VISUALLY IMPAIRED ADULT LEARNERS' EXPERIENCES OF THEIR UPPER PRIMARY EDUCATION PROGRAMME IN OMUSATI REGION, NAMIBIA

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ABSTRACT*: This study investigated the experiences of the adult visually impaired learners of Adult Upper Primary Education programme in the Omusati Region. This research emanated from the assumption that a study is needed to inform stakeholders on how the Adult Upper Primary Education programme may be implemented to provide inclusive and accessible quality education to the adult visually impaired learners (Directorate of Adult Education [DAE], 2009). Ten (10) adult visually impaired learners volunteered to participate in this study. A multi-stage sampling of purposive sampling and intrinsic case sampling was employed to select desired sample for this study. Data was collected through semi-structured interviews and naturalistic observations. Using the interpretative phenomenological analysis method, data was grouped and categorized into themes to form meaningful patterns of the study findings. The study found the learning environment to be unconducive is several ways: (a) the programme lacked assistive devices and learning materials; (b) the relevant offices (i.e. district, regional and national offices) were not supportive enough of the literacy centers; and (c) the learners' challenges outweighed the best practices, elsewhere. The study recommended to turn the presented challenges into opportunities for the program to provide quality education as envisaged in the Salamanca Statement and the Convention on the Rights of Persons with Disabilities (United Nation Educational Scientific & Cultural Organization [UNESCO], 1994). It also recommended future research on the assessment of the quality assurance of the programme as well as the quality of life for visually impaired people who graduate from the programme.*

KEYWORDS*: adult visually impaired, learners' experience, upper primary education, Omusati Region*

INTRODUCTION

Orientation of the study

The role of adult education is critical in the development of society, thus as a signatory to international commitments such as Education for All (EFA), the United Nations (UN) Literacy Decade, the Millennium Development Goals, and Declaration of Human Rights, Namibia has an obligation to provide a good quality education that improves the of life of all its citizens (UNESCO, 1994). Whereas the third goal of EFA affirms that the learning needs of all young people and adults are met through equitable access to appropriate learning and life skills programmes; the fourth goal is emphatic on equitable access to basic and continuing education for all adults (Ministry of Basic Education, Sport & Culture [MBESC], 2003). This proclamation is extended to the adult visually impaired learners.

As part of the National Literacy Programme of Namibia (NLPN), the Directorate of Adult Basic Education (DABE) was charged with the task of providing and promoting basic literacy and numeracy skills to adult people (MBESC, 2003). The NLPN was evaluated three times, first in 1994, secondly in 1999 and thirdly in 2008. The first two evaluations recommended the development of post-literacy programme including the Adult Upper Primary Education (AUPE) programme (DAE, 2009). The Ministry of Basic Education and Culture (MBEC) through the Directorate of Adult Education (DAE) introduced AUPE as an extension programme for NLPN. In 2008, the DAE responded to the draft Sector Policy on Inclusive Education which propagated for the inclusion of all learners in equitable quality education, and the first intake of the visually impaired adult learners was accommodated in the programme (Ministry of Education [MoE], 2008). A research study by Bhola (1996) showed the need for a programme of lifelong learning after graduating from the adult literacy programme, in Namibia.

The report by the Namibia Statistics Agency (NSA) shows that the blind and visually impaired form the highest proportion of people without formal education in Namibia (NSA, 2016). The report also showed the Omusati Region to have the highest number of people with disabilities (n=15,230), of which 18.2% were visually impaired. Based on the NSA report, several adult literacy classes at three different places in Omusati Region including the villages of Oneeya, Omaandi and Otamanzi were established to address the issue of uneducated persons with disabilities in rural areas. Twelve (12) adult visually impaired learners have been attending adult literacy classes at the mentioned places. It was at these three venues this study was conducted. It pursued the assumption that the highest proportion of disabled persons with no formal education was blind and visually impaired

Statement of the problem

Notwithstanding the fact that the AUPE programme had been evaluated three times (i.e. in 1994, 1999 and 2008), the adult visually impaired learners were not parts of these studies (Matengu, Nuujoma & Haosemab, 2009). Consequently, the visually impaired adult learners have never been

accorded a fair chance to express their experiences on the AUPE programme. The actual challenges and achievements that the visually impaired adult learners have experienced in the programme are yet to be identified. Although there were extensive activities taking place, there was no recorded information from the programme end-users apart from the District Education Officers' (DEOs) monthly statistics (MBESC, 2003). It was thus the intent of this study to establish through the visually impaired adult learners' point of views about the actual experiences they encountered in AUPE programme in Omusati region, to propagate for possible changes in terms of value addition, needs identification and programme sustainability.

Research questions

The main purpose of this study was to explore the experiences of the adult visually impaired learners of the AUPE programme in the Omusati Region. The main research question of this study was: "What are the experiences of the visually impaired adult learners of the AUPE programme in Omusati region?" The subsidiary research questions were: "What are the best practices the visually impaired adult learners have experienced in AUPE Programme? What are the challenges the visually impaired adult learners have experienced in AUPE Programme? What are the AUPE programme improvement measures?"

THEORETICAL FRAMEWORK

Socialization

Wadegaonkar, Sonawana and Uplane (2016) defined socialization as the process by which humans begin to acquire the skills necessary to perform as a functioning member of the society. They further postulated that socialization abilities are dependent on a person's acquired repertoire of learned social skills and behaviors. Their study shows that social deficits in adolescents can cause social isolation, low self-esteem and low mental health.

Socialization serves as the conceptual framework of this study underpinned by two integrated theories, i.e. *social development theory* and *social learning theory*. There are varied but interrelated branches under each theory. These integrated theoretical frameworks were developed to connect to the existing knowledge and address the knowledge gap to explain, predict and understand various interrelated aspects of the socialization phenomena of visually impaired adult learners in the pursuit of knowledge acquisition, as illustrated below;
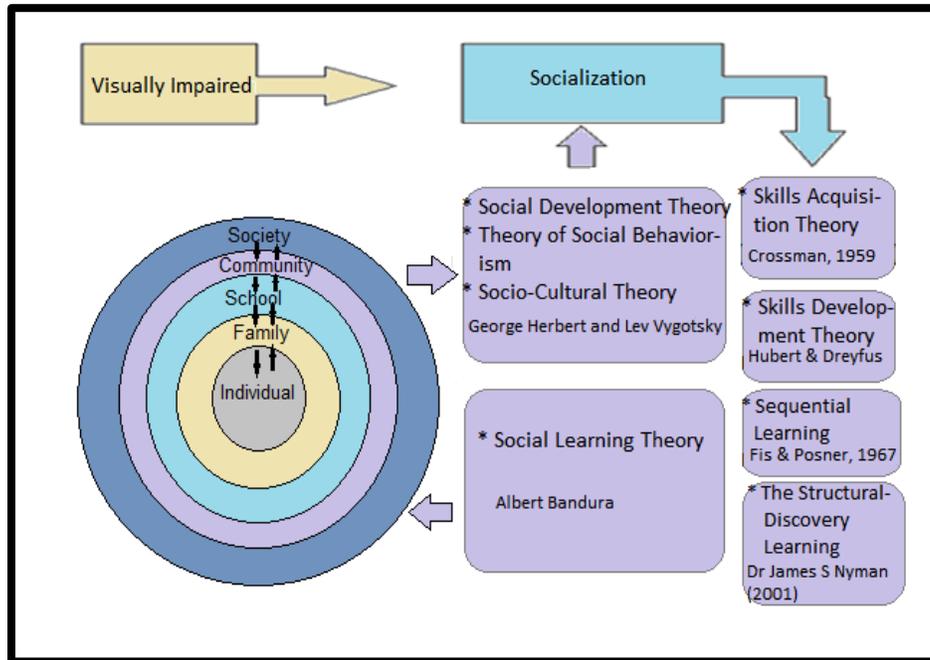
Figure 1: Integrated Theoretical Framework (Wadegaonkar, Sonawane & Uplane, 2016)

Various theories have been studied to develop a theoretical framework which explains, predicts and explores various interrelated aspects of the phenomena of socialization of visually impaired students. These theories are discussed as follows:

Social Development Theory
This study finds its roots on the principles of social development, which in many cases are virtually deficient on visually impaired adult learners' daily social interactions with others. Vygotsky (1978; cited in Wadegaonkar, Sonawane & Uplane, 2016) argued that social interaction precedes development; however, consciousness and cognition are the end products of socialization and social behavior. The second aspect of Vygotsky's social development theory is the idea that the potential for cognitive development depends upon the "zone of proximal development" (ZPD). The ZPD refers to the level of development attained when the range of skills are developed with adult guidance or peer collaboration and exceeds what can be attained alone when learners engage in social behavior. Mediation may occur through which teachers, parents, peers and other mentors help learners to gradually acquire knowledge and skills. Mediation may take place within the ZPD and full development of the ZPD depends upon full social interaction. Scaffolding is applied for the learners to internalize knowledge and environment around them until they become self-reliant. In other words, it can be said that social interaction among learners improves socialization. Vygotsky added that disability will change during development and that it is sensitive to the

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influence of remediation programs and social influences. Hence, this study intends to find out if there is a discrepancy between the literacy teachers' capacity building and support mechanism the visually impaired adult learners receive within the classroom and outside the institution.

According to Trent, Artiles and Sue-Englert (1998), social development has emerged as a theory that has the potential to make instruction in special education more holistic and, relevant. It emphasizes the strengths and knowledge that students bring to the classroom setting. Therefore this theory had been aligned to questions; *1.1 Do you live in this area?, 1.2 What other people react when they see you attending AUPE classes?, and 3.4 Do you receive any form of Learner Support from the government or Non-Government Organisation (NGO)? (Appendix A: Interview Guide).*

Socio-cultural theory

Vygotsky (1995, cited in Wadegaonkar, Sonawane & Uplane, 2016) introduced the core concepts of the "primary disability" and "secondary disability", and their interactions. He defined "primary" disability as an organic impairment due to biological factors such as loss of vision by diseases, and "secondary" disability refers to distortions of higher psychological functions due to social factors such as stigmatization. He maintained that an organic impairment prevents a child from mastering some or most social skills and acquiring knowledge at a proper rate and in an acceptable form. He stated that the child is socially deprived if the path of development diverges from normal social development because of the child's disability. He further stated that social deprivation leads to the emergence of delays and deficiencies, i.e. secondary handicapping conditions and inadequate compensatory ways of coping with disability. This makes the disability to become sensitive to remediation and social influences. Therefore, this study focused to establish if the degree of visual impairments has any secondary influence on ones' social well-beings.

Theory of Social Behaviorism

George Herbert Mead (1967) explained that people develop self-images through interactions with other people. In a nutshell, a person's personality which consists of self-awareness and self-image is a product of social experience. Hence, a person develops solely through social experience. The planned and organized experiences help develop the person's self-image which could lead to an improved socialization process. It further suggests that the mark of successful socialization is the transformation of social control into self-control. It shows that the development of self and identity in the context of intimate and reciprocal relations is important for socialization. Therefore, this theory ought to answer *question 1.3* that aims to find out how the community perceives the adult visually impaired learners who are attending AUPE programme.

Social learning theory

Bandura Albert (1977) explained that people learn new behaviors through overt reinforcement or punishment, or via observational learning of the social factors in their environment. He stressed that observational learning can occur in relation to three models, such as; *Live model* in which an actual person is demonstrating the desired behavior; *Verbal instruction* in which an individual

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describes the desired behavior in detail, and instructs the participant on how to engage in the behavior; and *Symbolic* in which modelling occurs by means of the media, including movies, television, Internet, literature, and radio. This theory was used in this study to identify the gap in how social factors may influence the attendance of the adult visually impaired learners.

Skills Acquisition Theory

Crossman (1959) provided an early view of how practice leads to performance improvements. Crossman's model qualifies as a theory which proposes that practice leads to more efficient procedures for performing a task. Skill acquisition theory postulates that, when individuals acquire skills through external instruction, they normally pass through five stages: *Novice, Advanced Beginner, Competent, Proficient,* and *Expert.* This theory is crucial for this study because it bridges the gap between the status quo and the desirable skills transfer' mechanisms which are relevant to the visually impaired adult learners. Following is a brief description of the elements of the skills acquisition theory, which are discussed separately;

Transfer of learning

Skill development is based on the concept of transfer of learning (Hubert & Dreyfus, (nd) cited in Wadegaonkar, Sonawane & Uplane, 2016). If the influence is on a new skill being developed then this is said to be proactive and if the influence is on a previously learned skill then this is said to be retroactive.

Transformational learning

According to Mezirow (1990, cited in Wadegaonkar, Sonawane & Uplane, 2016), transformational learning is the process of learning, analyzing and making deliberate changes to the assumptions that we have. This causes us to think act and behave in certain ways that enable us to accommodate change and transform our practices.

Active Learning

Active learning explains that immediate repetition enables the student to store the information gained from the experiences in his memory. The activity-based program should be considered while designing the intervention to help visually impaired students to learn social skills (Shafer, 1995).

Sequential learning

Fitts and Posner (1967) explained that there are three stages to learning a new skill, these are; *Cognitive phase* - identification and development of the components of the skill involves the formation of a mental picture of the skill. *Associative phase* - linking the parts into a smooth action involves practicing the skill and using feedback to perfect the skill and *Autonomous phase* - developing the learned skill so that it becomes automatic involves little or no conscious thought or attention whilst performing the skill, however, not all performers reach this stage. The learning of physical skills requires the relevant movements to be assembled, component by component, using feedback. Rehearsal of the skill must be done regularly and correctly.

The Structured-Discovery Learning

Nyman (2001) suggested two approaches for providing training to blind people. In the *science model,* the counsellor plays a central role in modifying the individual's behavior. The student does not need to know the science behind the training; they only need to execute the acquired skills to a prescribed standard. The *philosophy model* by which most of the environmental knowledge is derived from reflection by generations of visually impaired people on their shared experience in developing alternative techniques for accessing relevant information. This is the foundation of the philosophical approach known as structured-discovery learning. This theory supports that visually impaired students can be trained by monitoring their behavior and giving them experiences to develop alternative techniques for effective socialization through a need-based intervention. Based on the assumption (DAE, 2017) that the visually impaired literacy teachers were not adequately capacitated on how to facilitate the literacy classes of the visually impaired learners, these two approaches may serve as a viable option to bridge the knowledge gap.

Bio-ecological theory

The bio-ecological theory is based on the interdependence between different organisms and their physical environment. According to Donald et al, (2006) this theory was proposed by Bronfenbrenner (1977; 1979; 1986) who came up with different levels of the system in the social context that influence one another continuously. In Bronfenbrenner's model, these interacting dimensions happen within four nested systems; the *micro-system,* the *mesosystem*, the *exo-system,* and the *macro-system*.

The micro-system entails family, the school and the peer group which a learner interacts with on a daily basis. The mesosystem involves all aspects that nurture or influence the interactions, whereas exo-system has to do with the situation beyond a learner control but can influence the learner's interaction, and macro-system involves dominant social structures such as cultural values and beliefs. This theory would be aligned on partnership and collaboration between the adult visually impaired learners with various stakeholders, in question *3.4. Do you receive any form of Learner Support from the government or Non-Government Organisation (NGO)? (Appendix A: Interview Guide).*

A study by (Smith, 2006) has proposed four-step approaches of inclusion in the form of interactive dimensions between the visually impaired students, teachers, schools and parents as follows: **(a)** a physical dimension which has to do with mobility, room arrangement and seating; **(b)** an instructional dimension which covers the lesson presentation, skills acquisition, assignments/ worksheets and test-taking; **(c)** the social-behavior dimension which focuses on skill training and self-support, and **(d)** the collaborative dimension which includes aide, co-teaching, resource room assistance, teacher consultation and teacher training.

These dimensions are presumed to be fundamental in aiding this study to identify the best practices and challenges the visually impaired adult learners may have experienced on AUPE programme.

RESEARCH METHODOLOGY

Research Design

A qualitative case study research design was used to investigate the experience of the participants in their places of work and stay referred to as natural settings (Leedy & Ormrod, 2005). The selected approach was deemed appropriate in this study because it would help provide information on the subjective experiences of the participants (Creswell, 2009). The researchers therefore strived to describe the phenomenon as accurately as possible, refraining from any pre-given framework, but remains true to facts (De Vos et al, 2011).

Population

The population is described as the total number of persons one wishes to base his/her study on (Creswell, 2008). The target population of this study was the adult visually impaired learners who were attending AUPE classes from three literacy centers in the Omusati Region.

Sample and sampling techniques

A sample is defined as a well-informed subgroup of the target population that is selected to participate in a study (Creswell, 2008; Patton, 2001). For this study, a multistage sampling of purposive and intrinsic case sampling was used to select the sample. Intrinsic case sampling is defined as identifying and studying a case that inherently arouses the interest of the researchers (Patton, 2001). Purposive sampling is a non-probability sampling technique in which the researchers implore people with specific characteristics to participate in a research study (Creswell, 2008). For example, in this case, the information-rich group consisted of the adults with visual impairments who are self-identified as 'low vision, partly blind or total blind' adult learners as they hold a unique case in the society as they possess a special attribute that was relevant to this study. The adult learners with visual impairments in Omusati Region were purposely sampled to participate in the study, because this was the only region with a reasonable number of AUPE learners with visual impairments, out of the two (2) regions that had AUPE classes in 2018, the year in which the research was initiated. Out of the 12 adult visually impaired learners, ten were sampled to participate in this study in the Omusati region. The small sample of the study was in line with other scholars who stated that a small sample allows a qualitative researcher a better chance to learn a phenomenon under study in depth (Harry, Sturges & Klingner, 2005 cited in Hamunyela, 2008, p.96).

Research Instruments

Data was collected through semi-structured interviews and naturalistic observations. Semi-structured interviews deemed to be effective in that they are more flexible and allow the interviewees to provide more information (De Vos, Strydom, Fouche & Delport, 2011).
For this study, the interview tool was divided into two main parts: **(a)** the biographical information of the participants, and **(b)** information on the participants' experience of the programme such as

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attendance, accessibility, participation, performance, challenges, and possible alternatives. Additional to the interview tool, all interview conversations were recorded using a digital tape recorder for analysis (Merriam, 1998). Data was also collected through naturalistic observation. Naturalistic observation implies that a person's behavior is being observed without aware that he is being observed and that occurs in natural rather than artificial (Mwamwenda, 1996).

This study made use of field notes to capture all observable data. Researchers like De Vos et al. (2011), describe field notes as detailed notes that researchers make as they observe the phenomenon unfolding. Field notes contain information on the verbal and non-verbal behavior of the respondents was used. Pictures were also taken as supporting evidence of the collected data.

Data collection

Following the issuance of the ethical clearance certificate by the University of Namibia, the researchers wrote a letter to the Executive Director of the Ministry of Education, Arts and Culture and requested permission to conduct his study in Omusati region. Permission was granted and communicated to the Director of Education for the Omusati region. The researchers attached the interview schedule to the letter which was delivered to the intended person. The researchers phoned the immediate supervisors and the participants for their consent and to set dates for interviews.

The one-on-one semi-structured interviews were conducted with visually impaired adult learners in the Omusati region. The interviewing process started before attending literacy classes to avoid disruptions of their lessons. An interview began with a brief introduction about the nature and purpose of the investigation as well as the ethical considerations. The researchers explained the information on Participant Information Leaflet and Consent Form before handing them over to the participants' for completion *(Appendix F).* Interviews were conducted with 10 participants and tape-recorded at the same time. The interviewer also captured the photos. Each interview session took 15-22 minutes to conclude. After each interview session, an interviewer made a debriefing session to ensure accuracy and consistency of the given information. Observable data was compiled on field notes.

Data Analysis

The interpretative phenomenological analysis method was used to analyze all qualitative data that was collected. Interpretative phenomenological analysis has been developed to guide the design and conduct of small-scale, in-depth qualitative research studies. This approach involves trying to understand the experiences an individual has in life, how they made sense of them and what meanings those experiences hold (Mpofu, 2001). To analyze data, this research has followed the following steps: transcriptions and transformations; bracketing and phenomenological reduction; delineating units of meaning; clustering of units of meaning to form themes; summarizing each interview, validating it and where necessary modifying it; and finally extracting general and unique

themes from all the interviews and making a composite summary (Leedy & Ormrod, 2005). All Interview guides were brought together, grouped as the same questions and compiled answers for analysis. After grouping, the researchers listened to each interview and matched them to the same field notes as coded on the interview guide. Afterwards, the researchers transformed the field notes and transcribed the interview recordings into patterns, themes, codes and categories. This approach is deemed helpful in trying to understand the experiences an individual has in life, how they made sense of them and what meanings those experiences hold (Creswell, 2009).

PRESENTATION OF THE FINDINGS

Demographic data

Participants were requested to provide information about themselves in this study. The request was limited to their gender, ages, source of income, and degree of visual impairment. They were also requested to give information on the number of years that they had spent in the literacy programme as well as the venues where they attended literacy classes.
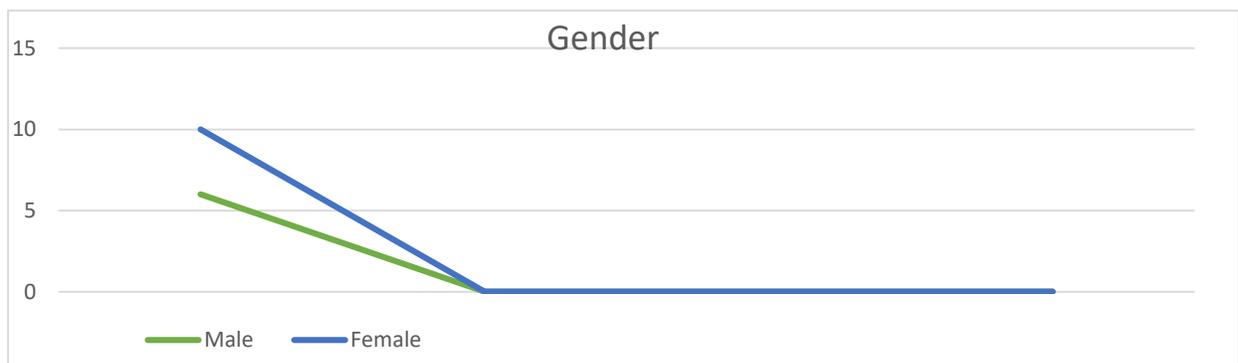
4.1.1   Gender

Figure 3: Gender

The figure above shows the gender of the participants. The graph depicts that they were more female adult visually impaired learners who attended literacy than their male counterparts.
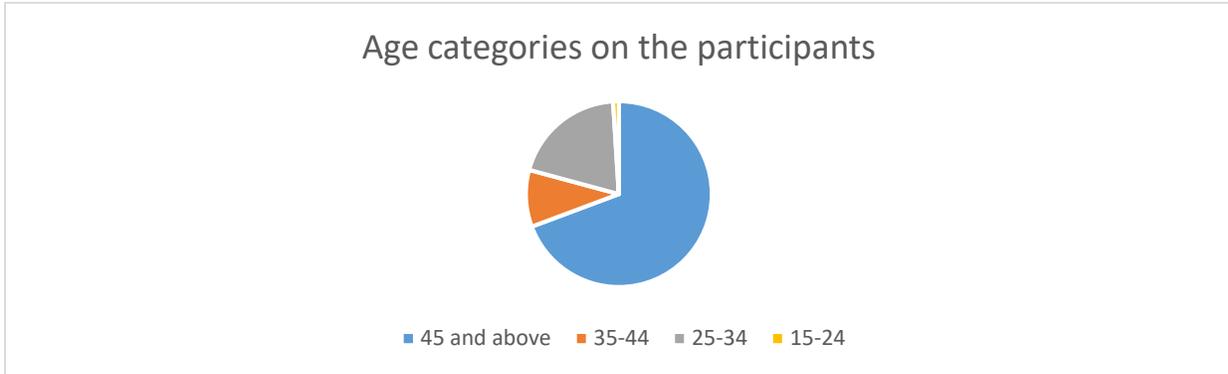
4.1.2   Age

Figure 4: Age

The figure above displays the responses of the participants on the question of their age categories. The chart shows that the majority of adult visually impaired learners who attend the programme of literacy are 45 years old and above.
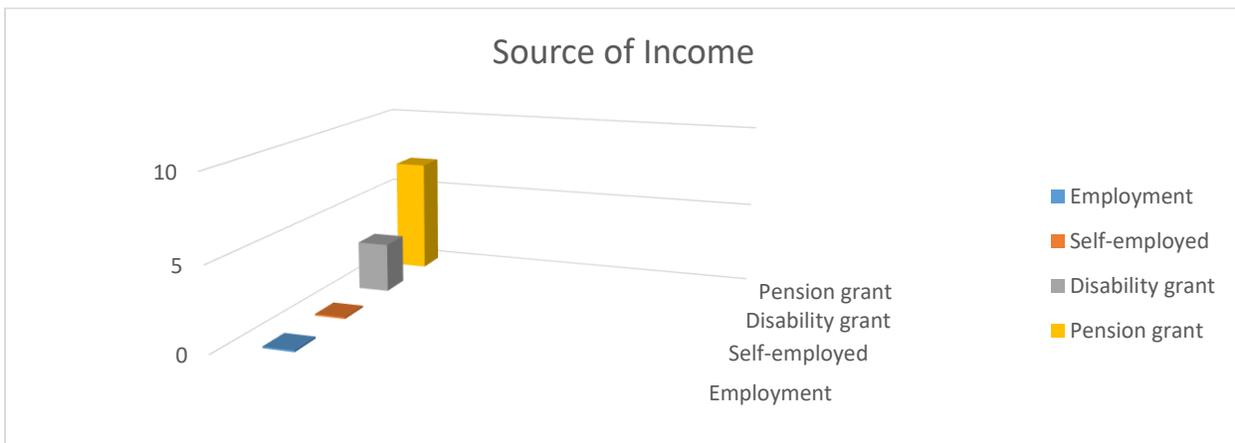
4.1.3   Source of income

Figure 5: Source of income

Based on the figure above, most of the adult visually impaired learners who attend the programme of literacy in the selected centers were pensioners whose source of income was from old-age pension grant. It also shows that none of the participants was employed.
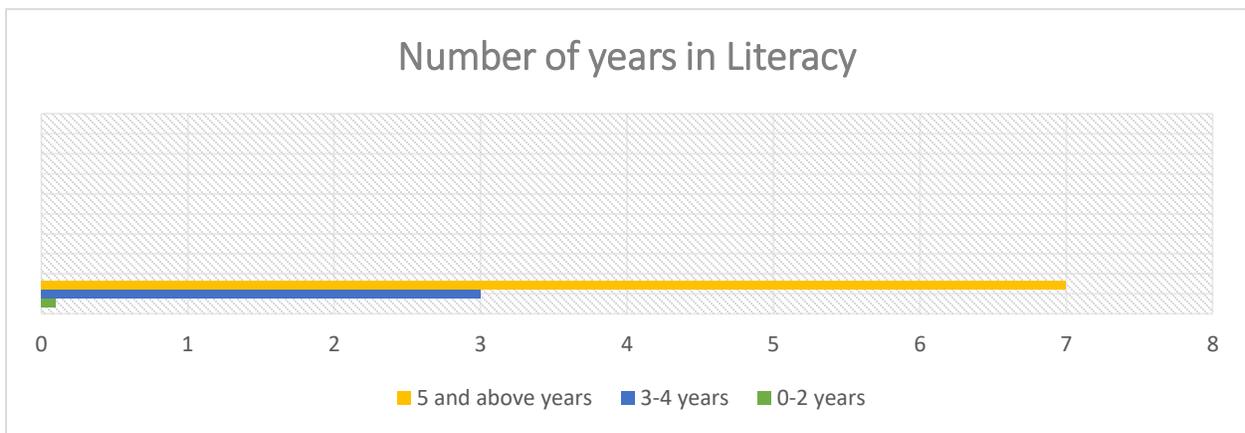
4.1.4   Years in a literacy programme

Figure 6: Number of years in literacy

Figure 4 demonstrates the time that the participants had spent in the literacy programme up to the day they participated in this study. On the basis of the figure above, the majority (i.e. more than six of the ten) of the adult visually impaired learners have been in the literacy programme for five years or more.
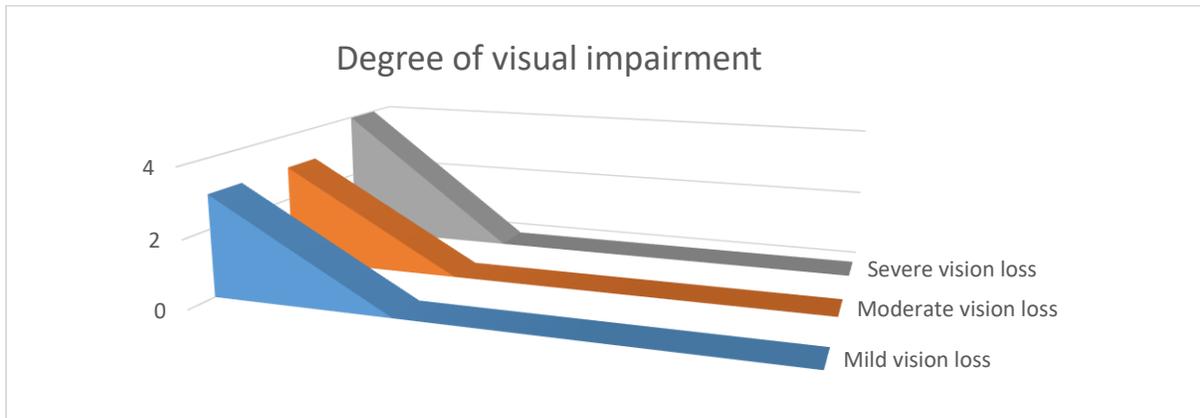
4.1.5 Degree of visual impairment

Figure 7: Degree of visual impairment

The above Figure displays the magnitude of the severity of each participant's visual impairment. The graph depicts that most of the participants (i.e. four out of ten) had severe visual impairment or were totally blind. The impairment of the remaining six ranged from a far to a near-sighted condition which placed them on mild to moderate category.
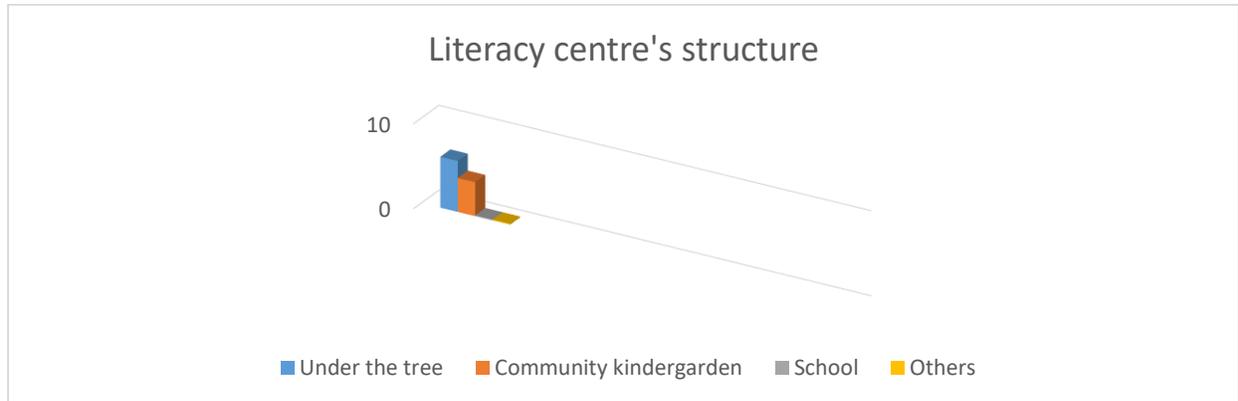
4.1.6 Center structure

Figure 8: Literacy center structure

The Figure above presents information about the nature of the physical structures of the places at which the participants attended classes. It shows that the majority of them (i.e. six out of ten) attended classes under trees. Only four of them reported having been accommodated in the community kinder-garden for classes. None of the participants mentioned any local formal school as a venue designated for the literacy programme.

Participants' views

Attendance and accessibility

Participants were asked to indicate their homes from where they would come to the literacy centers for classes. Responses showed that all participants were from homes that were close to literacy centers' locations even though some travelled long distances to reach their literacy centers. It was however observed that some of them actually walked long distances from their houses to the nearest literacy centers. One of them remarked, "I travel a long distance to reach the classes and sometimes find others have already started with classes."

All participants indicated that the nature of the literacy centers did not restrict their movements. They were responding to the question of whether or not centers had necessary structures that support their movement. The researchers, however, observed that only one center had a proper brick-walled structure which also serves as a community kinder-garden. Other two centers used trees as classrooms and learners had to endure the scorching heat of the sun, strong harsh winds and rain.

Learners with mild to moderate visual impairments indicated that they walked to their literacy centers with minimal challenges. They walked alone (without assistance from someone) to and from the literacy classes. They used walking canes to help them find their way around. Learners, who are totally blind, were accompanied on a daily basis for them to attend literacy classes.

Enrolment in the programme
On the question of enrolment in the programme, participants gave responses that were consistent. They reported to have started very well but during the course of time, some of the activities are no longer stimulating. Many learners quit due to long distance and too many personal responsibilities. Some were apprehensive because they were apparently told that their center was due to be closed. All respondents indicated that they had high expectations in the beginning but were then skeptical given the challenges which the programme faced.

People's reaction
Participants shared their experiences with the local people regarding perceptions and attitudes. All participants affirmed that the local community members were supportive of the learners' decision to enroll for literacy classes notwithstanding the hardship thereof. People understood what was happening each time they would see the participants attending literacy classes.

Participation in class activities
When asked what classroom activities they do, the respondents answered that they normally do reading in English using the Perkin machines, and counting using flames and wooden boards. The researchers observed one learner demonstrate how to count using dominoes but could not ascertain the lesson presentation thereof. He found out that participants were made to repeat the available Braille materials they had learned already. He attributed the repetition to the lack of advanced learning materials that prevented learners from advancing to the next subject contents/ modules of the programme. There was an issue of concern related to the examination papers that was also observed. They were presented in printed medium and the adult visually impaired promoters have to find someone who could read the print to enable them to translate the material into Braille language.All but one participant reported that they were struggling to learn and understand the content of Mathematics when compared to that of the English language. The respondents indicated their centers lacked proper table and chairs, Braille machines, frames, wooden boards, talking calculators, walking canes and special papers.

Possible alternatives
Respondents expressed their personal opinions on the question of what they would want to be done that might encourage them to fully participate in the classroom activities. They mentioned the need for constructing proper structures that would provide safety and security to the sensitive machines as well as bring to an end the use of trees as classrooms. They also proposed to have all the AUPE primers transcribed into Braille format.

Literacy teacher/ promoter and Learner Performance
Participants were requested to rate their own performance and also the competence of their teachers in classrooms. Rating for both the teachers and learners were extremely high. The respondents were of the opinions that their performances could improve for better if the classes were catered under conducive learning environment and each one was having his/her own assistive devices and materials. Participants had different views on the question of learner support. Some said they did

receive support from the Government and Non-Governmental Organizations while others reported not to have received any assistance from either the Government or Non-Governmental Organization. Other participants mentioned the community members and a DEO used to visit them regularly to motivate and offer assistance on request.

Challenges

Responses to the challenges experienced on attending AUPE programme elicited that unconducive learning shelters, repetition of subject contents due to lack of primers, health-related issues, untranslated primers and examination papers into Braille, isolated cases of few blind people which make it hard to form a class in one locality. Additional to the responses of the participants, the researchers observed the following challenges. All centers were very poorly resourced – they lacked necessary and suitable learning materials and assistive devices. Learners had to share one talking calculator and two Braille machines at a certain center. At some centers, learners shared one Braille machine and there were no talking calculators. There were no resource rooms to store assistive devices leaving the available machines exposed to the sun and rain. It was apparent that the centers were financially challenged. Some of the challenges observed by the researchers are depicted by the pictures below:

F*igures 9 above, shows two different literacy centers for the visually impaired learners that are facilitated under trees*

Figure 10 above, shows two Braille one talking calculator, and a table that is being used and shared by the learners. The learners are sharing at one center

Figure 11 above, shows the chair and machines and

Possible Suggestions

The respondents have suggested that for AUPE programme improvement, AUPE printed primers need to be transcribed into Braille well in advance, provision of proper teaching shelters, and supply of assistive devices and special materials. They also expressed the wish of wanting the district or regional office to have someone who was trained in Braille, training or refresher courses to be provided regularly, and the need of modern electrical Braille machines to be in par with the demand of the changing society.

DISCUSSION OF FINDINGS AND CONCLUSIONS

Biographical data

This study could not confidently establish nor explain why female adult visually impaired learners who attended literacy classes were more than their male counterparts. It is also unclear why all literacy promoters in all centers that participated in this study were males. Therefore, how gender affects the successful implementation of the literacy programme in the selected centers remains unclear.

The results of this study demonstrated that the majority of the participants were 45 years old and above notwithstanding the entry age level into the adult literacy programme has been set at a minimum of 15 years old (DAE, 2010). Mwamwenda (1996) argues that maturation plays a significant role in adult education. It is argued that people in late adulthood, more than any other age, experience more problems with their senses of hearing and sight. That could somewhat explain the high number of adult visually impaired learners in this study. Moreover, the age group of 45 years old and above is in line with the Presidential Commission on Education, Training and Culture (1999) which placed more emphasis on the role of Life Long Learning (LLL) in creating a culture of learning throughout life (MBEC, 1999). Old-age pension grant could be another contributing factor. Participants used the old-age pension grant as an extrinsic motivator to attend

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classes. Participants who could not benefit from the pension grant received disability social grant benefits, instead.

The study findings have revealed that seven (7) of the participants have been in the literacy programme for more than five years. According to AUPE curriculum, the programme was developed to take the course of three years (DAE, 2009). However, three (3) of the participants indicated that they have to repeat the subject contents/ modules due to the unavailability of primers. Thorndike theory of the *law of effect* states that a satisfying state of affairs leads to repetition of the behavior, whereas an annoying state of affairs weakens a response (Mwamwenda, 1996, p. 199). That theory concurs with this study findings, as it was revealed that some of the adult visually impaired learners ended up dropping out of the programme, and one cannot rule out the relentless repetition and infinite time-frame for the programme completion under difficult circumstances the participants experience. Indabawa (2000) asserted that rural adults with visual impairments were responsive to literacy if it has the potential to benefit and meet their felt needs and aspirations.

The study findings have also dissected the degree of visual impairments which are portrayed by the adult visually impaired learners. Three (3) participants indicated as having mild vision loss, other three (3) have moderate vision loss, and four (4) have severe vision loss. Douglas and McLinden (2005) described visual impairment as a broad term that covers a wide continuum of loss in visual function. There are many aspects of visual function, including visual acuity (the ability to resolve detail), accommodation (the ability to focus), the field of vision (the area that can be seen), colour vision, and adaptability to light. The lack of visual function is one of the lead factors that contribute to the adult learners dropping out of the programme as there are no strong supportive systems in place to provide remedial assistance for these learners. According to Cox and Dykes (2001), categories of visual impairments reflect more than just visual acuity. They explained that students 'ability to use vision, as well as how much they use other senses for learning are aspects of each category (Bishop, 1996; Turnbull, et al. 2002).

This study finding revealed that all adult visually impaired learners have undergone the eye tests check-up. However, there was no evidence if they were categorized rightly to the group they aligned themselves. According to Salvia et al. (2013), a vision specialist usually assesses functional vision through systematic observation of a learners' response to various types of paper, print sizes, and lighting conditions. However, there is lack of evidence whether the categories of visual impairments have been considered or assessed when the adult visually impaired learners were enrolled in the AUPE programme.

This study finding analyzed the identified center's structure to establish if the adult visually impaired learners were learning under a conducive learning environment. The study findings found that four (4) adult visually impaired learners were learning under a brick-walled structure without windows, whereas six (6) were under trees. These structures are observed to be in a dilapidated state, which poses danger to visually impaired students. This is not in line with Maslow's theory of the hierarchy of needs which has identified safety as one of the human needs, which requires

that one is safe from physical or psychological maltreatment, and is in an environment that is secure, stable and free from threats (Maslow, 1954; 1968). Visual impairment has many limitations that have more educational implications, but assigning adult visually impaired learners to learn under the tree may portray a gross inhumane treatment and may pose additional risks which may be attributed to environmental factors such as rain, wind, etc. The Policy Guidelines of 2012-2016 has clearly stated that the NLPN/ AUPE programme shall use school classrooms and government buildings that are conducive for educational purposes. Where stakeholders' facilities are used, these should meet the minimum criteria for educational facilities such as enclosed shelter, availability of chairs and desks appropriate for adult learners, adequate lighting and good ventilation as well as the availability of a writing board, as set out by MoE/DAE. However, the research findings have painted a different picture to what the policy guideline has asserted and what observed in the field, as it was revealed that none of the programme sites was conducted in the enclosed classroom (school/educational facilities).

Participants' views

The study findings revealed that all participants were living in the neighborhood where their literacy classes are provided, and they had no problem to reach their literacy centers on their own. This revelation shows that the participants did not require a boarding accommodation to be near their literacy centers as it is done in some localities like at Sauyemwa in Kavango east region where the pilot study was conducted. One of the participants revealed that the challenges which are related to personal problems became too much to handle and this has led to absenteeism and irregular attendance which has caused one of the AUPE center to be closed down.

The findings revealed that six (6) of learners with mild and moderate vision loss showed that they have mastered the art of moving on their own to attend the literacy classes. Four (4) of learners with severe vision loss revealed that they either walk in pairs with the assistance of one learner with mild or moderate vision loss, guided by the walking canes. The studies by Salvia, Ysseldyke and Bolt, (2013) highlighted that severe visual impairment is presumed to adversely affect learners' educational development, and learners with this disability are presumed to require special education services and curricular adaptations such as mobility training, instruction in Braille, and talking books.

The study findings found that the community members' behaviors towards the adult visually impaired learners were satisfactory. That was in line with Bronfenbrenner's bio-ecological theory which is based on the interdependence between different organisms and their physical environment (Donald, et al. 2009). The challenge was just on the reluctance of the nearby schools and the local councillors' offices to work together and offer necessary support to the adult visually impaired learners especially on securing them a safe shelter. Conversely, the adult visually impaired learners find it hard to attend classes regularly due to health-related issues, darkness, and distance. Recent statistics from learners' enrolment and attendance registers for NLPN/ AUPE indicated that the numbers of adults with visual impairments in the adult literacy program at present seem low (DAE,

2016). This may be attributed to the fact that adults with visual impairment, particularly those eligible to be integrated into the program are not known to the literacy teachers and are not receiving the services they may require.

Participation in class activities

The study findings revealed that the classroom activities that adult visually impaired learners undertake were English and Mathematics subjects using Braille machines and wooden boards. However, the learners have not indicated whether they are taught other subjects such as '*Know your Land and People'; 'Yourself: Body, Mind and Soul'; 'Livelihood for All'; 'Science in Our Daily Lives'* which are AUPE core subjects. Other subjects offered in the programme are such as '*Making a Living', and 'Living off the Land and the Waters'* which are AUPE optional subjects (DAE, 2009). They have not denied the fact that the subjects' contents were not easy and AUPE primers were not transcribed into Braille. However, the skills acquisition theory as proposed by (Wadegaonkar, Sonawane & Uplane, 2016) is crucial for this study finding as it may help to bridge the gap between the status quo and the desirable skills transfer' mechanisms which are relevant to the visually impaired adult learners. This could not be possible without the availability of the assistive devices identified by the participants such as chairs, tables, Braille machines, flames, wooden boards, talking calculators, walking canes and special papers. However, the adult visually impaired learners have emphasized the provision of a shelter that is conducive to the learning environment as a motivator that may encourage them to fully participate in the classroom activities.

Performance and Learner support

The study findings revealed that the performance of the majority of the adult visually impaired learners was average. To improve the performance of the learners, the number of strategies needs to be employed. First, skills acquisition theory should be used to accommodate strategies such as transfer of learning, transformational learning, active learning, sequential learning, and structured-discovery learning (Wadegaonkar, Sonawane & Uplane, 2016). Second, nine (9) adaptation types in the form of size, time, level of support, input, difficulty, output, participation, alternate and substitute curriculum as proposed by Smith (2006), must be strengthened. Donald, Lazarus & Lolwana, (2006, p.53 cited in Vygotsky, 1978) posited that the learners who are slower at completing tasks should be given tasks that are within the learner's zone of proximal development. Crossman (1959) provided an early view of how practice leads to performance improvements. One respondent has even indicated that he needs his own Braille machine to practice at home.

Even though the study findings revealed that the visually impaired adult learners have placed more confidence in the competency and capability of their literacy promoters, the final analysis revealed that more emphasis was placed on workshops to be provided on regular basis. Moreover, the findings revealed that the majority of the adult visually impaired learners have received no learner support either from an immediate or distant support network. Therefore, partnership and collaboration from various stakeholders are viewed as crucial on the effective implementation of the adult literacy program for the visually impaired learners.

Programme challenges

The major challenge revealed by the study findings was that of adult visually impaired learners being taught under the tree. That is supported by the literature review which has stated that challenges associated with the physical environment for adult literacy classes include unconducive learning environment, lack of resources, and lack of support from different stakeholders (White Paper, 2001). The report implied that some of the visually impaired adult literacy classes were conducted under facilities meant for sighted people without any modification, while others held under the trees, and distance to reach the literacy center is another challenge faced by the visually impaired learners. Even though more than half of literacy classes nationally are being taught under the trees especially in rural areas, the case of the adult visually impaired learners should be treated differently. Open space may pose hazardous risks such as being exposed to be bitten by snakes or stray dogs.

Repetition of subject contents/ modules of the AUPE programme due to lack of primers was another identified challenge. This situation may create the class to be redundant as learners may get demotivated for doing the same thing over and over. Another challenge identified was health-related issues. Some of these issues may be aggravated by vision loss as learners have to visit the medical facilities frequently for follow-up medical treatment. In the same vein, some of the health-related issues may emanate from accidental injury due to vision loss. An un-transcribed primer into Braille was another raised concern. One participant indicated that he had to find someone who can read for him while he transcribes the print materials into Braille, which is time-consuming.

An isolated case of blind people which make it hard to form a class in one locality was another challenge. The study has also revealed that one AUPE center was overwhelmed by challenges such as un-transcribed primers into Braille and lack of materials which caused the learners to be demotivated and resulted in learners' drop out. All the challenges identified in the study findings may directly or indirectly affect the adult visually impaired learners either socially, emotionally, behaviorally or financially, as the literature review has earlier elaborated. Furthermore, the study findings acknowledged the fact that the participants' views collaborate with the researchers's observation concerning the unconducive learning environment as well as the lack of assistive devices and materials. However, there were no observable classroom activities to establish the learners' participation in the lesson presentation due to the interview timing.

Possible alternatives

The findings suggested that the provision of proper shelters should improve the well-being of those learners involved in the programme. Moreover, AUPE primers should be transcribed into Braille well in advance, and assistive devices and special materials must be provided on time. According to Donald, Lazarus and Lolwana (2016) the following areas of content may need an improvement to meet the specific sensory learning disability; Good light or low vision aids; white chalkboards; sitting near the chalkboard; Braille reading materials in severe cases of visual impairment; big printed written materials; audio tape recorders for recording spoken speech; emphasis of audio,

tactile and kinaesthetic activities; magnification of the written activities; prescription contact lenses or glasses to be worn; use differentiated instructional methods; and parental involvement.

The study findings suggest additional information that a district or regional office should be represented by someone who was trained in Braille. This implies that the District Adult Education Officers and Regional Education Officers who are the eyes and ears of the visually impaired adult programme should be capacitated on using the Braille machines. Training or refresher courses for the visually impaired promoters should be provided regularly, and the need for modern electrical Braille machines to be in par with the demand of the changing society. Additionally, by integrating the visually impaired learners into its programme, the Adult Education Directorate would not meet its intended goals if it fails to recognize the inter-agencies collaboration and partnership (DAE, 2008). This is supported by a literature review that indicates a need for collaboration as an important aspect for the successful implementation of inclusive education (Thomas *et al*, 1998).

CONCLUSION

This study concluded that the adult visually impaired learners of Omusati Region are faced with various challenges regarding their inclusion into the AUPE programme. These challenges are such as unconducive learning shelters, repetition of modules due to lack of primers, health-related issues, untranslated primers and examination papers into Braille, isolated cases of blind people which make it hard to form a class in one locality and the low number of learners. One could give credit where it is due on the best practices such as sacrificing to attend the literacy classes under difficult circumstances, walking long distances and sometimes in darkness to and from the literacy classes, perseverance to repeat the same stages and modules due to unavailability of the materials, forming pairs to assist one another to navigate the way to attend the literacy classes, attending the classes under unconducive learning environment, and keep going without enough assistive devices and materials.

Even though the District and Regional Office of the Omusati Region has done what they could do to provide the limited assistive devices and materials to the classes of the adult visually impaired learners, much is still required. Collaborative efforts from various stakeholders are needed to turn the challenges into opportunities. The researchers commends the management and staff of the Directorate of Education, Arts and Culture in Omusati Region for the effort they have made in accommodating and supporting the adult learners with visual impairments into adult literacy programme irrespective of some challenges beyond their control.

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