were not accessible. A good summary of the discussants’ ideas was given by a learner from School A: “This school is not built to include us after all. The school has nothing for us. We are here just because we have to learn.” This exclusionary practice was also echoed in a recent study conducted in Ethiopia (Beyene et al., 2020).

Availability of Resources and Support

Walther-Thomas et al. (2000) discuss that for the effective implementation of inclusive education and the inclusion of learners with disabilities, the availability of adequate resources and support are mandatory. On the contrary, interviewed participants in this research were not confident to say that these resources are available in the schools. School B principal stated that “there are only two subjects (Civics and Biology) which are audio-recorded for the learners with visual impairment otherwise other audio-recorded resources available are as a chapter or two.” He said that recordings were done by voluntary teachers. All the teachers from the two schools also complained that there were no resources available for use by learners and the teachers. The teachers specified that they could not find any resources including reference books on how to teach learners with visual impairment. This is similar to a study conducted in Spain by Simon et al. (2010) which revealed that schools did not have resources. Furthermore, studies by Assefa (2008) and Anto (2004) conducted in Ethiopia also revealed that a lack of resources is affecting the implementation of inclusive education. Moreover, a study conducted in Botswana by Habulezi (2012) found that both human and material scarcities are affecting learners with visual impairment academic achievements. The lack or shortage of educational resources and assistive technologies to cater to learners with visual impairment in Ethiopia has continued unabated as revealed in a recent study (Beyene et al., 2020).

On the other hand, School A principal said that after learners with visual impairment are registered, the school makes necessary arrangements for them. He said that learners with visual impairment are assigned to first-floor classrooms. Regarding support, the principal reported that “we have connected the learners with visual impairment with the sighted learners to help them adapt in the school, to read and do other activities for them. The school organizes support clubs for learners with visual impairment.” This is good practice according to Lewis and Doorlag (2011) because such supports that are provided by peers become so important for the learners to succeed in their studies. In support, School B participants said, “sighted learners support learners with visual impairment by reading. They also go with them to their houses and help them to manipulate tape recorders and study with them.” The principal indicated that the school gives them some materials to listen to at home, but T3 in the same school denied this claim saying, “learners with visual impairment are not receiving all the necessary supports from the school.” Concerning this, Habulezi (2012) states that it is difficult to support learners with visual impairment because their needs differ as their sight problems differ. However, if identified, the principal said that they support them by making them sit at the front of the class.

To facilitate the learners with visual impairment learning, School A principal stated that his school has arranged library
and computer centers. He indicated that they help learners with visual impairment to efficiently use the computers. In the library, he said that there are books in braille. These books include History, Geography, Economics, Civics, and Ethical Education. Again, the principal said that some NGOs have promised the school that they will give them other braille books. However, the principal confirmed that “there are no audio-recorded books or other materials, but computers have software,” but Lewis and Doorlag (2011) advise that resources such as taped textbooks and computer adaptations should be provided to learners with disabilities to succeed in inclusive classrooms. The School A principal further said that his school helps learners with visual impairment by providing soft copy materials. T1 also confirmed that, “the school tries to help learners with visual impairment by giving braille papers and arranging computer rooms. However, that it is not enough. Similarly, T2 echoed that, “learners with visual impairment are unable to get instructional materials.”

School A principal mentioned that his school prepares tutorial classes for learners with visual impairment. He said that they design some special questions to give to learners with visual impairment which can help them to prepare for the grade 10 and 10 + 2 matriculation and college/university entrance examinations. T1 also agreed with the principal saying that he prepares questions and helped learners with visual impairment. He said he even helped the learners on weekends especially those who were absent during the week. Regarding the support provided by the outside community, School A principal said, “...in connection with the different community, for example, one merchant gave us two footballs for learners who are visually impaired and also ten-thousand-birr (Ethiopian currency) worth of braille papers. Other international countries also promised to bring some books in braille. He revealed that their efforts are hampered by the lack of money, “...we are affected by budget because we need a large amount of money for braille books.” WHO (2011) also advises that countries should allocate enough budgets for the effective implementation of inclusive education. A study by Awetash (2015) also shows that financial support to learners with visual impairment in schools in the Tigray Region of Ethiopia is not satisfactory. English (2011) advises that schools should evaluate and determine whether learners have disabilities or not to arrange resources and support for them.

The learners were also asked about the availability of resources and support in their schools. Sighted learners from both schools appreciated the availability of resources such as books in the libraries. However, learners with visual impairment complained that “there are no additional materials such as recorders, televisions, and computers, as well as enough books in braille. There is a shortage of computers which have JAWS software.” School A learners said, “when we ask the librarians to give us braille books to take them outside the library so that our friends who read braille could read for us... they do not allow us. So, we are not getting special attention.” Similarly, another learner said, “there are very few books in braille for Civics and History, but we are not allowed to take them home. We read them in the library when we have free time during the subjects, we do not learn Chemistry and Physics. So, we cannot read them at home.” This shows that there is a shortage of resources, especially braille books. This coincides with research by Awetash (2015) which found that school libraries do not give adequate service to learners with visual impairment and librarians are not cooperative with the learners who have a visual impairment. Again, a study by Knoowds (2010) shows that there are few resources available for learners with visual impairment in school libraries. Habulezi (2012) also confirmed that lack of resources is affecting learners with visual impairment’ academic achievement. Michel (2008) stresses that when little emphasis is given to support services, this is a barrier to the implementation of inclusive education.

In support, a learner from School A who has a visual impairment complained, “there is no special support provided for us. Teachers do not support us in a special way while they teach in classes...” The participants said that they needed their school to provide them with walking canes as the learners cannot afford to buy them by themselves. School B learners with visual impairment said, “...there are no professionals who graduated in special needs education. For this reason, we are not getting any kind of help in familiarizing ourselves with the school environment. We even meet with teachers only in classrooms. There are no specialists in our school who help us. So, there is no special orientation or information given to us.” Concerning orientation, a study by Knoowds (2010) shows that orientation and mobility training was not given to learners with visual impairment. Similarly, Awetash (2015) who conducted research in the same region as the current research found that orientation and counseling services to learners with visual impairment were neglected at schools.

In addition, most learners with visual impairment said that there were no professionals in the school who could help them except those teachers who gave lecture notes to low-vision learners, prepare recorded materials and upload them to the school computers. But they appreciated sighted learners’ support by reading from books, and chalkboards, and telling them what was happening in the classroom while lessons carried on. A learner who has a visual impairment said, “We only get support from fellow learners.” In the end, the discussants recommended that the schools should at least provide braille writers and braille books to learners with visual impairment. Stubbs (2008) also stressed that lack of both resources and support were the primary barriers to inclusion.

The interviewed participants were asked to explain the teacher-learner ratio and class size. School A principal responded that “we have large class sizes which are 1:70, but according to the policy in Ethiopia, the ratio has to be 1:40.”
He explained the reason why his school has large class sizes. He said it was because there is a shortage of secondary schools in Mekelle city. School B principal also said that the teacher-learner ratio at his school depends on the grades. He added that some classes have 40 or 45 learners in grade 9 whereas in grade ten there are 60 to 70 learners in a class. This is the opposite of what the policy stipulates. The policy stipulates that there should not be more than 40 learners in a classroom (MoE, 1995).

Regarding training on handling large class sizes, the teachers said that they were not trained, but the school principal said that teachers are trained on how to teach large classrooms by their respective departments and the Regional Education Bureau. School A teachers also stated that “there is overcrowding of learners in the classrooms.” They said that they are compelled to teach large classes that are difficult to manage. T1 and T2 teachers reported that “since the class is overcrowded there is noise disturbance which is hampering the learning of learners with visual impairment as they depend on listening. This is in line with what Stofile and Green (2007) clarify teachers do not function well if there are large class sizes.

Discussion of Findings

The findings show that there is a lack of professional training. Although the school principals and teachers received some form of training in inclusive education, it was not intense enough to allow them to handle and include learners with disabilities especially learners with visual impairment. Most of the teachers took Special Needs Education courses during their undergraduate degrees. However, they did not receive clear training on specific disabilities and had no in-service training to keep them up to date with new developments in the field. They are not provided with continuous professional development. It was also discovered that the school curriculum in the two schools is not inclusive or flexible. This is because it was not designed with the consideration of learners with disabilities. Although there is an emphasis that the curriculum should be adapted, this is not happening in these schools. Learners with visual impairment do not have instructional materials prepared based on an inclusive curriculum. As the literature has emphasized the importance of collaboration among the professionals, this research found a minimal collaboration from Tigray Region Education bureau specialists as well as NGO called Sun Way Ethiopia that is only supporting School B by giving awareness on inclusive education. However, the teachers revealed that the professionals from the relevant organizations are not supporting them.

The educational assessment mechanism used to assess learners with visual impairment poses a concern because it is not inclusive and appropriate. The assessments do not consider the learners’ disabilities such as their sight conditions. Concerning the availability of resources and support, School A is relatively better resourced than School B. While the first school has four textbooks in braille, the second school does not have books in braille but has two audio-recorded textbooks and chapters of textbooks. The schools do not have enough resources either for teachers or learners. As a result, the majority of the teachers are facing problems teaching in inclusive classrooms. However, most of the teachers believed that the present instructional materials are suitable to implement inclusive education and are happy with the service of the libraries in their schools. On the contrary, learners with visual impairment do not have materials. Most of the learners who have visual impairment do not have braille writers. The only support is that sighted learners help learners with visual impairment by reading for them, and showing and giving directions regarding the school’s physical setup. It has been revealed that teachers only support the inclusion of learners with visual impairment on average. The lack of identification of learners with low vision during registration has been pointed out as causing a lack of inclusion because the schools do not have a clear record of learners with low vision. It is noted that the scarcity of resources may never be solved in the near future because the schools have no budgets for resources and support. The teacher-learner ratio is also a cause for concern. Both schools have large class sizes although School B has smaller class sizes than School A. It has been revealed that large class sizes affect the inclusion of learners in general.

With Ethiopia’s difficulties in sustaining its positive economic growth and accelerating poverty reduction, recommendations and suggested solutions may take time to be implemented. However, this research recommends that the MoE must prioritize the allocation of enough finances and provide necessary resources and support to the schools to provide instructional and learning materials for learners with visual impairment. Above all, basic learning materials such as braille writers which facilitate and consider learners’ special educational needs should be made available. The government of Ethiopia, in line with the international conventions, declarations, agreements, and frameworks declared education as a human right in its constitution. Articles 41 and 91 of its constitution give attention to providing support and allocating resources to the disadvantaged people of the country including learners with visual impairment (Belaynesh, 2009; MoE, 2012, 2016; UN: Human Rights Office of the High Commissioner, 2016). Therefore, the Ethiopian government should fulfill the promises made in its constitution.

Conclusion

This article aimed to expose academic barriers that prevent the inclusion of learners with visual impairments in mainstream schools. Literature was explored where different academic barriers were exposed. These academic barriers were also confirmed during the collection of data. To sum up the findings, the challenges of creating a more inclusive, supportive, resourceful, and efficient education system to
accommodate learners with visual impairment were exposed. The Ministry of Education, Regional Education Bureaus, Woreda Education Bureaus, schools, teachers, parents, and education stakeholders are, therefore, urged to be committed to eliminating the academic barriers that are hindering the inclusion process and the implementation of inclusive education at schools. A high-level professional training of teachers in inclusive education is recommended. This may equip teachers with the knowledge and skills required for the inclusion of learners with disabilities especially learners with visual impairment. In addition, curriculum developers, schools, and teachers should consider learners with disabilities when designing the programs and plans. The Ministry of Education must implement digital libraries for learners with visual impairment as these libraries are more globally available and sustainable with less expensive technologies. Importantly, all the mentioned stakeholders must intervene and ensure that education is accessible to all learners and the implementation of inclusive education becomes a priority. This can be done by injecting more budget into the inclusive schools to allow them to procure much-needed assistive technology and learning materials for learners with visual impairment.

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