



2023

Inside:

1. Identification of Children with Hearing Impairment in Pre-primary Schools in Tanzania
2. The Dynamics of Preparing Children with Special Educational Needs to Start Schooling in Tanzania
3. The Efficacy of Exemplary Learning Materials for Enhancing Writing Skills among Primary School Children with Susceptible Writing Difficulties
4. Challenges in Supporting Children with Autism in Tanzanian Primary Schools: Voices from Teachers
5. Parents' Experiences in Provision of Social Support to Children with Intellectual Impairment in Tanzania Inclusive Primary Education Settings
6. Bilingual Deaf Education: Enhancing Literacy Skills Among Deaf Learners in Secondary Education in Tanzania
7. Access to Guidance and Counselling as a Determinant for Academic Performance among Students with Hearing Impairment in Tanzania
8. Promoting Support Services of Special Education Units for Enhancing Educational Achievements of Students with Disabilities in Tanzanian Universities
9. Challenges and Coping Mechanisms in Sign Language Interpretation at the University of Dar es Salaam
10. Intervention services for people with disabilities in Tanzania 1961-2022: what lessons do we learn?

Journal of the School of Education
University of Dar es Salaam

Papers in Education and Development
**Special Issue on Inclusive and Special
Education – June, 2023**

University of Dar es Salaam School of Education
P.O. Box 35048
Dar es Salaam, Tanzania
Website: www.udsm.ac.tz

School of Education, 2023

ISSN 0856-4027

e-ISSN 2665-0746

EDITORIAL BOARD MEMBERS

Chief Editor

Prof. Eustella P. Bhalalusesa, *Department of Educational Foundations, Management and Life-long Learning, University of Dar es Salaam, Tanzania.*

Associate Chief Editor

Dr Philipo Lonati Sanga, *Senior Lecturer, Department of Educational Foundations, Management and Life-long Learning, University of Dar es Salaam, Tanzania.*

Editorial Board Members

Prof. William A. L. Anangisye, *Department of Educational Foundations, Management and Life-long Learning, University of Dar es Salaam, Tanzania.*

Prof. Ivor Baatjes, *Centre for Intergrated Post-School Education and Training (CIPSET), Nelson Mandela University, South Africa.*

Prof. Maria Hallitzky, *Faculty of Education, University of Leipzig, Germany.*

Prof. Hanna Posti-Ahokas, *Senior Researcher, Faculty of Education and Psychology, University of Jyväskylä, Finland.*

Dr Blackson Kanukisya, *Senior Lecturer, Department of Educational Foundations, Management and Life-long Learning, University of Dar es Salaam, Tanzania.*

Dr Jackline K. A. Nyerere, *Senior Lecturer, Department of Educational Management, Policy and Curriculum Studies, Kenyatta University, Kenya.*

Dr Rebecca Sima, *Senior Lecturer, Department of Educational Psychology and Curriculum Studies, University of Dar es Salaam, Tanzania.*

Dr George Kahangwa, *Senior Lecturer, Department of Educational Foundations, Management and Life-long Learning, University of Dar es Salaam, Tanzania.*

Dr Sarah E. Kisanga, *Senior Lecturer, Department of Educational Psychology and Curriculum Studies, University of Dar es Salaam, Tanzania.*

Dr Mjege Kinyota, *Senior Lecturer, Department of Educational Psychology and Curriculum Studies, Dar es Salaam University College of Education, Tanzania.*

Dr Nkanileka Mgonda, *Senior Lecturer, Department of Educational Foundations, Management and Life-long Learning, University of Dar es Salaam, Tanzania.*

Dr Rose Upor, *Senior Lecturer, Department of Foreign Languages and Linguistics, University of Dar es Salaam, Tanzania.*

Dr Devota J. Marwa, *Lecturer, Department of Physical Education and Sport Sciences.*

Editorial Advisory Panel

Prof. Abel Ishumi, *School of Education, University of Dar es Salaam.*

Prof. Daniel Sifuna, *Department of Educational Foundations, Kenyatta University, Kenya.*

Prof. Peter Baguma, *Department of Organisational and Social Psychology, Makerere University, Uganda.*

Prof. Francis Indoshi, *School of Education, Maseno University, Kenya.*

Prof. Des Hewitt, *School of Education, University of Warwick, UK.*

Editorial Correspondence

Editorial correspondence including manuscripts for submission should be sent to The Chief Editor or Associate Chief Editors, *Papers in Education and Development (PED)*, School of Education, University of Dar es Salaam, P.O. Box 35048, Dar es Salaam, Tanzania. Authors are advised to submit their papers in electronic form, as an attachment, to email papersineducation@gmail.com, copied to ped@udsm.ac.tz. Journal Website: <http://ped.ac.tz>

Editorial

On behalf of the Editorial Board of *Papers in Education and Development (PED)*, I am delighted to welcome you to enjoy reading the papers published in this **Special Issue on Inclusive and Special Education**. The publication of this issue emerged as one output of the conference to celebrate 44 years of the University of Dar es Salaam's experience (through the School of Education) in providing services to learners with special educational needs. The conference was convened in the famous Nkrumah Hall of the University of Dar es Salaam in October 2022. It is imperative to narrate, albeit briefly the genesis and background of the provision of services to learners with special educational needs at the University of Dar es Salaam in Tanzania.

Since the academic year 1978/79, the University of Dar es Salaam has been providing support services to learners with special educational needs. Initially, the university through Special Educational Needs Unit (SENU) extended its support to two male learners with visual impairment. The primary aim of this initiative was to ensure equitable educational opportunities for learners with special needs. Eventually, there was an evident increase in the number of learners with visual impairment and other categories of disabilities. Subsequently, in the 1980s, the university expanded its enrolment criteria to include learners with other disabilities, such as physical impairments, total blindness, low vision, albinism, deafness, and hard of hearing.

In 2022, SENU was upgraded to a standalone Centre for Disability Services. This was done in compliance with Section 4.1.3 (i) of the University of Dar es Salaam Policy on Disability and Special Educational Needs of 2022. The Centre for Disability Services focuses on providing appropriate support services to both learners and staff with diverse disabilities and promoting inclusivity and equal participation within the learning and working environments. Currently, the centre has 158 learners with special educational needs from undergraduate and post-graduate programmes. The centre has recruited seven specialists including three transcribers for learners with visual impairment and four sign language interpreters supporting learners with deafness and hard of hearing.

While reflecting on such great achievements, this issue contains the following papers:

- i. Identification of Children with Hearing Impairment in Pre-primary Schools in Tanzania.
- ii. The Dynamics of Preparing Children with Special Educational Needs to Start Schooling in Tanzania.

- iii. The Efficacy of Exemplary Learning Materials for Enhancing Writing Skills among Primary School Children with Susceptible Writing Difficulties.
- iv. Challenges in Supporting Children with Autism in Tanzanian Primary Schools: Voices from Teachers.
- v. Parents' Experiences in Provision of Social Support to Children with Intellectual Impairment in Tanzania Inclusive Primary Education Settings.
- vi. Bilingual Deaf Education: Enhancing Literacy Skills among Deaf Learners in Secondary Education in Tanzania.
- vii. Access to Guidance and Counselling as a Determinant for Academic Performance among Students with Hearing Impairment in Tanzania.
- viii. Promoting Support Services of Special Education Units for Enhancing the Educational Achievements of Students with Disabilities in Tanzanian Universities.
- ix. Challenges and Coping Mechanisms in Sign Language Interpretation at the University of Dar es Salaam.
- x. Intervention services for people with disabilities in Tanzania (1961-2022): what lessons do we learn?

On behalf of the Editorial Board, I extend our heartfelt appreciation first and foremost, to the Dean of the School of Education for accepting to finance the production of this issue. Additionally, acknowledgments are due to all anonymous peer reviewers, authors, and both content and language editors for making this special issue a reality. Together We Can!

Eustella P. Bhalalusesa

Chief Editor

Papers in Education and Development

CONTENTS

Identification of Children with Hearing Impairment in Pre-primary Schools in Tanzania <i>Joyce Idd Mkongo</i>	1
The Dynamics of Preparing Children with Special Educational Needs to Start Schooling in Tanzania <i>Elizabeth Phillip Bhalalusesa, Emmanuel Babyegeya & Cosmas Mnyanyi</i>	18
The Efficacy of Exemplary Learning Materials for Enhancing Writing Skills among Primary School Children with Susceptible Writing Difficulties <i>Alphoncina Pembe</i>	37
Challenges Encountered by Teachers in Supporting Children with Autism in Primary Schools in Tanzania <i>Noela Ephraim Ndunguru & Sarah Ezekiel Kisanga</i>	55
Parents' Experiences in Provision of Social Support to Children with Intellectual Impairment in Tanzania Inclusive Primary Education Settings <i>Adeline Paul Mushi, Eugenia Joseph Kafanabo & Sarah Ezekiel Kisanga</i>	69
Bilingual Deaf Education: Enhancing Literacy among Deaf Learners in Secondary Education in Tanzania <i>Ildephonce Mkama</i>	86
Access to Guidance and Counselling as a Determinant for Academic Performance among Students with Hearing Impairment in Tanzania <i>Wengi Mohamed Mchuchury & Fidel Dassan Gwajekera</i>	97
Promoting Support Services of Special Education Units for Enhancing Educational Achievements of Students with Disabilities in Tanzanian Universities <i>Batista Francis Mgumba & Lucas Luhende Kija</i>	111

Challenges and Coping Mechanisms in Sign Language Interpretation at the University of Dar es Salaam <i>Fatuma Yusuph Semunyu & Bernadetha Rushahu</i>	127
Intervention Services for People with Disabilities in Tanzania (1961-2022): What Lessons do we Learn? <i>Cosmas Boniface Mnyanyi</i>	143
PED EDITORIAL POLICY AND NOTES FOR CONTRIBUTORS.....	161

Identification of Children with Hearing Impairment in Pre-primary Schools in Tanzania

Joyce Idd Mkongo

School of Education, University of Dar es Salaam – Tanzania

E-mail: joycenoahdr@yahoo.com

Abstract

The study investigated the identification of children with hearing impairment in pre-primary schools in Tanzania using 44 participants from four purposively selected schools. The objective of the study was to assess the methods and ways used to identify children with hearing impairment in pre-primary schools. The study employed documentary review and semi-structured interview as data collection methods. Results revealed that children with hearing impairment were identified at home by their parents or at school by teachers and fellow children. Teachers and parents used different local ways of identifying hearing loss in their children. The study further revealed congenital conditions, medications, diseases and infections and maternal condition as major causes of hearing loss among children in Tanzania. Hence, for clarity and uniformity, there is a need to develop a national guideline on hearing loss detection at school level.

Keywords: *early childhood, early intervention, hearing loss, screening, special education needs*

Introduction

Identification of children with hearing impairment (CHI) is crucial to the unique characteristics of development and learning in the early childhood stage. The unique characteristics in early childhood are different from those of older children and adults. Practitioners should be aware of the uniqueness and develop early childhood education programmes suited to the needs of the children. The needs of CHI have to be considered in order to ensure that they develop and learn as other children do regardless of their special education needs (National Association for the Education of Young Children [NAEYC], 2002, 2017). Children with hearing impairment are commonly categorized into hard of hearing and deaf (HH/D). A deaf child is a child with hearing loss which is so severe that it impedes successful processing of linguistic information through hearing with or without a hearing

aid. Children who are hard of hearing can use their hearing to understand speech with the help of a hearing aid. Additionally, hearing loss (HL) is identified based on which part of the ear is affected, age of onset and one ear or both (Hallahan et al., 2014; Stach, 2010; WHO, 2016b). In education context, the age of HL onset is important as it affects the acquisition of language.

Evidence shows that early identification and subsequent early intervention is crucial to the successful development of language in CHI. CHI can develop language in the same way as their hearing peers by the end of year one (Sass-Lehrer, 2011). The advantage of early identification lies in the early intervention programme benefitting the child and the family. In USA, for example, early intervention programmes provide parents of the CHI with the information and support needed to improve the child's holistic development (Sass-Lehrer, 2011).

The timing of identification is potentially significant to the child's development. Research reveals that the unidentified or late identified hearing loss (HL) has a negative implication to the child (Davis & Carr, 2014). The late or non-identified HL affects child development in many developmental domains such as language, communication, cognition social and emotional development. Also, it affects the accessibility of the child to quality education services that may bear repercussions in later life. A person with limited education is perceived to be dependent, unable to contribute to the economy of the family and society in general (Mkongo, 2019). Early identification and intervention is directly related to the development of the nation and minimization of child developmental delays (Davis & Carr, 2014; Sass-Lehrer, 2011; Sirimanna & Olusanya, 2014; Yoshinaga-Itano, 2003; World Health Organisation [WHO], 2016a, 2016b). Further, literature reveals that identification in early years followed by early intervention programmes lead to better language development (Gaffney, Eichwald, Gaffney & Alam, 2014; Sirimanna & Olusanya, 2014). The first three to five years of life are considered to be the most important for language development (Sirimanna & Olusanya, 2014).

Empirical research suggests that HI children who are born deaf or acquire HL earlier in life but receive proper intervention, have the possibility of acquiring language as their hearing peers at the age of 5 years (WHO, 2016a). Unfortunately, the majority of children with hearing impairment prevail in developing countries (WHO, 2016a) where there is a lack of early identification programmes. Most developing countries lack early identification programmes for hearing loss. Literature reveals slow priority, lack of resources, lack of awareness and lack of supporting services as a barrier to early identification of hearing loss (Santana-Hernandez, 2014; WHO, 2016a, 2016b). The limited programmes available in the few developing countries reveal that early identification leads to an improvement in raising and parenting practices.

Parent awareness of deafness in their children helps them to develop strategies of communication with the children. Language development plays a major role in overall child development and learning. Therefore, it is important to conduct a hearing test in early years.

Practically, common types of hearing tests include screening, tests, pure-tone audiometry, speech audiometry and specialised tests for young children. The choice of the tests depends on the purpose of assessment and the choice of the assessor. More than one assessment can be conducted. Several techniques are employed by audiologists to test hearing of young children. Several schools have routine programmes to conduct screening in the early elementary grades. Children identified through screening as having possible problems are referred for more extensive evaluation. Early screening has been found to be expensive in terms of resources such as facilities and professionals but the expenses of raising dependant persons with disability in society is not considered (Davis & Carr, 2014). Screening requires availability of resources such as screening facilities and well trained personnel. Literature suggests that hearing loss may be acquired at any time during the lifespan, from conception to death (Stach, 2010). Early identification and assessment are more effective when conducted in early years. Early identification of hearing loss and detection of causes provide greater chance for the early detection of the causes of hearing loss and early management of the causes.

There are several causes of hearing loss (ASHA, 2015; Duthey, 2013; Emmet & West, 2015; Hallahan et al., 2014; Olusanya et al., 2014; WHO, 2006, 2016a, 2016b; WHO & WB, 2011). Hearing loss can be congenital, resulting from genetic/hereditary or non-genetic factors. Dominant genes and recessive genes can cause mild to profound hearing loss (Hallahan et al., 2014; WHO, 2016b). Chromosomal abnormalities can also cause hearing impairment (WHO, 2016b). Non-genetic factors that cause congenital hearing loss are linked to pregnancy and conditions during delivery such as maternal diabetes, toxins taken by the mother during pregnancy, maternal infections, premature birth, low birth weight, birth injuries, complications due to jaundice and anoxia (Duthey, 2013). Developmental abnormalities can cause congenital hearing loss, involving abnormal development of the outer or inner ear structure. Malformation of the middle ear and reduction or closure of the external ear canal are among developmental abnormalities linked to hearing loss, affecting the foetus in the early period of pregnancy development (Hallahan et al., 2014; WHO, 2006). Other causes include infections due to bacteria, virus or parasite which are not treated, environmental hazards, nutritional deficiency, ototoxic medications and chemicals (ASHA, 2015; Duthey, 2013; Emmet & West, 2015; Hallahan et al., 2014; Olusanya et al., 2014; WHO, 2006, 216a, 2016b; WHO & WB, 2011).

WHO estimates that around 60% of childhood hearing loss could be prevented. Most HL in developing countries is caused by diseases such as rubella, measles, meningitis and ear infections, which can be prevented or cured. Complications at birth, prematurity, low birth weight, neonatal jaundice and birth asphyxia contribute about 17% of HL causes that can be prevented through improvement of maternal and child health practices. Expectant mothers could avoid ototoxic medicines which contribute about 4% of HL in children. However, the prevailing hearing loss identified requires early intervention to enable the full potential development of the CHI.

Understanding the causes of hearing loss is important for teachers, parents, administrators and policy makers as well as researchers. In this study, the knowledge of causes of hearing loss is vital as it is related to the implication of hearing loss in young children. It is noticed that some incidents of hearing loss can be prevented or cured if identified early. For example, the use of toxic medication and, exposure to noise and infection could be avoided or minimized. Nevertheless, the prevalence of hearing loss influences development and learning in children and usually the degree of hearing loss determines the consequences for the child's life.

The formal education system in Tanzania comprises two years of pre-primary education, seven years of primary education, four years of ordinary secondary education, two years of advanced secondary education, and three or more years of tertiary or higher education. The objective of pre-primary education, when effectively implemented, may ensure success in the future academic life of children and their holistic development. According to the Tanzanian constitution and education policy, all children have the right to education regardless of their background and differences, including CHI (URT, 1977; Ministry of Education and Vocational Training [MoEVT], 2014). The right of children with hearing loss could be fully attained if their needs were known. Since children with hearing impairment are vulnerable and at risk of exclusion in pre-primary education, strategic measures are mandatory to ensure access, participation and support provision in the early years. Despite the government's efforts to provide equal opportunity for CHI to access pre-primary education, the identification and awareness of the causes of HL, that can help to minimize the consequences is not yet systematically determined.

From this background, this paper assesses causes of hearing loss and the methods used to identify children with hearing impairment in selected pre-primary schools in Tanzania.

Methodology

Multiple case study design was employed in this qualitative study to obtain rich and reliable evidence. The design involved the integration of different information from

multiple units of data analysis. Since the present study was set out to investigate identification of CHI in pre-primary education in four pre-primary schools, multiple case designs were considered appropriate in the context of similarities and differences among children with hearing impairment in the four pre-primary schools.

The study was conducted in two regions, namely Shinyanga and Dar es Salaam. In each region two districts were selected. These regions were purposefully selected because they enrol a large number of CHI in pre-primary education as noted by Mkongo (2019). Two schools were selected from each district – one from each Municipality; S1 in Municipality A and S4 in Municipality B. Additionally, the districts were selected purposively as they have large numbers of CHI in pre-primary education compared to other districts. Availability of CHI in these regions was expected to provide rich information about identification of hearing loss to CHI.

Purposive sampling was employed to obtain 44 participants who comprised 26 CHI, four heads of school, four heads of special education needs unit, six teachers who teach CHI and four parents whose children were involved. The schools were selected based on the likelihood of the inclusion of children with hearing impairment in pre-primary classes. The study involved all pre-primary HH/D children in the selected schools. HH/D children were selected because they were easier to identify than other children with some degree of hearing loss. In collaboration with class teachers, the researcher used class attendance registers and enrolment particulars to obtain a list of all HH/D children from each sampled school. In order to ensure a good representation of the respondents, the study involved all children present on the day when the researcher was collecting data. This was possible as the number of HH/D children in the selected schools was reasonably small. Thus, the entire classes with HH/D children were included in the sample.

Information was collected through documentary review and semi structured interview. Documentary review was used to collect information concerning CHI in each class and in each school. Class registers of children were obtained from head teachers and academic masters/mistresses, who provided information about the number of children with disabilities and type of disability in each class and in each school. Other documents provided information about historical background of the child in the HH/D classes. Semi-structured interview was employed to obtain information from District Education Officers, head teachers, teachers of CHI in regular schools and parents of CHI. Semi-structured interview was employed due to its strength in collecting qualitative data in case studies (Cohen, Manion & Morrison, 2018, Yin, 2016, 2018; Patton, 2002). The study observed ethical issues including maintaining anonymity and confidentiality. Each school and participants were assigned a code: D1 – D4 for District/Municipal Officials, S1 – S4 for schools,

HS1-HS4 for heads of school, HU1 – HU4 for head of special education needs unit, T1 – T6 for teachers and P1 – P4 for parents.

Findings and Discussion

Methods used to identify children with hearing impairment

Information about all 26 CHI was obtained through interview with head teachers, teachers, parents and district officials involved in this study. The findings revealed that, most CHI are identified at home by their parents or/and at school by their teachers or peers except those with profound hearing loss who are identified at birth or identified a few months after birth. Identification of CHI in the schools involved in this study relied on the following methods: information from parents, verbal/behaviour assessment, use of play method, use of audiometer to assess the degree of hearing loss, the use of dully filled form by parents (providing background information of the child). It also involved dully filled form by Ear, Nose and Throat [ENT] specialist from a recognized hospital/health center or screening center, and teacher's observation of the child who may have hearing loss or other deficiency requiring special attention.

Information from parents

Information from parents of the child was reported to be the first source of identifying the child with hearing impairment. All four schools involved used information supplied by the parents. The unit of children with special needs receives children who have already been identified by their parents as having hearing impairment. The unit serves only children with significant hearing impairment easily detected by the parents at home during the child's early days of life. Two schools among four schools that educate young children with hearing impairment rely only on the information from the parents. School 1 and school 3 receive children who are already identified by their parents as having hearing impairment. After accepting the child, no further assessment or procedure is undertaken. The child is thereafter enrolled to start school. Teachers may try to assess them again locally without using advanced assessment techniques or use audiometric devices. There is no other procedure or screening or testing assessment followed as claimed by heads of school: *Normally, the school enrolls CHI already identified by their parents as having hearing loss. No further HL assessment procedure was undertaken in this school. Our duty is to teach them (HS2:S2).* Another head of school from S3 claimed that:

Unfortunately, here in our school we do not have specialised teachers for children with hard of hearing or deafness who have knowledge and skills on identification of CHI, but we are required

to accept all children with disabilities including CHI. So, we just rely on the information provided by their parents (HS3:S3).

The use of parents' information is a recommended method in identifying CHI. However, relying on information from parents only, without medical confirmation as in some cases, raises doubt concerning the status of the CHI, severity of the problem and the education service delivered. The study observed that all children registered in special education units for the deaf were taught language and communication skills. All schools teach children sign language-the language of communication for the deaf. But it is possible those other children are not totally deaf and that they have the opportunity to use spoken language when proper identification occurs. One teacher had the following to say:

Other children seem to have some residual hearing. Maybe if specific assessment takes place, they can be provided with hearing aids to amplify the sound. This will enable them to access direct verbal information from the teacher instead of relying on sign language only (T1, S3).

The findings revealed the use of information from parents. Parents know much about their children. However, further scientific assessment is required. One school was observed to have many children in pre-primary class (11 children), and it accepted children without further investigation. They relied only on parents' information. Thus, specific screening and assessment is considered to be mandatory for valid and proper intervention (Hallahan et al., 2014; WHO, 2016).

Verbal/behaviour assessment

Findings indicated that behaviour assessment was used to identify CHI. In S1 after accepting the CHI, further assessment is conducted in the form of verbal/behaviour assessment to identify the hearing loss of the child. The teacher speaks to the child in different positions to test the hearing ability of the child as well as the affected ear. Teachers from S1 and S2 gave similar response concerning methods used to detect hearing loss in the child. Their statements indicated that the procedure requires the teacher to stand at the back, left side and right side calling the name of the child loudly or clapping hands to assess which ear is affected.

After listening to the information about the status of HL of the respective child from his/her from parents, we always conduct another assessment, to confirm the hearing loss; we test which ear and the extent of the child hearing loss by using behaviour assessment methods we learnt in college (HU1, S1).

The procedure was reported in S1 as mandatory, but in S2 as optional. In S3 this method was not used because of the absence of a teacher or person specialised in deaf education as noted earlier. The method is commonly used elsewhere in assessing children's HL (Hallahan et al., 2014; WHO, 2016a). However, the effectiveness on the use of the method requires trained personnel (NDCS, 2016).

Use of the play method

The play method was reportedly used only in S1 as one among methods of hearing assessment – the method used for young children who could not respond well to audiological testing. The head of the unit explained:

For young children between one to five years, they cannot follow instructions to measure dB; therefore, we use play methods, for example, clapping hands, playing a flute, banging/beating the iron and other instruments that can produce sound in order to test the hearing status of the child (HU1, S1).

The findings are in line with literature (Hallahan et al., 2014; NDCS, 2016; WHO, 2016a) which recommend the use of play methods in assessing the hearing status of children who could not respond to audiology.

Use of audiometer to assess the degree of hearing loss

Audiometry assessment involves the use of an audiometer to assess the degree of hearing loss to the child identified to have hearing loss prior to enrolment and commencement of any kind of service. S1 and S4 reported the use of this method. In S1 audiometry assessment could be done in school in the S1 audiology room and conducted by teachers who specialized in audiology. Also, the child can be referred to hospital for assessment. The school works together with audiologists and Ear, Nose and Throat (ENT) specialists. S4 provides a special form requesting audiology testing at other schools with audiology facilities or the hospital.

Every child diagnosed as having hearing loss must be referred to audiometric test for further confirmation (T1, S4). In support of this method, HU1 stated: Finally, we conduct audiometric testing in our audiology room for accurate confirmation of hearing loss or we can refer the child to a National Hospital for further investigation if the case is difficult (HU1, S1).

The findings of the study supported that audiometry is commonly used to measure the hearing of children who can follow the instructions accurately. In most cases, the pure tone audiometry is used to test adults and older children only while play

tone audiometry is used to test young children. In this method, a range of test tones from low to high frequencies was transmitted through earphones placed in the ear. The test relies on the basic frequencies important for hearing and understanding speech and other sounds from the environment. Each ear was tested independently. Children were asked to raise a hand when they heard the sound. The louder the sound the greater the degree of hearing loss detected.

Moreover, hearing loss is measured in two ways: the loudness of sound measured in decibels that the child can hear and the pitch or frequencies measured in hertz the child can/cannot hear (Gelfand, 2016; ndcs, 2016). Deafness in children differs depending on which frequencies are affected and the loudness of a sound a child hears. Research shows that few children are deaf while most other children have some residual hearing that they can hear at a certain pitch and volume. The finding of the recent study shows that most children are categorized as Deaf / Hard of Hearing (HH/D) children in the absence of audiometric testing. Some of the children may have residual hearing hence they can hear by means of available modification devices for example hearing aids or surgery.

The use of background information of the child

Parents are provided with a form/sheet to be filled in and returned to the unit before the child is accepted and enrolled in the school. The form needs the parent to fill the space provided by answering questions concerning the child's history and the hearing loss status. Teachers use the information in planning learning activities and care. The finding is in line with Ciccantelli & Vakil (2015) who stated that information about the background of the child is needed to enable teachers to plan and start to help the child to become successful learners

Information from hospital

The study finds that parents were provided with another form in which they were required to attend hospital or other centres or institutions with specialists (Ear Nose and Throat-ENT specialists) to assess the degree of hearing loss. The assessment was done to detect which ear was affected or whether both ears were affected. Following assessment, it was customary for the audiologist/ENT specialist to provide parents with advice for further assessment and treatment if the child is observed to have other complications, for example, symptoms of infection of the ear. More significantly, the specialist provides advice on educational considerations such as the education placement option suited to the state of the hearing impairment. All children in the study were found to be total deaf and/or hard of hearing. Therefore, they were recommended to attend schools for children with deafness. Generally,

examination was done at recognised hospitals or other schools with audiologists. The findings are in line with those of WHO (2016a) which categorically emphasizes on the use of specialists and referrals (Hallahan et al., 2014).

Teachers' observation

Regular teachers' observation was used in identifying CHI. Only experienced teachers reported to be used as one of the reliable sources for identification of children with HI in S3. In this school, there were two children with hearing impairment who aged 4 and 5 years. The study found that there were no teachers who had specialized in education of children with hearing impairment in the school. Therefore, they had to rely on information from the parents and their own teachers' experiences. Information from parents embraced only those children who started school while they were already experiencing the hearing impairment. For cases that may happen during school, the teachers' experiences mentioned were thus commented by the head teacher:

Teachers use their psychology of teaching which they learnt during teacher training to identify children with disabilities. We do not have any special testing or examination or assessment in place. Teachers use their working experience by observing the children who may have hearing loss or other deficiencies which require special attention (HS3, S3).

The statement from the head teacher suggests the use of teacher's observation to identify CHI. Teachers' observation relies only on their teaching experience and little psychology of exceptionalities learnt in teacher Education College. The use of teacher observation could be valid if teachers were trained to teach CHI. Generally, the findings show a limitation in using scientific procedures to identify CHI. Reports from parents of these children are paradoxical and really need to be verified through thorough and specific devices in hearing loss assessment. The findings suggest that, although detection of hearing impairment is important for education planning and other services, there were no common methods and procedures for hearing assessment in the country as all district officers (D1-D4) declared. Each school did what they were capable of and assumed it was appropriate. In most cases, information from parents was a key source of identification. Only two schools among four involved other assessments, for instance, in S1 the head of the unit stated:

The first source of information we obtain is from the parents of CHI. Obviously large percentages of parents know the status of their children's hearing ability because most of CHI in the unit here at

our school are those categorised as HH/D But we do not rely on the parents' information only, we go further (HU1, S1).

Inconsistencies observed resulted from several factors hindering early identification and assessment of hearing loss among children in Tanzania including: lack of national screening programmes, difficulty in accessing medical facilities, lack of screening facilities, few trained personnel, lack of knowledge of the benefit of screening programmes and unaffordable cost of screening programmes, poor or lack of information for parents and the community on the availability of the service (Ciccantelli & Vakil, 2015; Duthey, 2013).

Universal screening is recommended to be the most effective although it is expensive. However, the cost of screening cannot be equated to the cost of medical, educational and social neglect the child and parents are subjected to in the case of late detection of hearing loss. According to Ciccantelli and Vakil (2015) early screening, assessment and intervention yield a great potential to enhance a child's long-term achievement, independence and social or emotional behaviour challenges. Assessment provides potential information about the child. Information about the strength and weakness of the child promotes the provision of special education that leads to enhanced child development. The finding suggests the need for early detection and intervention to enhance the learning opportunities for CHI.

Recent study is conducted in the special education unit which serves only children with significant hearing loss (HH/D). It should be understood that children with mild hearing loss may not easily be identified as they can develop and acquire language as normally as their peers without hearing loss. However, the hearing loss may cause problems as they grow and advance up the educational ladder. In education, mild hearing loss can mean significant loss (ndcs, 2016). Children with mild hearing loss can hear everything in a quiet environment but they cannot hear if there is background noise or if the speaker is whispering. Therefore, they should be identified, and recognized as children who require special intervention in order to make sure that they develop and learn normally. It should be noted that hearing loss at whatever level may pose a significant challenge to children in accessing environment, teaching and learning.

Hearing loss tests involved behaviour response testing and audiology tests. Audiology tests were observed in only two schools. In these two schools they use audiology to confirm the prevalence of hearing loss to children whose hearing loss was detected by their parents. The test was conducted at schools by trained teachers or at hospitals by audiologists. However, only children with significant symptoms of hearing loss were examined.

Causes of hearing impairment in children

Information about all 26 CHI was obtained through interview with head teachers, teachers and parents involved in this study as well through reviewing documents. The findings revealed five causes as presented in Table 1.

Table 1: *Causes of Hearing Loss*

S/N	Causes of hard of hearing or deafness – reported	Frequencies
1.	Congenital conditions	9
2.	Unknown	8
3.	Diseases and infections	4
4.	Medication	1
5	Maternal conditions	1
	Total	23

Congenital conditions

The findings show that nine children involved in this study acquired the HI during birth. Congenital conditions were the leading cause of HI among the children involved in this study. As it is in other developing countries where most births take place at home, and those who experience a healthy delivery are discharged from hospital soon after, screening is impossible. Under such circumstances, screening may take place in community health centres which children attend for immunization. For example, in South Africa immunization clinics seemed suitable places for screening because they are well attended, and the first immunization visit takes place six weeks after birth (Kock, 2014). Therefore, the detection of hearing loss can be made as early as possible.

Unknown causes

The findings show that eight children involved in this study had unknown causes for their HI. There are no indications related to HL. Hence, it is difficult to explain about their conditions. That means one third of the children identified with hearing loss do not have any indicators of hearing loss, the causes are unknown. In developed countries universal screening is recommended; all children should be screened at hospital soon after birth before being discharged (Ciccantelli & Vakil, 2015). It is suggested that in such circumstances, screening may take place in community health centres where children attend for immunization. For example, in South Africa immunization clinics seem to be suitable places for screening because they are well attended, and the first immunization visit takes place six weeks after birth (Kock, 2014). Therefore, the detection of hearing loss can be made as early as possible.

Diseases and infections

HL is associated with infants' diseases and infections such as malaria and high fever. Malaria affects a lot of children in Tanzania; it causes deaths and for some who survive hearing loss. One child in the study reported to acquire hearing impairment after suffering from malaria when he was three years old. In addition, high fever is mentioned as a cause of hearing impairment. One of the challenges to Tanzania concerning the care and health of children is reported to be poor health facilities. As it is in other developing countries (Ciccantelli & Vakil, 2015; Duthey, 2013, WHO, 2012) health facilities for infants are lacking, thus causing damage at this stage of life. Diseases and infections during infancy have been mentioned as a leading source of hearing loss among most children involved in the study. High fever during infancy causes deafness in many children in Tanzania as is the case in other developing countries (Duthey, 2013; WHO 2016a, 2016b) due to the presence of barriers to access health services

Medication toxins

Medications were another cause of HI to children reported in this study. Information available concerning the causes of HI show that one child became deaf as a result of medication toxins. This is how the parent narrated: *My child became deaf when she was two years old. She suffered from malaria and treated by using quinine injection, after that she could not hear at all; doctors confirmed the hearing loss (P4, S4).*

The statement shows that HL was caused by prescribed medication. The damage was caused by toxins administered to the child suffering from malaria who was injected with quinine, the anti-malaria drug that damaged the ear of the child. Quinine is used to treat malaria as it kills malaria parasites. However, research shows that quinine may cause HI; the damage may be reversed or permanent depending on the dosage and duration of the dosage (ASHA, 2015; Duthey, 2013, WHO, 2012). Unfortunately, it is too difficult to control the side effects of the medicines in young children since they cannot notice and communicate the difference.

Maternal conditions

Only one child born with HI was reported to be associated with maternal infections. The mother suffered from chicken pox during pregnancy and that was assumed to cause HI to the child. Worldwide, maternal infections during pregnancy lead to HI (WHO, 2006, 2015). Maternal illness and birth complication mentioned previously affect a small number of children. Worldwide maternal conditions such as maternal infections, low birth weight, prematurity, birth injuries, toxin

consumption by pregnant women, lack of oxygen (anoxia) and maternal diabetes are major causes of deafness in children.

Therefore, the finding suggests that: screening at birth before the child leaves the hospital is important in order to detect congenital deafness. Parents should be educated about the sources of hearing loss so that they can prevent their children from ear damage, also, they should learn to observe their children and understand their status of hearing. Parents should report on perceived changes or abnormalities in their children as soon as possible. Furthermore, there should be screening centre facilities and professionals for the parents to consult, it can be either nearby hospital units or health centres and lastly screening should also be done for all children including those identified as having hearing loss at the time the child starts school.

Moreover, a child with hearing loss which is not identified may not be able to develop normal speech and language. Late identification of hearing loss leads to permanent speech, language and learning impairment. Early identification leads to early intervention that could be treated and/or rehabilitated. Hearing loss is easily detected when it is hard of hearing or total deafness. Moderate and mild hearing loss cannot be easily detected as children may develop language normally. However, if not identified and managed, children will suffer the consequences later on in their development. Often, the degree of hearing loss determines the consequences for the child's life. Nevertheless, early identification and early intervention can minimize the consequences.

Special education unit service is only for children with significant hearing loss. It should be understood that children with mild hearing loss may not easily be identified as they can develop and acquire language as normally as their peers without hearing loss. However, hearing loss may cause problems as they grow and advance up the educational level. In education, mild hearing loss can mean significant loss (National Deaf Children's Society [ndcs], 2016,). Therefore, they should be identified, and recognized as children who require special intervention in order to make sure that they develop and learn normally (Marschark, et al., 2011).

Conclusions and Recommendations

From the findings, it can be concluded that lack of national guidelines to guide the identification and assessment process of CHI results in the use of different methods varying from one school to another. There is a need for a basic national guideline in order to ensure the accuracy of assessment that will lead to proper and accurate identification. Moreover, absence of screening at birth results in delayed identification which may affect the appropriate age for enrolment at school.

Thus, the study recommends that the available assessment/screening centres should be equipped with adequate modern equipment and advanced technology as well as specialists to conduct the assessment. It should be open for all children and not for school age children only. All schools with special education units for CHI should be equipped with screening and assessment facilities such as audiology room, machines and audiologists for easy service delivery for school children and the community around the school.

References

- American Speech-Language-Hearing Association [ASHA] (2015). *Ototoxic medication*. Rockville: ASHA. Retrieved from <http://www.asha.org/uploadedfiles/AIS-Ototoxic-Medications.pdf>.
- Ciccantelli, L. A. & Vakil, S. (2015). Case study of the identification, assessment and early intervention of executive function deficits. *International Journal of Early Childhood Special Education*, 3 (1), 1-12.
- Cohen, L., Manion, I., & Morrison, K. (2018). *Research methods in education (8th Ed)*. London: Routledge.
- Davis, A. & Carr, G. (2014). Early detection of hearing loss in newborn and pre-school children. (P. Ricard, Ed.) *Community Ear and Hearing health*, 11 (15) 1.
- Duthey, B. (2013). *Background paper 6.21 Hearing loss*. World Health Organisation.
- Emmett, S. D. & West, K. P. (2015). Nutrition and hearing loss: neglected cause and global burden. *The American Journal of Clinical Nutrition*, 102 (5), 987-988.
- Gaffney, M., Eichwald, J., Gaffney, C. & Alam, S. (2014). Early hearing detection and intervention among infants-hearing screening and follow-up survey, United States, 2005-2006 and 2009-2010. *Center for Disease Control and Prevention*, 63 (2), 20-26. Retrieved from <https://www.cdc.gov/mmwr/pdf/other/su6302.pdf>.
- Gelfand, S. A. (2016). *Essentials of audiology (4th ed.)*. New York: Thieme.
- Hallahan, D. P., Kauffman, J. M. & Pullen, P. C. (2014). *Exceptional learners: an introduction to special education*. Thousand Oaks: Pearson.
- Kock, T. D. (2014). Developing community-based infant hearing screening in the Western Cape. *Community Ear and Hearing health*, 11(15), 11-12.
- Marschark, M., Spencer, P.E., Adams, J. & Sapere, P. (2011). Teaching to the strength and needs of deaf and hard of hearing children. *European Journal of Special Needs Education*, 26 (1), 17-23. doi:10.1080/08856257.2011.543542.

- Ministry of Education and Vocational Training (2014), Education and Training Policy, MoEVT, Dar es salaam.
- Mkongo, J. I. (2019) Inclusion / integration of children with hearing impairment in pre-primary education in Tanzania. PhD Thesis. LMU, Munich.
- NAEYC (2017). *NAEYC early learning standards and accreditation criteria & guidance for assessment: a position statement of the National Association for Education of Young Children*. Washington, DC: NAEYC.
- National Association for the Education of Young Children [NAEYC] (2002). *Early learning standards: creating the conditions for success: a joint position statement of the National Association for Education of Young Children and the National Association of Early Childhood Specialists in State Departments of Education*. Washington, DC: NAEYC.
- National Deaf Children's Society [ndcs] (2016). *Supporting the achievement of hearing impaired children in early years settings*. National Sensory Impairment Partnership. Retrieved from www.ndcs.org.uk.
- Olusanya, B., Newmann, K. & Saunders, J. (2014). The global burden of disabling hearing impairment: a call for action. *Bulletin of the World Health Organisation*. 92 (5), 367-373.
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (2nd ed.). London: Sage.
- Santana-Hernandez, D. J. (2014). Early detection of hearing loss: Overcoming challenges in resource-poor settings. *Community Ear and Hearing Health*, 11 (15), 2.
- Sass-Lehrer, M. (2011). *Early beginnings for deaf and hard of hearing children: guidelines for effective services*. Washington: Laurent Clerc National Deaf Education Center.
- Sirimanna, T. & Olusanya, B. (2014). Early detection of hearing loss: an overview of methods and resources. *Community Ear and Hearing Health*, 15 (11), 4.
- Stach, B. A. (2010). *Clinical audiology: an introduction* (2nd ed.). New York: Delmer, Cengage Learning.
- URT (1977), Constitution of the United Republic of Tanzania, Government Printer, Dar es Salaam.
- World Health Organisation (2006). *International classification of functioning, disability and health*. Paris: World Health Organisation.
- World Health Organisation (2012). *Early childhood development and disability: a discussion paper*. Geneva: WHO. Retrieved from www.who.int.

- World Health Organisation (2016a). *Childhood hearing loss: act now, here's how!* Geneva: World Health Organistaion. Retrieved from <https://www.who.inc>.
- World Health Organisation (2016b). *Childhood hearing loss: strategies for prevention and care*. Geneva: World Health Organistaion. Retrieved from <https://www.who.int>.
- World Health Organisation & World Bank (2011). *World report on disability*. Paris: World Health Organization and World Bank.
- Yin, R. K. (2016). *Qualitative research from start to finish* (2nd Ed.) New York: The Guilford Press.
- Yin, R. K. (2018). *Case study Research and aplication* (6th Ed.). Thousand Oak: Sage.
- Yoshinaga-Itano, C. (2003). From screening to early identification and intervention: Discovering predictors to successful outcomes for children with significant hearing loss. *Journal of Deaf Studies and Deaf Educatioon*, 8 (1), 11-30.

The Dynamics of Preparing Children with Special Educational Needs to Start Schooling in Tanzania

Elizabeth Phillip Bhalalusesa¹, Emmanuel Babygeya² & Cosmas Mnyanyi³

^{1, 2& 3}Faculty of Education, Open University of Tanzania-Tanzania

E-mail¹: elizabethbhala@yahoo.co.uk

Abstract

This paper presents findings on how parents and teachers prepared children with Special Educational Needs (SEN) to start schooling. Information was sought from a sample of 84 participants in two districts in Tanzania using in-depth interviews, focused group discussion and non-participant observation. The collected data were subjected to thematic analysis. The study revealed that parents and teachers have a big role to play in preparing children with SEN to transit smoothly from home environment to start school. However, the transition process was not straight forward. It had some financial, social, and psychological implications on both parents and teachers. The study recommends, among others for parents' and community's awareness raising about children with SEN.

Keywords: *disability, transition, inclusive schools*

Introduction

All children whether with or without disability progress through several life transitions and each is a pivotal point of development and growth for them, their parents and family members (Grant, Knight & Busch, 2017). Transition is a concept that implies change and movement. It is a passage from one stage to another and is a lifelong process and part of everyone's life (Pattoni & Kimii, 2016). In the context of education and learning, some transitions may involve major changes like when children move a) from home to school for the first time or from pre-school provision to primary school, b) from primary school to secondary school, and c) from secondary school to tertiary education (e.g. vocational training, college or university). While all of these transitions are worthy of discussion, this paper will focus on one particular transition i.e., the transition from home environment to starting schooling for the first time for children with SEN.

There is enough research evidence which show that the transition from home environment to the first year of schooling is essential for the child's future physi-

cal, emotional and intellectual development (Then and Pohlmann-Rother, 2023). However, it is also widely accepted that while the process of transition from home to school is important for all children, it is of particular importance for children with disabilities and Special Educational Needs (SEN) who may have additional concern. Children with SEN have a learning difficulty or disability which makes it much harder for them to learn than other pupils of the same age (Balli, 2016). They may also have other specific special needs as per their disability that compels more attention. Thus, children may need more support and this situation calls for proper planning and preparation.

In Tanzania, starting school begins with pre-primary education at the age of 5-6. However, in the context of this study, to start schooling implies the time when a child with SEN is sent to school for the first time. Unlike children without disability and even those with disabilities that do not affect or interfere with learning, children with SEN do not necessarily follow the same stages as those without disabilities who begin with pre-primary education. Rather, they are categorized in levels 1, 2, 3 and 4. Basic skills of reading, writing and counting are not taught until when they have mastered the adaptive behaviours. These are skills necessary for day-to-day life that individuals should be able to perform at a certain age. Such skills include greeting, cleaning oneself, washing hands before and after eating, dressing, toileting, self – feeding, interacting with others, and taking care of oneself. Experience shows that children with special needs are most likely to delay in these areas. A good example is children with intellectual impairment who develop more slowly than other children of the same age. Sometimes it takes longer for such child to learn to speak, walk, dress, or eat without help. Therefore, parents deliberately delay to send them to school fearing that they will find it difficult to learn in school. There is no specific age range but in the schools visited for this study, the age range in the special education classes was between 7 to 16 years.

The context

Provision of educational opportunities for children with SEN has a long history in Tanzania. It can be traced back to the 1950s when the first special school was established by European missionaries (Church Missionary Society) at Buigiri in Dodoma to meet the needs of children with visual impairment (Possi & Milinga, 2017). At that time, the government had not ventured into special needs education. Consequently, quite a large number of children with disabilities were left at home due to ignorance; stigma and superstitions attached to causes of disability and the disability conditions.

In 1963 the government joined efforts with the European missionaries to provide special needs education in Tanzanian schools. Uhuru Primary School in Dar es Salaam was then opened as an integrated school for children with visual impairment. With this breakthrough more integrated schools were established. Following the Salamanca Statement and Frame for Action and Special Needs Education in 1994 which called for countries worldwide to move towards inclusive approaches, Tanzania started to implement inclusive education in 1997 (Possi & Millinga, 2017). Concurrent with the decision to move towards inclusion, Tanzania also developed a National Policy on Disability in 2004 (United Republic of Tanzania (URT), 2004) to provide guidelines and to set parameters for service delivery. The policy acknowledged that education was a key to the development of children with disabilities' potential and that they should be given priority. It states: *The government, in collaboration with stakeholders, shall provide a conducive environment for inclusive education that takes care of the special needs of disabled children (URT, 2004, p16).*

Since 2004, the government has been making concerted efforts to ensure that children with special educational needs are admitted in the mainstream of formal schooling through three different models, namely special schools, integrated schools and inclusive education. Special schools on the one hand cater for children who have special and additional educational needs due to learning difficulties or behavioural problems. These schools are normally run separately from conventional schools. They have a special designed form of instruction to cater for the unique needs and abilities of children with special educational needs. Unlike the special education model, the integrated model, on the other hand, incorporates children with special needs into regular schools. Children with special educational needs are able to attend regular schools but are usually taught in a separate special unit or class (URT, 2004).

Inclusive education as the third model promotes the education of all children in the same school and classroom environment, without discriminating them by disability or other special needs (Possi & Millinga, 2017). The classroom is seen as a place where all children, despite their special educational needs, have the right to belong, talk, walk, work and share together. According to Frederickson and Cline (2009), it is sometimes very difficult to draw a clear cut line between inclusive education and integrated models, although they are theoretically different. While integration is about making a limited number of additional arrangements for individual pupils with SEN in schools, inclusion, on the other hand, implies the introduction of a more radical set of changes through which schools restructure themselves so as to be able to embrace all children. Presently, based on the three models, at least each disability category is provided with education in Tanzania (URT, 2022).

Tanzania's commitments and efforts towards equality in education have further

been strengthened by the 2014 Education and Training Policy (MoEVT, 2014) and the global initiatives of which Tanzania has also signed and ratified. These include the Universal Declaration on Human Rights (Article 26); Convention on the Rights of Persons with Disabilities (Article 24), UNESCO Convention against Discrimination in Education (Articles 4), The 1990 World Conference on Education for All (EFA), The Dakar Framework for Action (DFA); the Millennium Development Goals (MDG) and now the Sustainable Development Goals (SDGs) which set goals to be achieved by all nations by 2030. Nonetheless, there has been a growing concern that despite the Governments' efforts and commitment to provide equal access to education for all children in Tanzania, discrepancy still persists. The enrolment of children with SEN remains low. The Ministry of Education, Science and Technology (MoEST, 2018) indicates that the percentage of children with SEN enrolled in primary schools was very low; at the range of only 0.43 per cent by 2018. The situation has not changed much to-date (URT, 2022). This is a bleak picture which cannot be left to continue.

Several factors have been indicated as contributing to the less enrolment status for school children with special needs and disabilities in developing countries like Tanzania. According to Thompson (2017), access to school for children with disabilities is often limited by practical reasons associated with planning and preparation among key players on the specific education needs for children with disabilities to join and stay in school.

The essence of planning and preparation for successful transition to school

It is evident from research that where parents have been actively involved in the planning and preparation for their children with SEN, the process of transition from home to school has been smooth and the take-off to start schooling has been successful (Veitch, 2017, Bariroh, 2018 and Bessi & Sakellariou, 2019). This is due to the fact that parents and guardians know their children better than anyone else and have the most complete understanding of a child's physical, social, developmental, and family history. They also provide the resources as well as social, cultural, and emotional supports that children need to function successfully at school (Dockett, Perry & Kearney, 2012). Together with the potential role of parents, it is also evident that successful transition to school for children with disabilities and SEN depends very strongly on the supports available at the school and the ability of the school to accommodate the individual children's needs (Mapunda et al., 2017; UNICEF, 2012). Parental engagement with children's learning is effectively supported when parents receive clear, specific and targeted information from schools. The two agencies (family and school) have to collaborate together to ensure effective preparation and smooth transition to school of these children.

Experiences from other developed countries

Recognising the significance of preparation and planning beforehand, some countries especially those from the developed world have designed a range of disability support services and programmes for children to promote social adjustment and prepare them to start schooling smoothly (Dockett & Perry, 2001). In Singapore, for example, guidelines have been developed which includes steps and advice to parents on what they ought to do before sending their children with SEN to a mainstream school (Aljunied, 2019). According to Aljunied, parents should first consult professionals who have worked closely with their children, such as psychologists, developmental paediatricians and early intervention teachers on whether the child should consider attending mainstream or Special Education schools. As children with more severe SEN require intensive specialised support in the long-term, their learning needs can be better supported in special education (SPED) schools. In such schools, these are the professionals who have a clear idea of the children's needs and areas of strengths. It is important to heed their advice. However, of even more importance according to this psychologist is that parents must also provide the school with clear information about the child's learning needs in order to allow them to have a better understanding of the child's needs. The school can then take the appropriate steps and provide the necessary support to help the child make the transition into a mainstream setting.

Similarly, in Ireland, the National Council for Special Education (NCSE) developed some guidelines for parents/guardians of children with SEN to serve as tips on how to prepare their children for starting school (NCSE, 2016). Apart from the guidelines, normally, schools hold information meetings for parents of young children with special educational needs, in the year before they start school. The planning meeting normally includes parents, the school principal and if possible the class teacher and if necessary other professionals who have been involved with the child before he/she starts school. At this planning meeting, parents are advised to let the school know any particular anxieties the child has about starting school. It is also important to give the school any information that might help the school to meet his/her needs. This includes any relevant professional reports (e.g. reports written by psychologists, speech and language therapists, occupational therapists and so on) as these can help to ensure that the school is aware of the child's strengths, abilities and needs. Parents find it useful to attend these meetings as they hear about the various educational supports and settings that are available for their children. In Finland and Lebanon too, they have an early intervention programmes that provide developmental and therapy services for young children with mild disabilities who can cope academically with the curriculum requirements, but need extra support (Al Hout, 2017).

The study: rationale, purpose and research questions

Whereas all these examples have been cited from developed countries, little is evident and documented from developing countries including Tanzania. Much of what is largely available in Tanzania, for example, is related to studies on the challenges and barriers of mainstreaming of children with disabilities and SEN in regular schools (Krohn-Nydal, 2008; Tungaraza, 2014; Possi & Milinga, 2017; UNICEF, 2017; Said, 2017 ; Juhudi, 2018). So far to the best of my knowledge, no study has been done in Tanzania, to investigate the transitional process followed before children with SEN start schooling and how parents and teachers are engaged in preparing these children to start schooling smoothly.

The aim of this study was therefore, to examine the engagement of parents and teachers in preparing children with SEN to transit for the first time from home to school environment to start schooling. It was expected that on the basis of the data collected, this study would shed light into how smooth and successful children with SEN in the Tanzanian context should be prepared to start schooling.

The study was guided by the following research questions:

- In what ways do parents prepare their children with SEN to transit from home environment to school?
- How do teachers support children with SEN to adjust to the demands of starting school?
- What challenges do parents and teachers experience in the process of preparing children to transit from home environment to start schooling?

Theoretical framework

This study was informed by ecological systems theory developed by Bronfenbrenner (1979). The theory recognises the role played by the environment in which a child operates. In the context of this study, it implies that children's transition to school is not only dependent or influenced by the nature of learning disability of the child but also on parents, schools, peers and their relationships as well as on the socio-economic and cultural context within which the child lives. The theory was considered practical for this study because it emphasizes on the interrelationships of the sub-systems in the sense that if one system fails to work together, it will have negative effects on the other subsystems.

Methodology

The study was guided by interpretivist research paradigm because of its philosophical underpinnings which usually focus on meaning and assume that each individual has

his/her own point of view or way of perceiving and interpreting a phenomenon. In this view, interpretivists assume that knowledge is constructed subjectively from different individual experiences. The role of the researcher is to enable participants in the study to attach meanings to the events and phenomenon around them. For that matter, it becomes important, then, to conduct studies in the “field,” where the participants live and work since these are important contexts for understanding what the participants are saying. Methodologically, interpretivists believe in flexibility and in methods of data collection such as interviews which give room to participants to create their own social world, meanings and understanding of the topic under study. Based on the interpretivist philosophical stance, this study considered qualitative research approach to be the most suitable. Operating within this perspective, the researcher entered into the key informants (parents and teachers) personal world to gain deeper and clear understanding of how they prepare their children with SEN to start school and the challenges experienced in this process.

The study was conducted in Kinondoni district in Dar es Salaam Region and Kibondo district in Kigoma Region. The selection of Dar es Salaam was based on the fact that Dar es Salaam was the first region in the country to practise inclusive education. It was also reported to have registered more children with disability than any other region in the country (President’s Office Regional Administration and Local Government, 2018). Kigoma Region and specifically Kibondo district, was also considered appropriate for this study since it has also registered many children with disabilities. According to the Tanzania Disability Monograph more children with disabilities who never attend school, come from rural areas like Kibondo largely because of lack of awareness among parents (URT, 2019). Besides, the Education Sector Performance Report for Tanzania Mainland by MoEST (URT, 2022) shows that at primary school level; Kigoma Region had the least Gross Enrolment Ratio (GER) in the country (89. 6%) which suggests that there are still large numbers of out-of-school children.

With regard to research design, the study employed a case study design which allowed multiple cases to be assessed. Eighty four participants were involved in the study including 45 parents, 21 teachers, 8 head teachers and 2 DSEOs. Purposive sampling as well as snowballing and convenient sampling techniques were used to obtain the sample size of the study. In depth semi-structured interviews, FGD, non-participant observation and documentary review were used to obtain the required data for the study. In particular, parents and teachers provided information on the activities they performed in preparing and helping children with SEN to start schooling and the challenges experienced in that process. The DSEO was consulted as a representative of the government to provide official information

related to policy matters and the support provided by the government to facilitate smooth transition to school for children with SEN. Data collected through these various methods were subjected to thematic data analysis to make sense and create useful meaning as per objectives of the study.

Findings and Discussion

In this section, findings from the field on how parents and teachers prepared and helped children with SEN to transit from the home environment to school for the first time are presented, analysed and discussed. Similarly, the challenges experienced by parents and teachers in the process of preparing and enabling children with SEN to start schooling are also presented and discussed.

Parents' ways of preparing children with SEN to start schooling

Parents' preparation of their children with SEN to start schooling was marked by specific activities. The first and unique distinctive activity from other parents with school-age children but without SEN was seeking for medical prescription certification. Each respective parent was obliged to consult with medical doctors to assess the child with SEN and make diagnosis on the type and magnitude of the disability that might affect learning. The certificate was a mandatory condition before registration and proper placement of the child either in an inclusive class or special educational need class.

After the medical certificate was obtained, the second activity was buying common basic school materials like school uniforms, shoes and stationery items such as exercise books and pencils as well as school bags. This was a common and generic preparation for any school-age children earmarked to start school. Normally, parents get information about the school materials when they meet the special education teachers in a joint parent meeting before the beginning of a new school calendar.

First we were called to attend a joint meeting where we were informed about inclusive schools and the possibilities of our children with SEN to get education. At the meeting, the teachers also informed us on the different basic materials which a child needs to begin school. These include school uniforms, shoes and stationery items. I had to buy them. This is how I prepared my son to go to school.

Parents also narrated that preparing a child with SEN to start schooling does not only end up with buying school materials. Since the majority of children with SEN could not independently walk to the inclusive schools, parents had also to think on how they would get the children to school and the means to make this possible.

At the family level, it also involves sitting down, discussing and agreeing on how the child will get to school, who will do that, and by which means. For parents, this was indeed a challenging activity because their life style had to change to accommodate escorting the child to school. Sometimes, it involved one to sacrifice himself/herself like quitting jobs, relocating working areas and time adjustments to fit in the child's school schedule. One parent (mother) had this to say:

We were excited to learn that our son who had autism and intellectual impairment could learn something at school. But sending him to school was something we had to sit down as a family and discuss. One of us had to escort him to school. My husband and I are both civil servants. As a mother, I had no choice. I went to see my employer and requested for re-location of my working station. He could understand my intension. I was allowed to transfer to this new working station which is very close to the school.

It is important to note that parents of children with SEN varied in terms of educational level, socio-economic status, as well as knowledge and awareness about disability. The differences in their demographical characteristics influenced the way they got information about the available educational opportunities for children with SEN and the way they engaged themselves in preparing their children with SEN to start school. Parents who were well educated, knowledgeable, and who were economically-advantaged perceived their children with SEN from the human rights model and did whatever was possible to prepare them to start school. They believed that having a child with SEN does not make anyone less of a person. Through personal initiatives such parents even looked for proper information from medical practitioners and checked for suitable inclusive schools to enable their children to start school.

My daughter was diagnosed to have moderate autism although she is also intellectually impaired. After I was told that my daughter can also learn something I was very happy that day. But I was also very much curious about how she was going to learn. So I made a follow up to the refereed nearby inclusive school. The teachers welcomed me and informed me that the main emphasis was to help these children learn the basic things in life like greetings, brushing their teeth, holding a spoon and self-feeding before they move into the formal school curriculum. I was impressed.

Teachers ways of supporting and preparing children with SEN to enrol into school

The study observed that the role of special education teachers begins with identification of all school-age children with disabilities and their geographical location. With the assistance of local leaders, special education teachers would go to the villages/communities to identify school-age children with SEN and mobilise parents to enrol them into school.

The teachers also advise parents to send their children to recognised medical practitioners for diagnosis and assessment of the nature and type of disability. Consulting medical practitioners was to be done prior to sending the children to school for registration since some children need medical attention or treatment and have to take medicine while at school. One teacher had this to say: *“Some children especially those with extreme autism have to take drugs to calm them down and those with limited or no control of short or long calls have to be served with diapers.”*

The findings also indicated that teachers played a sensitization and counselling role for parents who were psychologically desperate and unwilling to prepare and allow their children with SEN to start school. According to the teachers, such parents had low self-esteem and had lost hope over their children. They did not believe that their children with SEN were able to learn as other children. They looked sad and desperate as indicated by one parent: *Sending this child to school is not something one can be excited and be proud of. After all what will she learn? And what will be next? The doors for a bright future are already closed.*

Parents like this, especially those with low education level and those with continued ill-belief about disability viewed preparing children with SEN to start school as a worthless investment without any promising added value for the future of the child. Such parents had low self-esteem and lost hope over their children. Therefore, teachers had to counsel and help them to understand that children with SEN can also learn.

Likewise, teachers had to plan well on how to receive and orient children with SEN to the new environment of the school. They must make sure that there is a space (special classroom) for these children because they cannot be integrated in inclusive classrooms with children without disabilities. Also they have to ensure that there are adequate facilities and stationery to enable these children learn.

It was further noted that when teachers receive the children during the early days at school, they continue providing supportive services such as medical referrals to

children who require medical attention. For parents who come with their children directly to school with no prior knowledge that their children require or may require medical attention, teachers have to let the parents know that they need to visit the hospitals and get medical attention for their children. A teacher from one of the schools in Kinondoni District which serves children with intellectual impairment stated:

Our school has been identified to receive children with intellectual disability and autism. Majority of those children with extreme autism came with their medicines to calm them down. There are situations when they become very aggressive and irritative. In such situations, we have to be very close and handle them with care.

Teachers also provide special attention and needs to children with severe, profound and multiple disabilities including making sure there is careful administration of their medicines while at school. They work together with the first aid teachers within the school and for those with boarding facilities they also collaborate with matrons and patrons: *We have to double check and at times consult with medical practitioners to ensure that the drugs have really been prescribed by certified medical doctor. We also need to know when and how to keep and administer them.*

From this quotation, one can note that teachers play multiple roles in the absence of other professionals like school nurses or school psychologists. This is contrary to the practice reported in other developed countries like Finland where there is normally a multi-agency care comprising the principal, the special teacher, the school nurse, the school psychologist, a social worker and the teachers; all working together to assist children with SEN (Al Hout, 2017).

Challenges experienced in the process of preparing children with SEN to start school

Parents and teachers encountered several challenges as they prepared children with SEN to transit from home to school. These challenges are presented and discussed hereunder:

Challenges experienced by parents

One of the challenges which was mentioned by almost all parents was the costs involved in preparing and enabling children with SEN to start schooling. Findings from the study indicated that the costs involved in preparing and enabling a child of SEN to start and remain in school was very high compared to a normal abled child. Throughout this study parents also stressed about the emotional costs and

described the processes by which their families had to adjust to the needs of the child. Although primary education has always been fee-free in Tanzania (at least at theoretical level), Dachi (2000), observed that there are still some hidden costs that parents of children with disabilities and SEN have to bear. Some parents with children with physical disability and motor problems, for example, expressed a concern about lack of suitable equipment such as wheelchairs and/or clutches. Even when clutches and wheelchairs were available, the challenges of navigating unmade roads and a limited transport system especially in the rural areas were evident. All these are extra costs to be shouldered by parents with SEN children.

Much as I am very thankful to the government for providing special schools for our children with disability, I am currently at the crossroad given the nature of disability of my child. He needs a wheel chair and someone to assist him to move the child around. The wheel chair is costly.

These findings are not unique to Tanzania alone. Studies conducted in India (Limaye, 2016) and Uganda (Moyi, 2012), for example, have all established that socio-economic disadvantaged families were at high risk of failing to send their children with SEN because of the costs involved to meet their needs. Due to transportation cost and parents not having time to accompany children to school, parents are often forced to make a choice between providing education to a child with SEN and without a disability. Findings also show that the more the severity of a child's disability, the lower the chances of the child to attend school.

The long process of getting a child with disability enrolled in the school system was mentioned as another stumbling block for parents to make preparation for their children to make smooth transition to school. Before a child is accepted in an inclusive school he/she has to be assessed by a medical practitioner to get a confirmation certificate of the child's type of disability and if there was any medical attention /treatment needed. Medical doctors also determine if a child is eligible for special education support and services. Technically, this is an important requirement and step not advisable to skip. Teachers need to be well informed and advised by medical practitioners accordingly. Some of the parents who participated in this study considered this requirement as cumbersome, unnecessarily bureaucratic as well as time-consuming especially for parents who were not staying close to the hospital. One parent who had a son with autism had this to say:

When I arrived at school I was told my son could not start right away. I was then re-directed to go to the hospital first to get a document from the doctor to confirm the nature and status of disability of my son. I was

disappointed because this was not easy for me. I stay very far from the district hospital and it is tough to move with my son in his condition.

In rural remote areas of Kibondo district, for example, this step was not very practical because the district hospital is not accessible to distant communities. Therefore, parents just take their children with disabilities to school for the teachers themselves to carry out initial assessment and identification. Some teachers understood the real situation and accepted the children without the medical certificate especially where they felt the disability was not very complex. Otherwise, parents were advised to go and seek for the medical confirmation. In an interview with parents, it was clear that for some parents the morale to enrol their children was low and they were doing this because they had been told by local leaders to do so.

I wanted my child to go to school like the rest, so I had no choice but to comply and look for the documents. Worse still I had to carry my son along with me. It was not easy at all. As you can see my son has intellectual impairment. It was not only costly for me but an unpleasant experience as well.

For some parents being told to go back for medical diagnosis and certification was more or less like a permit to go back home forever. For educated parents who were aware of the importance of education and who wanted their children with disabilities to learn something the situation was different. They were willing to take their children for the medical diagnosis and certification before taking them to school for registration as can be seen in this interview extract:

The teachers informed me to go to the diagnostic centre to meet medical practitioners to be given a medical certificate. It was a requirement because the teachers had to be sure of how best to handle my son. I was determined to get my child with intellectual impairment to school.

Challenges experienced by teachers

One of the challenges expressed by teachers in all focused group discussions was continued myths and misconception about children with SEN. This study established that some parents, relatives and the community at large still hold the cultural beliefs about disability in which disability is often blamed to have been caused by misdeeds of ancestors and parents and or supernatural forces, punishment or will from God. Mothers were often blamed when they give birth to such children as can be seen from this interview extract which was emotionally shared by a mother of a child with SEN in Kibondo district:

My child has cerebral palsy and her development has been slow and problematic. My in-laws despise me by saying I have brought bad luck. Hence, this becomes a source of sorrow and agony in the family. She says because of my bad luck I am being punished by ancestors and Gods. As a mother I am very much hurt and traumatized.

From this interview one can easily note the misconception and ill belief which is still evident in people's mind about children with SEN. According to one teacher, the sister-in-law who was a very close relative was supposed to be a source of relief and encouragement. But she turned out to be a source of grief and discouragement.

The situation was found to be more critical where the child was born with disability and there was no clearly known and scientific reason for explaining the cause of such disability. A good example is the case of Autism Spectrum Disorder (ASD) where until to-date there is no scientific consensus about the cause of such condition (Manji, 2018). In a systemic search and an extensive survey of the existing information about ASD in Tanzania, this professional and medical expert in autism noted that there is very limited information available on children with Autism in Tanzania although the cases for such condition are currently becoming more prevalent.

This false belief about children with disabilities and SEN is not only evident in Tanzania. Odongo (2018) in Kenya noted that a good majority of people still believe that a disability is retribution for past wrong deeds committed. Baker, Lund, Nyathi, & Taylor (2010) observed that in Zimbabwe and South Africa, witchdoctors created a market of body parts of people with albinism believing that people who take these body parts will be lucky in the mining boom of gold and diamond. Certainly, children who are met by these ill beliefs and attitudes can hardly develop to their full potential.

Parents' delayed identification of their children's learning difficulty and associated intervention was another main challenge which teachers mainly faced as they tried to sensitize and mobilise parents to enrol children with SEN into school. Early identification and intervention of children with special educational needs is absolutely important. The earlier a problem is identified, the better the outcomes of intervention. These problems especially those related with intellectual and developmental disorders can emerge early in childhood and become progressively worse if not treated. One of the teachers gave an example of how they met one parent who was struggling with a 13 aged son who had severe autism but had done nothing other than tying him with ropes around his feet and arms to prohibit him from movement because of lack of knowledge. According to this teacher, the parents desperately explained that their child was destructive and at times he

used to hurt himself as if he had no feelings. Probably, with early identification, the parents would have been made aware of the disorder and got support on time instead of locking and hiding the child inside the house. As affirmed by Manji (2018), with early identification and intervention, children with autism can be very successful in school and develop to their full potential.

It is important to note that not every child is born with well-known and visible disability which can easily predict learning difficulties in future. Sometimes even parents may not be aware that they have a child with SEN if the disability is not noticeable like mild hearing impairment, slow learning, mild autism or low vision. In case of mild autism, some parents think that their child is just naughty; over reactive, non-interactive with disruptive behaviours just to find out later that the child is autistic. The teachers learned from the parents that sometimes, there were no alarming visible physical defect and parents assumed that the unusual behaviours and developmental delays were just temporary disorders that would be cleared with time. Therefore, parents do not do anything and just keep the child until when other symptoms started to show up and find that it was too late for an intervention.

Whereas in high income countries they offer the array of programs and design a range of disability support services for children to promote social adjustment and prepare them to start schooling smoothly. The same is not evident in Tanzania. Majority of parents especially those located in rural and geographically disadvantaged areas get to know that their children have some problems with associated learning difficulties at the time when they have to enrol their children into schooling. In Finland as observed by Perry & Wilson (2015), the focus on early identification begins long before children start school, with a network of child health clinics providing regular assessments of the social, physical and mental development of babies and pre-school children. Multi-disciplinary teams comprising a nurse, doctor, speech therapist and psychologist make evaluations with the aim of identifying development risks.

Conclusions

Overall, this study indicates that parents and teachers have a big role to play in preparing and enabling children with SEN to transit smoothly from home to school. Nonetheless, this study indicates that preparing a child with SEN to enrol in school is not a simple and trouble-free process. It has some financial, psychological and emotional implications. For example, while parents may be willing to enrol their children with SEN to school, this is shortened by several challenges; some of which are beyond parents' personal control. Similarly, much as teachers would wish to see children with SEN enrolled in school, this is also curtailed by

some lack of cooperation from parents especially those who are overprotective and who still believe that it was a worthless investment to enrol a child with SEN in school. This is accompanied with a delayed diagnosis and identification of the children's nature of disability and its effect on learning make the engagement of teachers in supporting and preparing children with SEN to start schooling smoothly real challenging.

As a whole, it is also important to note at this point that this study was conducted in two districts only in Tanzania. The findings may not claim to be conclusive and generalisable. However, they are adequate and have shed light into the dynamics of preparing children with SEN to start schooling as experienced by parents and teachers. Certainly, these findings and subsequent recommendations may be applicable to other districts in Tanzania with similar features.

Recommendations

Based on the findings and conclusions, it is recommended that there is need for continued sensitization and awareness raising campaign among parents and the community as a whole on the facts about disability and children with SEN in particular. Parents who are knowledgeable about disability and have managed to enrol their children in school can form a valuable team to share their practical experiences and evidence that children with SEN can learn some valuable and useful things.

Given the fact that disability is a natural part of human diversity that must be respected and supported in all its forms, there is also a need for a shared commitment between the government on the one part and parents and communities on the other part in ensuring that children with SEN also access educational facilities near their families. Continued efforts should also be made even by the communities and other educational stakeholders to assist children with SEN with the necessary learning materials, devices and equipment.

This study has shown that early diagnosis and identification was not a common practice in all schools in Tanzania, there is need for the government to institute within its health and education policies and practices the diagnosis and early identification of disability and learning abnormalities among children. The sooner learning the disabilities are diagnosed and treated, the more likely children are able to reach their potentials.

Finally, the government should also consider providing continued in-service training to teachers to enable them to identify children's learning needs and assist them accordingly.

References

- Al Hout, R. (2017). *How to include children with special educational needs and disabilities*. Retrieved from <https://www.britishcouncil.org/voices-magazine/>
- Aljunied, M. (2019). *Preparing your child with special educational needs for a mainstream School*. Ministry of Education Singapore. <https://www.schoolbag.sg/story/preparing-your-child-with-special-educational-needs-for-a-mainstream-school>.
- Balli, D. (2016). Importance of parental involvement to meet the special needs of their children with disabilities in regular school. *Academic Journal of Interdisciplinary Studies*, 5(1).
- Bariroh, S. (2018). The influence of parents' involvement on children with special needs' motivation and learning. *International Education Studies*, 11(4), 96-114.
- Bessi, M. & Sakellariou, M. (2019). Factors associated with the successful transition to Primary school. *European Journal of Educational Studies*, 5(10), 63-75.
- Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge: Havard University Press.
- Dachi, H. (2000). *Household private costs of primary schooling in Tanzania*. Unpublished EdD Thesis, University of Bristol.
- Dockett, S., Perry, B. & Kearney, E. (2012). Family transitions as children start school. *Family Matters*, 90, 57-67.
- Dockett, S., & Perry, B. (2001). Starting school: Effective transitions. *Early Childhood Research & Practice*, 3(2).
- Frederickson, N. & Cline, T. (2009). *Special needs, inclusion and diversity* (2nded). MC Graw Hill: Open University Press.
- Grant, W.G., Knight, B. & Busch, G. (2017). Children's transitions to school: so what about the parents? *International Journal of Early Years Education*, 25(2), 204-217.
- Juhudi, K. C. (2018). Family Barriers for quality Pre-Primary education for children with disabilities in Tanzania: A Case of Lindi Region. *Journal of Popular Education in Africa*, 3(1), 22 – 39.
- Krohn-Nydal, A. (2008). *The development of inclusive education in the Tanzanian primary School*. (Unpublished M.A Dissertation), University of Oslo.
- Limaye, S. (2016). Factors influencing the accessibility of education for children with disabilities in India. *Global Education Review*, 3 (3), 43-56. <http://ger.mercy.edu>

- Manji, K. P., & Hogan, M. N. (2015). Identifying gaps in knowledge, prevalence and care of children with autism spectrum disorder in Tanzania – a Qualitative Review article. *Tanzania Medical Journal*, 26(2).
- Mapunda, P.H., Omollo, A.D. & Bali, T.A.L. (2017). Challenges in identifying and serving students with special needs in Dodoma, Tanzania. ICEP 11, *International Journal of Child Care and Education Policy*. 11(10).
- Ministry of Education, Science and Technology. (2018). *Education Sector Development Plan (2016/17 –2020/21) Tanzania mainland*, Dar es Salaam: MoEST.
- Ministry of Education and Vocational Training. (2014). *Education and training policy*, Dar es Salaam: Moevt.
- Moyi, P. (2012). Access to education for children with disabilities in Uganda: Implications for Education for All. *Journal of International Education and Leadership*. 2 (2).
- National Council for Special Education. (2016). *Supporting students with special educational needs to make successful transitions guidelines for schools*. Dublin: National Council for Special Education <https://ncse.ie/wp-content/uploads/2016/01/5-NCSE-2016-Supporting-Students-final-web-27.01.16.pdf>
- Odongo, G. (2017). Barriers to parental/family participation in the education of a child with disabilities in Kenya. *International Journal of Special Education*, 33(1), 2018.
- Pattoni, J.R., & Kimii, M.K. (2016). The importance of transition planning for special needs students. *Revista Portuguesa de Educação*, 29(1), 9-26.
- Perry, C., & Wilson, J. (2015). Special education needs in Finland. *Research and Information Service Briefing Paper 90/15*, Northern Ireland Assembly.
- Possi, M. K., & Milinga, J. R. (2017). Special and inclusive education in Tanzania: Reminiscing the past, building the future. *Educational Process: International Journal*, 6(4), 55-73.
- Skouteris, H., Watson, B., & Lum, J. (2012). Preschool children's transition to formal schooling: The importance of collaboration between teachers, parents and children. *Australian Journal of Early Childhood*, 37, 78-85.
- Then, D., & Pohlmann-Rother, S. (2023). Transition to formal schooling of children with disabilities: A systematic review. *Educational Research Review*, 38. <https://doi.org/10.1016/j.edurev.2022.100492>.
- Tungaraza, F. (2014). The Arduous march toward inclusive education in Tanzania: Head teachers' and teachers' perspectives. *Africa Today*, 61(2), 108-123.

- United Nations International Children’s Emergency Fund. (2012). *Child friendly schools manual*, New York: UNICEF’s Division of Communication.
- United Nations International Children’s Emergency Fund. (2017). *Annual Report 2017 Tanzania*, Dar es Salaam, United Republic of Tanzania.
- United Republic of Tanzania. (2019). *Pre-Primary, Primary and Secondary Education Statistics in Brief*. Dar es Salaam: President’s Office Regional Administration and Local Government.
- United Republic of Tanzania. (2004). *Special Needs Education Unit Report*. Dar es Salaam: Ministry of Education and Culture.
- The United Republic of Tanzania. (2022). *Education sector performance report for the financial year 2021/2022 Tanzania mainland*. Dodoma: Ministry of Education, Science and Technology.
- Veitch, H. (2017). Parental memories of school and children’s early learning a comparison of higher-income and lower-income mothers. *New Waves Educational Research & Development*, 20(1), 38–54.

The Efficacy of Exemplary Learning Materials for Enhancing Writing Skills among Primary School Children with Susceptible Writing Difficulties

Alphoncina Pembe

College of Education, University of Dodoma – Tanzania

E-mail: pembealpha@gmail.com

Abstract

This paper reports the efficacy of exemplary learning materials for improving writing skills of Grade Two children with susceptible writing difficulties. A mixed research approach involving phenomenological and quasi-experimental designs was used. Two teachers and 49 children were purposively selected from two primary schools in Dodoma Region, Tanzania. Data were collected through observation, interviews and tests. The findings indicate that children benefited from learning through designed materials. Children in the experimental group improved their writing skills significantly compared with those in the control group, $t=13.15$, $p<.001$ with a very large effect size of 4.211770 , $g>0.8$. Thus, teachers should frequently support these children using designed materials in remedial classes to remove grade repetition.

Keywords: *writing skills, writing difficulties, efficacy, exemplary learning materials.*

Introduction

Writing skills are essential skills of concern globally due to their usefulness in school and life in general. Together with other fundamental abilities (listening, speaking, and reading) in language, writing skills are a predictor of academic achievement and a prerequisite for access to and involvement in social life and economic activities (Graham, 2019). Since paper and pencil examinations are frequently used to assess academic progress, students with strong writing skills have a greater chance of succeeding in academic activities at school (Al-Gharabally, 2015; Graham, 2019). Moreover, the capacity to write successfully is a crucial workplace competency across professions and business sectors (Lee & Schmidgall, 2020). Besides, at home, writing helps family members in initiating and keeping personal relations using a variety of social networks and media (Freedman, Hull, Higgs & Booten, 2016). This means that individuals who do not sufficiently master the basic writing skills will eventually encounter problems in participating fully in academic, occupational, and personal life.

Due to the importance of writing skills, worldwide policies such as Education for All (EFA), Millennium Development Goals (MDGs), and Sustainable Development Goals (SDGs) point out the issue of writing skills. For instance, the EFA strategy specifies that every child should be able to benefit from educational opportunities designed to meet their basic learning needs such as writing, oral expression, numeracy and problem solving (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2006). Moreover, UNESCO (2006) underlines the importance of writing skills to achieve each of the EFA goals including economic, social and political participation as well as development in today's knowledge societies. Likewise, MDGs intended to achieve Universal Primary Education (UPE) in which among other things, the focus was put on writing. The Millennium Development Goals were replaced by SDGs which also focus on education. The SDGs envisioned ensuring inclusive and equitable quality education and promoting life-long learning opportunities for all. Under this goal, one of the targets is to ensure that all youths and a substantial proportion of adults develop reading and writing skills.

Tanzania is not far from the worldwide agenda which focus on recognizing the importance of writing skills. Tanzania's Education and Training Policy (ETP) of 1995 and 2014 state the importance of writing skills in school learning. Together with Tanzania's policies insisting on the issue of writing skills, the government of Tanzania launched several initiatives to improve the quality of primary education in general and 3Rs (Reading, Writing, and Arithmetic) in particular. For example, the government initiated in-service training for primary school teachers through the Primary Education Development Programme (PEDP) II and III (Ministry of Education and Vocational Training (MoEVT), 2012a; 2012b). Both focused on 3Rs training to help teachers become more effective in teaching these basic skills to primary school children (MoEVT, 2012a, 2012b). Additionally, the government has changed the primary school curriculum for grade I and II. This curriculum insists on 3Rs in those classes (Ministry of Education, Science and Technology (MoEST), 2015).

Despite the importance of writing skills together with the initiatives made in different countries to improve the skills, it was established that the majority of the learners in the world and Tanzania in particular, do not achieve the desired level of writing skills at early grades as it is expected (FinScope, 2017; Mmasa & Anney, 2016; Pembe & Bali, 2019; Phiri, 2015; Suleiman, Boniventura, Kalage, Mihayo & HakiElimu (Tanzania), 2015; UWEZO, 2014; World Statistic Institute, 2011). Some of the children complete even primary education without mastering the writing skills (UWEZO, 2013). For example, the world statistics anticipated that 27% of the primary school children encounter problems of writing skills in the world (World Statistic Institute, 2011). Despite the worldwide data, there are also

country-specific data. In Zambia, for instance, Phiri (2015) found that on average 50 (64.05%) of fourth graders had difficulties in writing words and sentences from BASAT (The Basic Skills Assessment Tool) while 61(76.25%) were unable to write the tested story correctly.

Tanzania is not different from other countries as school children experience similar situation in writing. This argument is evidenced by different studies. For example, a study by Ngorosho and Lahtinen (2010) note that almost 30% of the grade two children tested in writing words did not write any word correctly. Moreover, Kumburu (2011) revealed that 32% of 301 children in grade one had reading and writing difficulties. Besides, Kalanje (2011) identified that 27% of the children in standard one had reading and writing difficulties. Furthermore, the national baseline assessment for 3Rs in Tanzania reported that 42.1% and 53.1% of grade two children had difficulties in writing Swahili dictated words and sentences respectively (Brombacher et al., 2014). In the same view, the report by FinScope (2017) testified that 25% of all Tanzanians could neither read nor write in Kiswahili. Additionally, Pembe and Bali (2019) identified that 26.2% of 202 children in grade two were facing difficulties in writing words and sentences.

The reality from the aforementioned studies triggered the researcher to design exemplary learning materials (ELMs) to support primary school children with susceptible writing difficulties (CSWD) and test their efficacy. This study, therefore, sought to report the efficacy of the designed ELMs to determine if they can be used to improve the writing ability of the CSWD specifically on word and sentence writing. The study was guided by two research objectives, namely:

1. To examine the teaching and learning process of children with susceptible writing difficulties; and
2. To assess the efficacy of the exemplary learning materials designed to support writing ability of the children with susceptible writing difficulties.

Methodology

Development and validation of the exemplary learning materials (ELMs)

The ELMs were designed based on the findings of a preliminary study, syllabus analysis, and two theories: Social Constructivist and Motor Learning. The preliminary study revealed that CSWD experienced errors when writing due to lack of teachers' training, lack of supportive resources, and poor teaching/learning methods. The Kiswahili syllabus of 2015 emphasizes small group activities and use of teaching and learning aids, but the teachers were not using them. Additionally,

CSWD were being retained in the same class to support their writing skills, but this should be the last resort. Therefore, an intervention programme to focus on teachers' pedagogical competence was needed to address the problem.

The principles of social constructivist theory (SCT) and motor learning theory (MLT) were used to design the ELMs, which allowed learning through mediation, collaboration, and the use of prior knowledge. The ELMs include stages of learning and individual activities to identify the ability of the child to work independently. Practice was the core activity, and feedback was important after each activity.

Following the findings and mentioned principles, seven design guidelines were formulated to guide the designing process and implementation. These included aligning materials with the competency-based curriculum, following active learning techniques, adopting the maxims of teaching, making decision on pedagogy, creating flexible learning environment, arranging plus time table for the implementation, and stating procedural specifications. Procedural specifications included rationale of the lesson, lesson objectives, teaching and learning aids, time allocation for lesson implementation, introduction of the lesson, teaching with mediation, practice and conclusion.

The researcher used design guidelines and specifications to compose lessons for intervention, which were evaluated through expert appraisal, classroom trials and panel discussion. The ELMs were evaluated to improve their validity and practicability before testing their efficacy (see Appendix A: Final version of the sample of ELMs). The curriculum design researcher, an intervention programme designer and experienced teachers of literacy skills were involved in appraising and discussing the ELMs.

Research approach and design

This paper adopted a mixed research approach, using quasi-experimental and phenomenological designs to evaluate the efficacy of the designed materials. Quasi experimental research design was used to evaluate the efficacy of the designed materials whereas phenomenological research design was used to evaluate teacher and children's experiences on the ELMs. Two non-equivalent groups, experimental and control groups were used, with different sample sizes depending on the identified CWSD. The CSWD were similar in terms of school settings, teachers' qualifications, and children's prior knowledge on writing ability as argued by White and Sabarwal (2014).

Sample size and sampling procedures

The sample size consisted of 49 grade two children with susceptible writing difficulties (CSWD) who were purposively selected from two government primary

schools in Dodoma City in Tanzania. Out of the 49 identified CSWD, 28 (16 boys and 12 girls) were involved in the experimental group and exposed to the designed ELMs, while 21 (10 boys and 11 girls) were exposed to the Conventional Learning Materials (CLMs). The government primary schools were selected as the ELMs aimed to measure the writing ability of the CSWD in Kiswahili language. The selection of the two schools was based on the availability of rooms as other schools had double sessions.

Two teachers who were teaching writing skills in grade two in the selected schools were involved. One was involved in teaching the experimental group, while the other was involved in teaching the control group. These teachers were purposively chosen as they were the only ones teaching writing skills to second graders in the selected schools. The teachers were of different sexes, but the important issue was to ensure that the participating teachers were those who teach in the respective class. Both teachers had Grade 3A qualifications. Besides, the teacher in the experimental group had 17 years of experience, while the one in the control group had 25 years of experience and had received in-service training on the 3R's.

Orientation of the teacher to the ELMs

The teacher in the experimental group was introduced to the ELMs and discussed with the researcher on how to use the materials. They also discussed where and how the proposed teaching and learning aids could be used. The researcher and the teacher worked together in preparing the desired teaching and learning aids including the cards for both letters and syllables, a tree of vowels and a chart of letters.

Data collection methods

Non-participant classroom observation, semi-structured interviews and tests (reading and writing) were used to collect data from both groups. The observation checklist consisted of three lesson dimensions, namely introduction, body of the lesson and conclusion. Each test had 14 items, consisting of ten words and four sentences. The test content included words with two vowels as short, and words with four syllables as long. Additionally, short sentences comprised two words, while long sentences comprised five words. The reading and writing tests were administered in different days, starting with the reading test, due to the fact that children with reading problems usually have writing problems (Graham, et al., 2021). Therefore, the children with critical reading problems were excluded before administering the writing test, as the ELMs were prepared for the children with writing problems. The scores for the writing test only were treated as pre-test scores, which were compared with the post-test scores.

The researcher conducted one – on – one interviews and reading test to individual participants in a private place while the writing test was administered in a group by dictation on an individual basis. During the writing test, it was ensured that the children were seated comfortably in a free environment and apart from each other to avoid copying. The writing test was administered by their teachers of writing skills in the same grade to familiarize them with the pronunciation of the dictated words.

Assessment through writing test (Dictation)

The word component was assessed in terms of nine patterns of errors, namely identification, spacing problem, misspelling, uppercase and lowercase confusion, letter deformation, poor alignment, overwriting, mixed letter sizes and letter reversal. In sentences, there was an addition of one pattern of error, namely word omission. Thus, each sentence had a total of 10 patterns of errors, and each pattern was awarded one mark. If the child failed to identify the word/sentence, he/she was awarded 0 for that item.

Validity and reliability of the tests

The researcher constructed the tests based on the primary school syllabus content used in all primary schools in Tanzania. The authorized standard one Kiswahili text books prepared and prescribed by the MoEVT (now MoEST) were used. The tests were also given to the researcher's co-workers and teachers of literacy skills from the two government primary schools. In measuring the reliability of the tests, the Spearman-Brown and Guttman Split-Half coefficients were used. The coefficients of reliability were found in both, words and sentences and were found to be above 0.70, which is acceptable for a classroom examination (Rosaroso, 2015). The reliability of the ELMs was measured through classroom trial, which was conducted using other grade two classes not sampled for the study.

Data analysis procedure

Qualitative data obtained through observations and interviews were thematically analyzed. Moreover, data obtained from observation checklists were analyzed based on the themes in terms of the lesson introduction, body of the lesson and conclusion. Besides, the data collected using tests were analyzed through descriptive statistics methods to obtain frequency, percentage, mean and standard deviation using Statistical Package for Social Sciences (SPSS) version 21.0. The independent sample t-test was used to analyse the significance of differences in mean scores between the experimental and control groups.

Findings and Discussion

This section presents the findings of the study based on the research objectives.

Teaching and learning process of the children with susceptible writing difficulties

Before the classroom implementation, 49 CSWD were identified (28 for experimental and 21 for control) and pre-tested to compare writing skills through an independent sample t-test. The pre-test results are summarized in Table 1.

Table 1: *Mean Pre-test Scores of Experimental versus Control Groups*

Groups	Mean	Mean Difference	S.D	S.E.D	t-ratio	Df	P-value
Experimental	51.25	4.18	16.34	4.90	.85	47	.398
Control	55.43		17.80				

The mean pre-test scores on writing skills for the experimental and control groups of the CSWD are 51.25 and 55.43 respectively and $t(47) = .85, p > .005$. The 't' ratio was not significant at any level of significance, indicating that both groups were equivalent at the pre-test level.

Teaching and learning process in the experimental group

The experimental group was exposed to the ELMs for the intention of measuring their efficacy. Ten (10) lessons were observed out of 28 lessons (see Table 2), and each lesson took 40 minutes. Data from both classroom observation and interview were presented and analyzed following the three stages of the lesson, namely introduction, lesson development and lesson conclusion.

Table 2: *Organization of the ELMs Lessons*

Lessons
Vowels and Words
L-1: Vowels 'a, e, i, o, u'
L-2: Words from vowels
Consonants, syllables and words
L-3-11: Consonant (b, d, f, g, h, j, k, l, m) syllables and words
Consonants, syllables, words and sentences
L-12-16: Consonant (n, p, r, s, t), syllables, words and sentences with two to three words
L-17-20: Consonant (v, w, y, z), syllables, words and sentences with two to five words
L-21-28: Digraph (ch, nd, ng, mb, sh, nj, nz, mw, ny), syllables, words and sentences with two to five words

Lesson introduction

The findings from the classroom observation revealed that the teacher introduced the lessons through songs followed by questions and/or activities of writing the syllables on the slates using a piece of chalk. It was observed that the children were very interested in the singing session. This was also evidenced from the words of one of the children who whispered to her neighbor “*Aaah! I like to sing. I sometimes wish to ask the teacher to add more time for singing*”. Besides, during the interview, children reported that they liked the singing session. In support of the findings, one of the children had this to say:

I like the songs which we sing during the lessons because the songs remind me of what we learned in other lessons, and sometimes, they help me identify the answers from the teacher’s questions. Therefore, I have been trying to be the first one to respond immediately after the teacher’s questions.

This statement indicates that songs are a good warm-up activity for children to engage in learning. This is in line with Džanić (2016), who reported that if the right songs are chosen, learning can become a funny and memorable experience as most of the children love to sing. Besides, it is documented that songs can improve the skills of speaking, listening, reading, and writing (Saricoban & Metin, 2000). Therefore, songs are influential for the children to enjoy the lesson and learn quickly if the songs relate to the lesson materials.

Lesson development

During this session, the children and the teacher performed different activities. The main activities performed by the children were letter identification, writing the identified letter(s) on air, writing the letters and syllables on slates as well as writing letters, syllables, words and sentences in their exercise books. Moreover, children were working in small groups and presenting what they had discussed.

During the interview, the teacher informed that every child participated in different activities during lessons and did most of the assigned work correctly, demonstrating that they understood what they had learned. In this context, the teacher had this to say:

I did not expect they would be able to participate to that extent. You know, in normal classes, most of these children do not respond even to simple questions. But, in these classes, everyone struggled to respond to the questions.

Participating in different activities allowed children to use different senses while learning how to write. Moreover, most of the time the teacher was observed guiding the children, and helping those who were facing difficulties in holding a pencil and writing the letters. This shows that the teacher was observing while the children were writing. The observation method helped the teacher to identify most of the mistakes committed by the CSWD when writing and support them. Kennedy et al. (2012) emphasize the importance of observation as an assessment tool, especially when assessing young children in book reading or early writing.

Lesson conclusion

The teacher concluded the lessons by asking questions, and most of the children raised their hands to respond. Most of the answers were correct and the children were confident. The teacher then declared the end of the session and announced the next lesson, and gave homework to the children. Carr (2013) and Fernandez-Alonso (2015) state that the provision of homework helps the children in the earliest grade levels reinforce the learning of skills taught in class. In addition, homework encourages learners to become more independent problem solvers (Fernandez-Alonso, 2015). Hence, the use of homework enabled the CSWD to practise what they had learned.

Teaching and learning process in the control group

The control group was also observed to see what was happening in the classes during teaching and learning of the writing skills through conventional learning materials (CLMs). As in the experimental group, 10 lessons were observed and important phenomena were recorded by following the three stages of the lesson: introduction, lesson development and lesson conclusion. The teacher divided the writing skills into 26 lessons in the control group as shown in Table 3.

Table 3: Organization of the Lessons in the Control Group

Lessons
L-1-18: Consonants (b, ch, d, f, g, h, j, k, l, m, n, p, s, t, v, w, y, z), syllables, words and sentences
L-19-26: Syllables (nya, nye, nyi, nyo, nyu; nda...; nga...; mba...; sha...; nja...; nza...; mwa...), words and sentences

Lesson introduction

The teacher introduced the lessons by writing “*Reading and Writing*” and then asked one child to read loudly what was written on the chalkboard for the other children to re-read. The children were observed raising up their hands, eagerly waiting for

the teacher to select one of them to read loudly. These children were observed to be very happy in re-reading. The findings from the classroom observation were supported by the words from one of the children who said: *I like to be the first one to read what the teacher has written on the chalkboard because I want to become like the teacher who directs others in reading.*

Lesson development

At this stage, the teacher started the lesson by writing letters on the chalkboard and then asking one child to read loudly for the other children to re-read. The teacher then showed a manila card with syllables to the children and one child was selected to read loudly the syllables for the other children to re-read them. Then, the teacher wrote those syllables on the chalkboard. Furthermore, the teacher proceeded to show different pieces of manila cards with words and the same procedures of reading and writing on the chalkboard were applied. Thereafter, the teacher wrote one sentence after the other on the chalkboard and asked one child to read it loudly for the other children to re-read. Subsequently, the teacher used a pointer to show the syllables, words and sentences, and the children were reading them in chorus by following at what the teacher was pointing. Afterward, the teacher asked the children to copy what had been written on the chalkboard in their exercise books. Thereafter, the teacher sat on the desk and marked the children's copied work.

Through interview, the teacher seemed to be satisfied with the way of helping the CSWD in improving the writing skills despite the challenges faced. The teacher informed that absenteeism and shortage of teaching and learning aids were the main challenges in supporting the CSWD. With regard to absenteeism, the teacher stated:

Some of the CSWD do not attend all the classes. For example, one child did not attend three classes while other two children did not attend five classes out of 26 despite frequent insistence to attend the classes. Actually, as it was revealed, these children were not sick but just truants.

It is clear that pupils who are absentees will have difficulty in understanding writing skills and will face a problem in learning the other subjects. These findings are in line with those of Mmasa and Anney (2016) which show that teaching of literacy (reading and writing) was difficult because of many pupils' infrequent school attendance particularly those in standard one and two. Besides, the teacher complained on the shortage of teaching and learning aids in school as well as funds for buying the required materials. These findings are supported by the following statement:

Neither teaching/learning aids nor funds are provided by the office to support the teaching and learning process. Sometimes, I use my own money to buy manila cards so that I can write some letters and syllables for the CSWD to learn easily.

The quote from the teacher shows that the school lacked important aids required for teaching writing skills. But Ordu (2021) informs that the use of teaching aids is vital as it enables learners to use their hearing or seeing abilities and actively perform something while learning. Besides, Mmasa and Anney (2016) reported that young learners need more teaching and learning aids, classroom walls with impressive letters, words and learning cards.

Lesson conclusion

In this stage, there was no activity conducted by the teacher and children, rather, the teacher asked the children “Have you finished?” There were two types of responses from the children for this question. Some of them answered “Yes” while others answered “No”. In the two lessons observed, the teacher asked the children who had finished copying the notes to go in front of the class and tell those who were still writing as *mbumbumbu* means “learners with low ability, ignorant or fools”. This kind of lesson conclusion can discourage children with low speed in copying notes to attend classes and may lead to school dropout.

Efficacy of the exemplary learning materials

The findings are presented dimension wise in words and sentences writing skills in Table 4 and 5 respectively on different patterns of errors followed by the overall results in Table 6. The writing ability of the groups were measured on the basis of their pre-test mean scores and compared with the post-test mean scores between the groups. The following Tables are illustrative:

Table 4: *Comparison of Pre-test and Post-test Scores of Experimental and Control Groups on Words*

Dimension	Patterns of Errors	Groups	Pre-test			Post-test		
			Mean	t-ratio	p-value	Mean	t-ratio	p-value
Words	Word identification	Experimental	6.86	.81	.439	10.00	3.18	.005
		Control	7.29			9.14		
	Spacing	Experimental	2.86	.07	.943	9.32	7.93	<.001
		Control	2.90			4.71		

Words	Spelling	Experimental	2.86	.00	1.000	7.96	3.58	.001
		Control	2.86			6.05		
	Case confusion	Experimental	4.36	1.75	.090	9.96	5.57	<.001
		Control	5.24			8.24		
	Letter formation	Experimental	1.07	1.47	.147	8.54	12.32	<.001
		Control	.67			1.81		
	Alignment	Experimental	6.46	.06	.951	9.71	4.57	<.001
		Control	6.43			7.14		
	Overwrite	Experimental	5.18	1.34	.187	9.82	4.31	<.001
		Control	6.00			7.71		
	Mixed letter sizes	Experimental	3.79	2.91	.005	9.64	9.00	<.001
		Control	5.67			5.81		
	Letter reverse	Experimental	6.46	1.24	.222	9.93	3.29	.003
		Control	7.10			8.95		

Table 4 reflects the comparison between the pre-test and post-test mean scores for the experimental and control groups of the CSWD on different patterns of errors in the word writing skills. The pre-test findings from Table 4 show that out of the nine ‘t’ ratios, only one, that is, ‘mixed letter sizes’ was found to be significant at boundary level of significance (t = 2.91, p = .005). However, it can be said that at the pre-test level, both experimental and control groups were largely similar on word writing skills. Nevertheless, during the post-test, the experimental group performed better than the control group. Through the independent t-test, all of the ‘t’ ratios were found to be significant at the level of significance (p<.005).

Table 4: *Comparison of Pre-test and Post-test Scores of Experimental and Control Groups on Sentences*

Dimension	Patterns of Errors	Groups	Pre-test			Post-test		
			Mean	t-ratio	p-value	Mean	t-ratio	p-value
Sentences	Sentence identification	Experimental	2.46	.07	.941	4.00	1.45	.162
		Control	2.43			3.90		
	Spacing	Experimental	.00	1.45	.162	1.79	5.80	<.001
		Control	.10			.33		
	Spelling	Experimental	.32	.32	.748	2.11	4.62	<.001
		Control	.38			1.05		
	Case confusion	Experimental	1.79	.17	.867	3.96	4.28	<.001
		Control	1.86			2.95		
	Letter formation	Experimental	.14	2.12	.043	2.46	8.99	<.001
		Control	.00			.05		

Sentences	Alignment	Experimental	.36	1.95	.058	3.36	13.08	<.001
		Control	.10			.52		
	Overwrite	Experimental	1.82	.50	.617	4.00	4.99	<.001
		Control	1.62			2.76		
	Mixed letter sizes	Experimental	.93	.54	.592	3.68	4.79	<.001
		Control	1.10			2.00		
	Letter reverse	Experimental	2.14	.81	.421	3.82	3.96	.001
		Control	1.81			2.86		
	Word omission	Experimental	1.39	1.28	.208	3.71	3.01	.004
		Control	1.90			3.00		

Table 5 highlights the findings of the mean pre-test and post-test scores for the experimental versus control groups of the CSWD on different patterns of errors in sentence writing skills. The Table shows that, at pre-test, none of the 't' ratios was found to be significant at any level of significance. Thus, it can be concluded that at the pre-test level, the experimental and control groups of the CSWD were also the same on the sentence writing ability. On the contrary, the Table portrays that during the post-test, nine out of ten patterns of errors are significant except one pattern that is 'sentence identification'. On 'sentences identification', the mean scores for the experimental and control groups are 4.00 and 3.90 respectively and the 't' ratio is found to be 1.45 which is not significant at any levels ($t = 1.45$, $p=0.162$). This means that, sentence identification was not a big problem in both groups of the CSWD.

Table 6: *Comparison of Pre – and Post-test Findings between Experimental and Control Groups*

Dimension	Groups	Pre-test				Post-test			
		Mean	Mean Difference	t-ratio	p-value	Mean	Mean Difference	t-ratio	p-value
Words	Experimental	39.89	4.25	1.39	.171	84.89	25.32	12.19	<.001
	Control	44.14				59.57			
Sentences	Experimental	11.36	.07	.03	.975	32.89	13.46	11.61	<.001
	Control	11.29				19.43			
Overall	Experimental	51.25	4.18	.85	.398	117.79	38.79	13.15	<.001
	Control	55.43				79.00			

Generally, based on Table 6, the independent sample t-test indicates that there is no significant difference between the experimental and control groups during the pre-test, ($t = .85$, $p = 0.398$). However, during the post-test, the CSWD in the experimental group performed better than those in the control group with the difference of 38.79 more marks. These results, obtained during the post-test indicate

a significant increase in the mean score for the experimental group, $t = 13.15$, $p < .001$. Equally, Figure 1 specifies that there was improvement in terms of mean scores in both experimental and control groups, but there was a sharp increase in the experimental group compared to the control group. This indicates that the CSWD in the experimental group performed better than those in the control group in the post-test. The findings of this study are in line with those of Kumburu (2011) who noted that all groups made significant improvement during the intervention programme, but the experimental group did better than control groups.

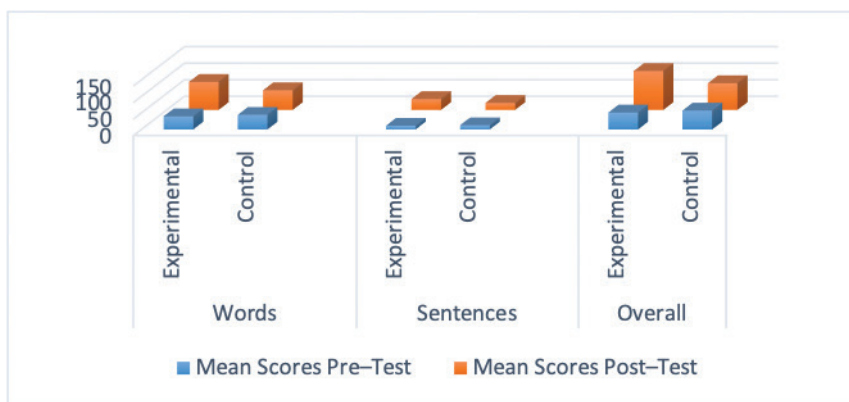


Figure 1: Pre-test and Post-test Mean Scores for Experimental versus Control Groups of CSWD on Writing Skills.

Despite a significant increase ($t = 13.15$, $p < .001$) in the mean score for the experimental group during the post test, the effect size was also calculated using the Hedges’ g method. Hedges’ g is used when the sample sizes between two groups is not equal (Brydges, 2019). In this study the sample size of the experimental and control group was different (see Table 7). The effect size was calculated using the data from Table 7.

	Group	N	Mean	Std. Deviation	Std. Error Mean
overall post	Experimental	28	117.79	5.280	.998
	Control	21	79.00	12.716	2.775

The obtained effect size is 4.211770 based on Hedges’ g method. An effect size of 4.211770 indicates a very large effect, $g > 0.8$ (Brydges, 2019). That means the means are likely to be very different.

Limitation of the Study

This study employed quasi experimental design. However, literature shows that there are limitations of using quasi experimental because randomization is not used

as a result there is a possibility of constructing non-equivalent groups. Nevertheless, this limitation was minimised by pre-testing the groups before the intervention. Moreover, the study did not assume control of the children's cultures, traditions, social economic status and education background. However, it employed quasi experimental design and therefore, it focused on improving the writing ability of the CSWD without any consideration of other factors.

Conclusions

This study concludes that the designed ELMs have the quality of improving the writing skills of the grade two CSWD in government primary schools in Tanzania. The ELMs engage the children and enable them to be active in the whole teaching and learning process. However, for the sustainability of improving the writing ability of the CSWD, teachers need to be assisted in designing more materials and maintaining similar strategies that could continuously enable them to improve the writing ability of the CSWD. The ELMs improved the writing ability of the CSWD because of the activities that were planned to involve the children from the beginning of the lesson to the end.

Recommendations

In light of the study's findings and conclusions, it is recommended that teachers be educated on how to identify the CSWD. Moreover, CSWD should not be retained in the same class; instead, ELMs should be designed based on the level of writing difficulties and used in primary schools to improve the CSWD's writing ability.

References

- Al-Gharabally, M. (2015). The writing difficulties faced by L2 learners and how to minimize them. *International Journal of English Language and Linguistics Research*, 3(5), 42-49.
- Brombacher, A. Nordstrum, L., Davidson, M., Batchelder, K., Cummiskey, C., & King, S. (2014). *National baseline assessment for the 3Rs (Reading, Writing, and Arithmetic) using EGRA, EGMA, and SSME in Tanzania*. Retrieved from https://ierc-publicfiles.s3.amazonaws.com/public/resources/National_Baseline_Assessment_for_the_3Rs_in_Tanzania_Study_Report_%28TO24%29.pdf
- Brydges, C. R. (2019). Effect size guidelines, sample size calculations, and statistical power in gerontology. *Innovation in Aging*, 3(4), 1-8. doi:10.1093/geroni/igz036

- Carr, N. (2013). Increasing the effectiveness of homework for all learners in the inclusive classroom. *School Community Journal*, 23(1), 169-182.
- Džanić, N. D. (2016). The effect of using songs on young learners and their motivation for learning English. *An Interdisciplinary Journal*, 1(2), 40-54.
- Fernandez-Alonso, R., Suarez-Alvarez, J., & Muniz, J. (2015). Adolescents' homework performance in mathematics and science: Personal factors and teaching practices. *Journal of Educational Psychology*, 107(4), 1075-1085.
- FinScope Tanzania (2017). *Insights that drive innovation*. Dar es Salaam: FSDT
- Freedman, S. W., Hull, G. A., Higgs, J. M., & Booten, K. P. (2016). Teaching writing in a digital and global age: Toward access, learning, and development for all. In D. H. Gitomer & C. A. Bell (Eds.), *Handbook of Research on Teaching* (5th ed., pp. 1389–1450). Washington, DC: American Educational Research Association.
- Graham, S., Aitken, A. A., Hebert, M., Camping, A., Santangelo, T., Harris, K. R., ..., & Ng, C. (2021). Do children with reading difficulties experience writing difficulties? A meta-analysis. *Journal of Educational Psychology*, 113(8), 1481–1506. <https://doi.org/10.1037/edu0000643>
- Graham, S. (2019). Changing how writing is taught. *Review of Research in Education*, 43(1), 277-303.
- Kalanje, S. E. (2011). *Identifying first graders at risk of reading and writing difficulties: creating a group-based screening tool in kiswahili in Tanzania* (Doctoral Dissertation). ÅboAkademi University Press.
- Kennedy, E., Dunphy, E., Dwyer, B., Hayes, G., McPhillips, T., Marsh, J., ... Shiel, G. (2012). *Literacy in early childhood and primary education, 3-8 Years* (Report No.15). Retrieved from https://ncca.ie/media/2137/literacy_in_early_childhood_and_primary_education_3-8_years.pdf
- Kumburu, S. A. (2011). *The effectiveness of short-term literacy skills intervention on children at risk of reading and writing difficulties in Tanzania: A study of grade one children with dynamic assessment approach* (Doctoral Thesis). ÅboAkademi University Press.
- Lee, S., & Schmidgall, J. (2020). *The importance of English writing skills in the international workplace* (Research Memorandum No. RM-20-07). Educational Testing Service.
- Ministry of Education and Culture. (1995). *Education and training policy*. Dar es Salaam, Tanzania: MoEC.
- Ministry of Education and Vocational Training (MoEVT). (2012a). *Evaluation of the impact of the primary education development programme phase two (PEDP II) 2007-2011*. Dar-es-Salaam, Tanzania: MoEVT.

- Ministry of Education and Vocational Training (MoEVT). (2012b). *Primary education development programme (PEDP) phase III (2012-2016)*. Dar-es-Salaam, Tanzania: MoEVT.
- Ministry of Education and Vocational Training (MoEVT) (2014). *Education and training policy*. Dar-es-Salaam, Tanzania: MoEVT.
- Ministry of Education, Science and Technology (MoEST) (2015). *Primary education syllabus, standard I*. Dar-es-Salaam, Tanzania: Tanzania Institute of Education.
- Mmasa, M. & Anney, N. V. (2016). Exploring literacy and numeracy teaching in Tanzanian classrooms: Insights from teachers' classroom practices. *Journal of Education and Practice*, 7(9), 137-154. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1095841.pdf>
- Ngorosho, D. & Lahtinen, U. (2010). The role of home environment in phonological awareness and reading and writing ability in Tanzanian primary school children. *Education Inquiry*, 1(3), 211-234. Retrieved from <https://www.tandfonline.com/doi/pdf/10.3402/edui.v1i3.21943>
- Ordu, U. B. (2021). The role of teaching and learning aids/methods in a changing world. In *New challenges to education: Lessons from around the world*. BCES Conference Books (pp. 210-216). Sofia. Retrieved from <https://files.eric.ed.gov/fulltext/ED613989.pdf>
- Pembe, A. & Bali, A. L. T. (2019). Writing difficulties in primary schools in Tanzania: A focus on standard two children's experiences in Dodoma City. In *Innovative Education and Policy Reforms for Industrial Economy in Africa*. Proceedings of the 1st International Conference (pp. 482-496). The University of Dodoma, Tanzania.
- Phiri, J. (2015). *Nature and prevalence of writing difficulties among learners at fourth grade: A case of selected primary schools in Lusaka District of Zambia* (Master's Dissertation). The University of Zambia, Zambia.
- Rosaroso, R. C. (2015). Using reliability measures in test validation. *European Scientific Journal* 11(18), 369-377.
- Saricoban, A. & Metin, E. (2000). Songs, verse and games for teaching grammar. *The Internet TESL Journal*, 6(10), 1-7. Retrieved from <https://www.scribd.com/document/354489260/Saricoban-Metin-Songs-Verse-and-Games-for-Teaching-Grammar-TESL-TEFL>.

- Suleiman, S., Boniventura, G., Kalage, J., Mihayo, R., & HakiElimu (Tanzania). (2015). *Will the “2014 Education and Training Policy” prepare Tanzanian children to face challenges of the 21st century: HakiElimu position paper on the education and training policy 2014*. HakiElimu. Retrieved from <https://docs.edtechhub.org/lib/MLVVXIJ4>.
- UNESCO (2006). *Literacy for life: EFA global monitoring report*. Paris, France: UNESCO.
- UWEZO. (2013). Are our children learning? Annual learning assessment report 2012. Retrieved from <https://uwezotanzania.or.tz/wp-content/uploads/2021/02/Uwezo-Tanzania-Annual-Learning-Assessment-Report-2012.pdf>. Accessed 3 September 2021.
- UWEZO. (2014). *Are our children learning? Literacy and numeracy*. Dar es Salaam: Uwezo Tanzania.
- White, H., & Sabarwal, S. (2014). *Quasi-experimental design and methods, Methodological Briefs: Impact Evaluation 8*. UNICEF Office of Research, Florence.
- World Statistic Institute (2011). *Priorities and Strategies for Education: Education Sector Human Development Network*. UNESCO, 1999-2000 Statistical Year Book.

Challenges Encountered by Teachers in Supporting Children with Autism in Primary Schools in Tanzania

Noela Ephraim Ndunguru¹ & Sarah Ezekiel Kisanga²

^{1&2} School of Education, University of Dar es Salaam-Tanzania

Email¹: ndungurunoela@yahoo.com

Abstract

This paper reports the challenges experienced by teachers in supporting children with autism (CA) in primary schools in Tanzania. It is a qualitative study that employed purposive sampling technique to select seven primary school teachers of CA from two schools. Data were collected using a semi-structured interview and were analysed thematically. The findings of the study revealed that teachers experience challenges when supporting CA due to inadequate knowledge in managing the behaviours of CA. Also, teachers received little collaboration from parents of CA due to a lack of commitment to the education of their CA. The paper recommends for continuous professional development training to teachers of CA to enhance the acquisition of updated knowledge and skills for supporting CA. Also, there is a need for effective collaboration between teachers and parents for the successful support of CA.

Keywords: autism, collaboration, special units, teachers' knowledge

Introduction

Supporting children with autism (CA) in developing daily living skills at schools is one of the vital roles of teachers. United Nations [UN] (2007) defines autism as a lifelong developmental disability that manifests itself during the first three years of life resulting from a neurological disorder that affects the functioning of the brain. It is marked by the presence of impaired development in social interaction, communication abilities, and repetitive or rigid behaviours (Hallahan et al., 2012; Manji & Hogan, 2013; UN, 2007). It requires knowledgeable and committed teachers to provide effective assistance to CA due to **diverse need among them. The disparity in developmental features makes it a challenge to teachers when supporting children with autism. Globally, the prevalence of autism** is increasing exponentially as from 2006 to 2022 the rate has increased from 1:500 to 1:100 respectively (William, 2006; World Health Organisation [WHO], 2023).

This trend is attributed to professional and parental awareness, improved screening and identification, and the growth of professional organisations advocating services for children with autism (Obrusnikova & Dillon, 2011).

The magnitude of CA has led to a significant increase of such children in schools leading to a need for teachers with appropriate knowledge and skills to accommodate the needs of CA (Busby et al., 2012; Murray, 2015). Despite the increased number of CA in schools, teachers and schools in Alabama-USA seem to be unprepared to address their needs because teaching CA effectively requires highly trained teachers in which a regular classroom teacher seems not to have the specialised skills needed to address the needs of CA (Busby et al., 2012). Moreover, the professional knowledge base of teachers and their experiences of accommodating the needs of CA in some areas like Ontario and Toronto in Canada is not known due to the paucity of studies (Lindsay, 2013; Sally et al., 2013).

Supporting CA seems to be a challenging aspect among teachers due to the variation of symptoms, severity, and combination of impairments among CA (Alberta Learning, 2003; Busby et al., 2012; McDougal et al., 2020). Such variations make it a trick for teachers to fully understand and relate to CA (Blacher et al., 2014; Manti et al., 2013; Murray, 2015). This calls for specialized and flexible teachers to adapt the curriculum or modify activities to suit the needs of CA (Busby et al., 2012; McDougal et al., 2020).

In Tanzania, the number of CA in pre-primary and primary schools has been increasing within the past six years **from 1108 pupils in 2016** to 2237 in 2021 (Ministry of Education, Science and Technology [MoEST], 2016; 2021). The circumstance requires proper efforts to make sure teachers have the appropriate knowledge and skills to support CA in developing adaptive skills for them to become independent in their life.

Correspondingly, the curriculum for certificate for teacher education in special needs in Tanzania identifies three categories of disabilities that prospective teachers are supposed to specialise such as blind, deaf and intellectual impaired (II) including autism (Tanzania Institute of Education [TIE], 2019). This means that teachers in intellectual impaired are expected to be trained in handling both pupils with II and those with autism regardless of their variations in needs. From this context, the question of whether the prospective teachers of the identified category are being equipped with adequate knowledge and skills for supporting CA has been a matter of interest.

In addition, the curriculum directs prospective teachers in II and autism to attend sixteen (16) lessons per week; out of which twelve (12) lessons focus on

accommodating children with II and the remaining four (4) focus on CA (TIE, 2019). This implies that prospective teachers are guided to attend more lessons on II than those on autism. Variation in lessons suggests that prospective teachers are mostly focusing on supporting pupils with II rather than pupils with autism. Effective support to CA requires skillful teachers in modifying curriculum, preparing Individualised Education Plan (IEP) and addressing challenging behaviours of CA; however, the allocated number of lessons to autism seems to be insufficient for prospective teachers to become conversant with the demands of CA. The situation is likely to pose challenges in ensuring successful support to CA in schools. This paper was set out to explore challenges experienced by teachers for proper intervention can be directed to addressing the challenging situations for the betterment of CA.

Tungaraza (2014) reports on the great challenge of training enough teachers for children with special needs in Tanzania attributed to limited special needs teachers' training colleges. Also, teachers reported shifting from the field of special needs education to other fields due to lack of support and motivation in teaching children with special needs. All these might lead to an inadequate number of special needs education teachers including autism in Tanzanian schools. Similarly, Tungaraza (2014) reports that inadequately trained tutors and insufficient teaching and learning materials are some of the challenges prospective teachers are experiencing in special needs teachers' training colleges in Tanzania. These might impede training those teachers; hence graduating with insufficient professional knowledge and skills to support CA effectively.

Inadequate teachers training might impede teachers of CA in developing social interaction with CA as Blacher et al. (2014) put it clear that; inadequate knowledge about autistic mannerisms may affect teachers' ability to develop social interaction with CA hence leaving them at a greater risk of behavioural problems such as bullying, which may influence school dropout. In addition, teachers' confidence in supporting CA is likely to be affected by a failure in understanding and managing behaviours of CA, limited knowledge in developing an individualised education plan, lack of appropriate resources, limited time to collaborate with parents and large size of classes (Busby et al., 2012; Lindsay et al., 2013; McDougal et al., 2020). Therefore, for teachers of CA to work effectively, they need to be equipped with relevant knowledge and skills and accompanied by adequate resources.

Education plays a vital role in enhancing CA to learn socialisation, adaptive skills and communication (Manti et al., 2013); thus, sufficient knowledge and skills among teachers become an important factor for them to be in a better position of supporting CA effectively. Moreover, collaboration among teachers and parents of CA is fundamental to adequate education of CA (Busby et al., 2012; McDougal

et al., 2020). Teachers of CA have to work in partnership with parents of CA to ensure consistency between support being provided to CA at school and home environment. This is likely to foster improvement in CA; to ensure effective implementation of education programs for CA, teachers of CA are supposed to be competent in making collaboration with parents of CA (Alberta Learning, 2003; Busby et al., 2012).

Despite the increasing number of CA in recent years in Tanzanian primary schools, much is not known about the challenges encountered by teachers when supporting children with autism in primary schools in Tanzania. This necessitated the researchers to conduct the current study, which investigates the challenges facing teachers in supporting CA in Tanzania's special units placed in primary schools.

Purpose

The purpose of this study was to explore challenges teachers encounter in supporting CA in special units placed in Tanzanian primary schools.

The study was guided by two key questions:

- i. What challenges do teachers face in supporting CA in schools?
- ii. What challenges do teachers face in making collaboration with parents of CA?

Literature Review

Teachers' experiences with CA vary from one context to another depending on the availability of teaching and learning materials, the presence of ongoing in-service training and support from the government and school administrators. Studies conducted in England and Canada revealed that teachers experienced challenges in understanding, addressing autistic characteristics and identifying environmental factors that lead to anxiety among CA (Cook and Ogden, 2021; Sally et al., 2013). In addition, teachers seemed to experience inadequate resources in supporting CA consequently hindering the provision of effective support to CA in classrooms.

Furthermore, the study conducted in the United States by Busby et al. (2012); Obrusnikova and Dillon (2011) revealed that teachers face challenges in controlling inattentive and hyperactive behaviours of CA. Such challenges limit teachers in supporting CA to follow instructions; understand what they teach hence spending more time controlling such behaviours while teaching. Moreover, in Alabama-USA, Busby et al. (2012) found teachers reported making collaboration with parents of CA and preparing individualized education plans as challenges in teaching CA as they require extra time for teachers to fulfill such roles. This implies, proper

training on managing behaviours of CA and establishing effective collaboration with parents of CA are highly needed for teachers to provide desirable support to CA.

Additionally, the study conducted in South Africa by Numisi et al. (2020) found that teachers do experience challenges in collaborating with parents of CA because parents were not committed to the education of their CA, and they were unable to fulfill the parental role to their children and they held unrealistic expectation on them. Such findings suggest that parents had a limited understanding of ways of supporting their CA and the benefit of collaborating with teachers for the betterment of their CA. Also, a lack of commitment to the education of their CA is likely to affect teachers' commitment to support CA. So there is a need for teachers to be trained in ensuring effective team working with parents of CA for desirable results.

The findings from the study conducted by Edward (2015) in Tanzania revealed that teachers of inclusive schools indicated poor pre-service training on autism, lack of in-service training, limited time to include CA, lack of relevant teaching and learning materials and lack of cooperation with parents of CA as challenges in effective inclusion of CA in the learning process. This implies that teachers in inclusive schools need in-service training on effective inclusion of CA during teaching and learning and maintaining collaboration with parents of CA.

Studies on challenges encountered by teachers in supporting CA in special units are scarce. Moreover, most studies on the experience of teachers in teaching CA have focused on teaching them in inclusive classes (Cook and Ogden, 2021; Edward, 2015; Lindsay et al., 2013; McDougal et al., 2020; Obrusnikova & Dillon, 2011; Sally et al., 2013) and not in special needs education units. Therefore, this paper intended to fill the gap by exploring challenges facing teachers in supporting CA in special needs education units placed in Tanzania primary schools.

Methodology

This is a qualitative study that employed phenomenological design, which focused on describing and interpreting teachers' lived experiences in supporting CA. This design was considered appropriate because it enabled the researchers to inquire about the lived challenges experienced by teachers supporting CA. The study involved two special education units dealing with CA; one was attached to a public primary school and the other one to a private primary school. The diverse experiences of teachers in supporting the CA in the two institutions provided the researchers with rich information required for a clear understanding of the challenges encountered by teachers. Purposive sampling was used to select seven teachers, two from the government unit and five teachers from the private unit who participated in the study. All teachers who participated in this study had more

than two years of working experience. Their experiences were significant for the study. They provided in-depth information related to the study.

A semi-structured interview was used to collect information from the teachers. The researchers used an interview guideline which helped to have consistency in exploring teachers' challenges in supporting CA. Interview sessions ranged between 23-44 minutes. Interviews were conducted at the school premises, in which the researcher requested a private room from the school administration to ensure participants were free to share their experiences without fear of being heard by other people.

Research ethical issues have been adhered to; before going to the field, the researchers obtained research clearance from the University of Dar es Salaam and a research permit from relevant authorities for fieldwork. Furthermore, before the interview sessions, participants were informed of the purpose of the study to obtain their consent to be involved in the study. To ensure the anonymity of both participants and study areas, letters were used to identify schools, in which letter A represents the government school and letter B represents the private school. Numbers were used to represent teachers instead of using their actual names.

Data were analysed inductively using a thematic analysis approach. The approach seemed to be appropriate in this study because it provided the researcher with accessible and systematic procedures for generating codes and themes from the collected data. The researchers familiarised with the collected data by reading and re-reading transcriptions while coding features of data which seemed to be meaningfully related to research questions (Braun & Clarke, 2006; Clarke & Braun, 2017). The themes that revealed challenges that teachers encountered in supporting CA were further analysed to come up with two groups of themes, namely challenges associated with meeting the demands of CA and those related to collaboration with parents of CA.

Findings and Discussion

Demographic characteristics of participants

The study involved seven female teachers; whereby two teachers were selected from a government school, and five teachers from a private school. All teachers were females. This can be attributed to the view that male teachers often hold negative attitudes towards CA (Victor, 2020). A negative attitude is likely to impede male teachers' tolerance and persistence when encountering challenges in supporting CA. Hence it makes it possible for them to shift from special education units to ordinary schools.

Moreover, all teachers had a background in special needs education, two of them

were certificate holders and five were diploma holders. Therefore, all teachers involved in this study were qualified to teach CA.

This study was guided by the following two questions: i. What challenges do teachers face in supporting CA in schools? ii. What challenges do teachers face when collaborating with parents of CA? The findings are presented in the following themes and subthemes.

Challenges in meeting the demands of children with autism

Meeting the demands of CA requires teachers with adequate knowledge, skills and materials to support children in realising their full potential. This study has found that teachers of CA face two main challenges in meeting the demands of CA. These challenges are insufficient knowledge of autism and inadequate financial and material resources.

Insufficient knowledge of autism among teachers as a challenge in meeting the demands of the CA

Study findings have revealed that teachers of CA were facing challenges in meeting the demands of CA due to insufficient knowledge. Despite having a background in special needs education; teachers reported having insufficient knowledge to effectively support CA. This was further insisted by teacher 1 from school A, who reported:

The knowledge I have is not sufficient to ensure effective support to CA; sometimes I fail to understand what to do when the child shows destructive behaviours... We are not trained on how to assist children with autism in this institution. What we normally do when we encounter difficulties is to ask teachers from another school on how they handle a similar situation (School A, Teacher I).

The quotation above indicated that insufficient knowledge among teachers limits their efficiency in meeting the demands of CA.

Findings portrayed insufficient knowledge among teachers of CA as the impact of limited in-service training. Teacher II from school A supported this by saying, "Teaching techniques are changing often, but you can imagine, it was since 2012 when I attended the last training. So, we teach using old techniques. This may lead to delaying improvement to CA". This quote suggests that teachers of CA have not acquired updated knowledge and skills for supporting CA, which implies there is no in-service training provided to these teachers. Moreover, delays in progress of CA were associated with teachers using irrelevant and old techniques.

Moreover, the findings indicated that another factor associated with insufficient knowledge on autism among teachers of CA was inadequate training in autism during teacher training education. To support it here is what teacher II from school A explained:

I pursued a diploma in special needs education. However, at that time we learned more about intellectual impairment and very little about autism. Even during teaching practice, I never came across CA. Hence, I was not aware of how they looked like and their specific needs. This became a challenge to me to teach CA after reporting here as it was my first time to meet with them. So, I had to learn from experienced teachers what to do in supporting CA (School A, Teacher II).

The interview extract portrays those teachers in special needs education graduate with insufficient knowledge of autism. This has been attributed to little content in autism compared to other disabilities and lack of practical training to students with autism. Limited knowledge and awareness of CA limited teachers from supporting CA effectively.

The current findings concur with those of Cook and Ogden (2021) and Sally et al. (2013) who reported that teachers of CA are likely to face challenges in understanding and addressing autistic characteristics of learners due to limited knowledge of autism. Moreover, such finding concurs with those of the previous study by Tungaraza (2014) and Edward (2015) who found that improper training is a challenge that impedes special needs education teachers in teaching children with special needs including CA. Such findings suggest there is a need for ongoing in-service training for teachers of CA to equip them with relevant knowledge and techniques for addressing needs of learners with autism.

Inadequate financial and material resources as challenges in meeting the demands of CA

The findings of this study have revealed insufficient financial and material resources in supporting CA as another challenge faced by teachers of CA. Teachers have reported to have been encountering financial challenges in visiting CA at their homes. According to the school timetable, teachers of CA are supposed to home visit learners with autism once per week. Teachers portrayed performing such role as challenging because they did not have financial support. A similar view was explained by teacher I from school A who said, "... visiting CA at their home is a challenging task; apart from adding roles to us, no one is responsible for expenses we incur to visit those children. I normally use my own money for transport costs..."

(School A, Teacher I).

Such finding portrays teachers of CA were experiencing a financial burden related to visiting CA at their home premises. Such task seems to be a burden to teachers because there was no transport allowance to facilitate them in fulfilling the mentioned task. So, in order to support CA by visiting them at home, there is a need to ensure teachers of CA are provided with transport allowance so as to avoid financial burden to them.

In addition to that, the findings revealed that; teachers reported experiencing insufficient teaching and learning materials in supporting CA. This was narrated by teacher IV from school B who commented:

CA requires an individualized education plan in which teaching and learning materials differ from one learner to another. This becomes a challenge for the unit which deals with CA to afford purchasing materials needed by each learner; hence we end up using the available ones regardless of their relevance (School B, Teacher IV).

From that extract, it is shown that inadequate teaching and learning materials affect teachers in supporting CA. Moreover, it has been reported that school administrations fail to meet the expenses of such materials; hence, this limits teachers to using relevant materials based on the needs of the CA.

Such findings concur with that of McDouglas et al. (2020), Numisi et al. (2020) and Sally et al. (2013), who found that the support from the government and relevant institutions was insufficient for teachers to have adequate resources to meet demands of CA. This implies; sufficient resources are needed for teachers of CA to effectively perform their roles of supporting CA.

Receiving Limited Collaboration with Parents of Children with Autism

Findings indicate that teachers of CA viewed establishing effective collaboration with parents of CA as a challenge. Teachers of CA reported to have been experiencing limited cooperation from parents of CA. This was narrated by teacher IV from school B:

Parents are not cooperative in supporting their CA... Some are reluctant in putting into practice what we recommend for their children. Even if we direct them on types of food which are recommended and not recommended to their children; some parents ignore it as a result they

end up activating hyperactive behaviours hence demoralising teachers' efforts in supporting their CA (School B, Teacher IV).

Such extract indicates teachers of CA received limited collaboration with parents of CA because they pay no attention to directives from teachers. Such a trend seems to discourage teachers' efforts to support CA as they noticed deterioration in CA after staying with their parents for a while.

Moreover, the finding reveals that limited collaboration received by teachers from parents of CA hinders the implementation of education plan for children with autism, as the following quotation demonstrates:

Parents are a great source of challenge in implementing education plans for their children; if a child is not getting proper treatment at home, the expected goals will not be achieved. For example, in toilet training at school, we discourage the use of pampers and potty, so we send a child to the toilet after some minutes, and we do insist parents to do the same at home. Unfortunately, some parents do not obey; as a result they assist their children with toilet potty and pamper. These inconsistencies hinder the achievement of the expected objectives as planned (School B, Teacher III).

The quotation implies teachers of CA face challenges in meeting the intended objectives because of discrepancies between the practices of CA at school and the way parents treat them at home. Therefore the achievement of the intended objectives requires effective collaboration among teachers and parents of CA to ensure consistency in the support provided by teachers and parents at home.

Moreover, teachers reported limited knowledge of autism among parents of CA as a factor associated with ineffective collaboration between parents of CA and teachers. Teachers revealed experiencing effective teamwork and commitment from parents who were aware of the effective ways of supporting their CA. As teacher II from school B claimed:

Few parents are aware of the needs of their children. Such parents are cooperative and committed to implementing what is being directed to them by the teacher. The outcome is always improvement of their children unlike children of parents with a lack of knowledge on requirements of their CA (School A, Teacher II).

Such extract reveals that there was an effective collaboration between teachers and few parents of CA who seemed to be aware of the needs of their children.

In addition to that, the finding portrays such parents played an active role in implementing directives from teachers.

The findings of this study concur with those of the previous studies by Numisi et al. (2020) and Busby et al. (2012) which reported teachers of CA face challenges in collaborating with parents due to parents' limited knowledge of autism and lack of commitment to the education of their CA. Such findings portray that insufficient collaboration between parents and teachers of CA may lead to delays in improvements among CA.

Conclusions

The findings of this study suggest that teachers of CA play a vital role in supporting children to become independent in their life but their efforts and commitment seem to be limited because of insufficient knowledge and resources to meet the demands of CA. The unique characteristics and demands of CA call for teachers with well-equipped knowledge to develop individualised education plans together with adequate resources to meet the planned objectives per CA. In addition, teachers receive little collaboration from parents of CA; this becomes a barrier to teachers in supporting CA. Most of teachers reported collaboration with parents of CA is fundamental in implementing education plan to CA; but it requires knowledgeable and committed parents to work hand in hand with teachers for the betterment of CA. The approach ensures consistency in support provided to CA while granting a room for feedback to both teachers and parents.

Recommendations

Based on the findings, the study recommends that it is essential to ensure teachers of CA are well-equipped with adequate knowledge, skills and resources in supporting CA. This can be implemented by the Ministry of Education, Science and Technology, local government authorities and school administrations through organizing ongoing in-service training, and provision of fund for purchasing teaching and learning materials and fixing other requirements of CA.. Such endeavor may increase teachers' morale and commitment to continue supporting CA. Moreover, the study recommends the need for effective collaboration between teachers and parents of CA for successful support of CA. This can be addressed by school authorities through organising seminars and workshops for teachers and parents of CA to understand autism disorder, needs of CA and techniques of supporting CA. Furthermore, this study recommends to the Tanzanian Institute of Education to review the curriculum of special needs education and consider the need to separate intellectual impairment and autism into two different categories of specialisations.

This will enable the prospective teachers of autism to acquire more proper professional techniques for supporting CA during teaching and learning processes.

References

- Alberta Learning (2003). *Teaching a Child with Autism Spectrum Disorder*. Alberta <https://files.eric.ed.gov/fulltext/ED491496.pdf>
- Blacher, J., Howell, E., Lauderclale-Littin, S., Reed, F., & Laugesson, E. (2014). Autism spectrum disorder and the student-teacher relationship. A comparison study with peers with intellectual disability and typical development. *Research in Autism Spectrum Disorders*, 8, 324-333. <https://files.eric.ed.gov/fulltext/ED585800.pdf>
- Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <http://dx.doi.org/10.1191/1478088706qp063oa>
- Busby, R., Ingram, R., Bowron R., Oliver, J., & Lyons, B. (2012). Teaching elementary children with autism: Addressing teacher challenges and preparation needs. *Rural Educators*, 32 (2), 27-35. <https://files.eric.ed.gov/fulltext/EJ987618.pdf>
- Clarke, V. & Braun, V. (2017). Thematic analysis. *The Journal of Positive Psychology*, 12(3), 297-298. <https://doi.org/10.1080/17439760.2016.1262613>
- Cook, A. & Ogden, J. (2021). Challenges, strategies and self-efficacy of teachers supporting autistic pupils in contrasting school settings: A qualitative study. *European Journal of Special Needs Education*, 3(37), 371-385. <https://doi.org/10.1080/08856257.2021.1878659>
- Edward, G. (2015). Teachers' knowledge and perceived challenges of teaching children with autism in Tanzanian regular primary schools. *International Journal of Academic Research and Reflection*, 3(5), 36-47.
- Hallahan, D., Kauffman, J. & Pullen, P. (2012). *Exceptional learners: An Introduction to Special Education 12th ed.* Pearson
- Lindsay, S., Proulx, M., Thomson, N. & Scott, H. (2013). Educators' challenges of including children with autism spectrum disorder in mainstream classrooms. *International Journal of Disability, Development and Education*, 60(4), 347-362. <https://doi.org/10.1080/1034912X.2013.846470>
- Manji, K. P. & Hogan, M. N. (2013). Identifying gaps in knowledge, prevalence and care of children with autism spectrum disorder in Tanzania. *Tanzania Medical Journal*, 26(2), 6-17. <https://doi.org/10.4314/tmj.v26i2.3>

- Manti, E., Scholte, E. & Van Berckelaer-Onnes, I. (2013). Exploration of teaching strategies that stimulate the growth of academic skills of children with ASD in special education school. *European Journal of Special Needs Education*, 28(1), 64-77. <http://dx.doi.org/10.1080/08856257.2012.743729>
- McDougal, E., Riby, D., & Hanley, M., (2020). Teachers' insights into the barriers and facilitators of learning in autism. *Research in Autism Spectrum Disorder*, 79, 101674. <https://doi.org/10.1016/j.rasd.2020.101674>
- Ministry of Education Science and Technology (2016). *National Basic Statistics in Tanzania (BEST)*. https://www.tamisemi.go.tz/storage/app/media/uploaded-files/BEMIS_ABSTRACT%202017%20-%2008-05-2018.pdf
- Ministry of Education Science and Technology (2021). *National Basic Statistics in Tanzania (BEST)*. National Data
- Murray, J. (2015). Practical strategies for students with Autism Spectrum Disorder: A review of the literature. *Journal of Graduate Studies in Education*, 7(2), 68 – 75. <https://files.eric.ed.gov/fulltext/EJ1230708.pdf>
- Numisi, S., Themane, M., Nel, K., & Govender, I. (2020). Parent-teacher collaboration in children with Autism Spectrum Disorder in Limpopo Province, South Africa. *Journal of Human Ecology* 69, (1-3), 117-126. <https://repository.up.ac.za/handle/2263/81120?show=full>
- Obrusnikova, I.& Dillon, S. R. (2011). Challenging situations when teaching children with autism spectrum disorder in general physical education. *Adapted Physical Activity Quarterly* 28, 113-131. <https://doi.org/10.1123/apaq.28.2.113>
- Sally, L., Meghann, P., Nicole, T.& Helen, S. (2013). Educators' challenges of including children with autism spectrum disorder in mainstream classrooms. *International Journal of Disability, Development and Education*, 60(4), 347-362. <http://dx.doi.org/10.1080/1034912X.2013.846470>
- Tanzania Institute of Education (2019). *Curriculum for Certificate for Teacher Education in Special Needs*. <https://www.youscholars.com/curriculum-for-certificate-for-teacher-education-in-special-needs-tanzania/>
- Tungaraza, F. D. (2014). Training teachers in special needs education in Tanzania. a long and challenging ordeal to inclusion. *Journal of the Open University of Tanzania*, 16, 49-60. <https://www.ajol.info/index.php/huria/article/view/108739/98534>
- United Nations (2007). Resolution Adopted by the General Assembly on 18 December 2007. <http://archive.ipu.org/idd-e/a-62-296.pdf>

- Victor, E. W. (2020). Attitude of teachers towards pupils with Autism Spectrum Disorders (ASD) in selected primary schools in River state, Nigeria. *European Journal of Education Studies*, 6(10), 286-305. <https://doi.org/10.5281/zenodo.3653336>
- World Health Organisation (2023). Autism Spectrum Disorders. <https://www.who.int/news-room/fact-sheets/detail/autism-spectrum-disorders>
- Williams, J. G. (2006). Systematic review of prevalence studies of autism spectrum disorders. *Archives of Disease in Childhood*, 91(1), 8–15. <https://doi.org/10.1136/adc.2004.062083>

Parents' Experiences in Provision of Social Support to Children with Intellectual Impairment in Tanzania Inclusive Primary Education Settings

Adeline Paul Mushi¹, Eugenia Joseph Kafanabo² & Sarah Ezekiel Kisanga³

^{1, 2 & 3}School of Education, University of Dar es Salaam – Tanzania

E-mail¹: mushiade@yahoo.ca

Abstract

The aim of this study was to explore experience of parents in provision of social support to their children with intellectual impairment in inclusive primary education settings. The study is qualitative in nature. It used a sample of sixteen participants from three primary schools in Katavi Region. Data were collected through semi-structured interviews and were thematically analysed. The finding revealed that parents' provision of all kinds of social support to their children with intellectual impairment is inadequate. Thus, it can be concluded that inadequate provision of social support by the parents to the children with intellectual impairment is a challenge to the children with intellectual impairment to cope with learning in inclusive education setting and hence to acquire quality education.

Keywords: social support, intellectual impairment, inclusive education

Introduction

Children with intellectual disabilities usually have sub-average functioning of adaptive behaviour (mobility, dressing, washing, housekeeping, toileting, preparing meals, managing money, medication, responsibility, self-esteem, follow rules, obey laws avoid victimization, using expressive language, reading and writing, and self-direction) and intellectual functioning (ability to understand, learn reason, judge and solve problem) (American Association on Intellectual and Developmental Disabilities [AAIDD, 2022]; Tasse, Luckasson and Schalock, 2016). In this regard, support to children with intellectual impairment is imperative as it helps them to manage their education in inclusive education. Parents by virtue of their custodian role are key stakeholders in the education of their children with intellectual impairment. Parents have an important role to play in everyday school life of the children and have additional role for the children with intellectual impairment studying in the setting of inclusive education as well (Bagadood, 2022).

Parents as socialising and caregivers notice and influence many changes in their

child's development (Mohsin, Khan, Doger & Awan, 2011). Arguably, unlike other parents, the parents of children with intellectual impairment bear additional roles in caring and socialising obligations. It is generally accepted that social support enables people with disability to participate in social activities including education as other members of the society. Parental support is a very important factor for the success of children with intellectual impairment in inclusive education.

Conceptualisation of Intellectual Impairment through the Lens of Social Model of Disability

AAIDD (2022) defines intellectual impairment as a significant limitation of both intellectual functioning and adaptive behaviour as expressed in conceptual, social and practical adaptive skills which originate before age 18. Children with intellectual impairment like other children with disabilities were seen as helpless, hopeless, and a curse in the society (Thwala, Ntinda & Hlanze, 2015). Under this perspective, they were discriminated in all social activities including education. The social model of disability views disability as a societal construct, rather than a medical impairment (Lang, 2007; Petasis, 2019). The social model conceptualizes disabilities as a collective issue caused by the physical environment, inappropriate or inaccessible services and attitudes, and lack of understanding (Oliver, 1983). Shakespeare (2010) contends that disability is something imposed on top of impairments, and that an individual with disability is unnecessarily isolated and excluded from full participation in the society. It attempts to switch the focus away from the functional limitations of individuals with impairment on the problems caused by disabling environments, barriers, and cultures (Oliver, 2004). The social model seeks to remove unnecessary barriers, which prevent participation of individuals with disabilities in society, accessing work and living independently (Lang, 2007). This places the moral responsibility on society to remove the burdens, which have been imposed, and enable those with disabilities to participate (Shakespeare, 2010).

The social model provides an understanding of the ways children with intellectual impairment can learn when the school and home environment meet the needs of every child with intellectual impairment. Similarly, emotional support and appropriate supportive devices enable the respective children to feel and realise that they are recognised and supported. The provision of appropriate teaching and learning strategies and resources enable the children with intellectual impairment to learn and benefit in inclusive education even if is not as the same pace as the children without impairment (Cornelius & Balakrishnan, 2012). In addition, positive attitude towards pupils with intellectual impairment will break the barriers to enable them to acquire quality education. Thus, children with intellectual impairment require

social support to enable them to manage their daily life including school life in inclusive education setting.

The concept of inclusive education for a learner with intellectual impairment in Tanzania

Inclusive education enables marginalized children including those with disabilities to access education in a nearby school. Inclusive education originated from the 1994 Salamanca statement which stated that schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic, or other conditions (UNESCO, 1994). It was conceptualized and maintained that all children have a fundamental right to education and must be given the opportunity to achieve and maintain an acceptable level of condition for learning in regular education system (UNESCO, 1994). In the context of Tanzania, inclusive education involves social disadvantaged children, learners from nomadic and seminomadic families, refugee learners, out of school children, working children, learners with chronic illness, orphaned children, learners with specific learning difficulties, gifted and talented learners, learners who live in extreme poverty, children who live far from school, learners with disabilities, boys and girls, and children in conflict with law (MoEST, 2022).

However, despite the observed enhancement of the right of education and increase in enrolment for the children with disabilities in Tanzania, several studies conducted in Tanzania, indicate that, children with intellectual impairment in inclusive primary education faced several challenges that impede the success of their education (Ngata, 2011; Sijaona, 2011). For example, Sijaona (2011) reported that, teacher to pupils' ratio is higher and it affects teachers' ability to manage the behavioural and academic problems of individual learners with intellectual impairment. In addition, teachers lacked training on how to teach pupils with intellectual disability that lead to their poor performance (Ngata, 2011)

On the other hand, children with intellectual disabilities experienced more emotional and behavioural disturbance as compared with their typically developed peers in that they needed social support for their mental health wellbeing (Campbell & Gilmore, 2014). All these posed different problems in the process of the child's learning and consequently hindered their academic achievements in inclusive education. Most of the pupils with intellectual disability require direct and intensive instruction in reading, writing or mathematics which is difficult to meet in general education classes (Gal, Schreur & Yeger, 2010). Inclusive education is more about equity than equality. Therefore, children with intellectual impairment need extra support so that they can cope and adapt learning in inclusive education (MoEST,

2022). Mitchell (2015) contended that, children with disabilities need additional support and attention to enhance participation, and facilitate learning in educational activities, routines and play in inclusive education. Social support for the children with intellectual impairment is of great importance to enable them to succeed in inclusive education.

Social support for the children with intellectual impairment

Social support is defined as the assistance that people provide in order to help others to cope with life changes and situational demand (Xu & Burlson, 2001). Mattason and Hall (2011) described three types of social support as emotional support, informational support, and tangible support. According to them, emotional support is communication that meets an individual's emotional or affective needs. It includes caring, empathy, love and acceptance. Informational support is communication that provides useful information. Tangible support is any kind of physical assistance provided by others such as material, or actions to help them in challenging situations. The kind of problem one has determines the type of support that is provided. Since children with intellectual impairment faced stressful situations caused by both physical and social environment, the provision of social support is fundamental for enabling them to cope with learning in inclusive education.

Social support is based upon the premise that people must depend on one another to satisfy certain basic needs (Jang, 2012). Sultan, Malik and Atta (2016) argued that a human needs social support to not only improve their physiological condition but also assist an individual to improve his or her quality of life psychologically and socially so that he or she could spend a happier and satisfied life. Children with intellectual impairment are characterized with low intellectual functioning and adaptive behaviour which impede their capacity to learn and social life as other typical developing children (AAIDD, 2022). The studies have revealed that parents' support to children with intellectual impairment increases children learning competence, health social relations and fewer behavioural problems (Bagadood, 2022; Oranga, Obuba, Sore & Boinett, 2022).

Parental support to children with intellectual impairment in inclusive education

While the school is important for the academic achievement of the learner with intellectual impairment, parents are the most important people to the achievement of the children with intellectual impairment (Bagadood, 2022, Laing, 2016). It was argued that the role of parents of children with impairment do not end in taking the children to school but also to support their academic matters to compensate

what they missed in classroom since they cannot learn in the same pace as their peers without impairment (Cornelius & Balakrishnan, 2012; Kisanga, 2017). Bryan, Burstein and Bryan (2001) argued that pupils with intellectual impairment may have more difficulty understanding the requirements of the homework assignment, or may have reading and writing deficits that affect their ability to complete homework. Researches also have shown that high levels of parents' provision of social support to the children with disability in general in inclusive education correlate with improved more positive attitudes towards school, higher homework completion rates, fewer placements in special education of the children with disabilities, higher math and reading score (LaRocque, Kleiman, & Darking, 2011; Xu & Filler, 2008).

While the issue of parent support has been of increasing concern, only few studies have focused on the experience of parents of children with intellectual impairment in provision of social support. Thus, the current study intended to investigate the experience of parents of children with intellectual impairment in providing social support in inclusive education settings.

Methodology

The study employed a qualitative research approach. Gay and Airasian (2000) argued that in order to achieve detailed understanding of a phenomenon a qualitative researcher must undertake an in-depth and in-context research that allows them the opportunity to uncover more subtle and less overt understandings. Qualitative researchers study things in terms of the meanings, attempting to make sense of or to interpret a phenomenon in terms of meaning people bring to them (Cohen, Manion & Morison, 2011). Hence, the qualitative approach enabled the researcher to capture rich, detailed and relevant information about the perception of parents of the children with intellectual impairment in providing social support to their children in inclusive primary school contexts.

The study was conducted in Katavi region. Katavi region was chosen due to the fact that it is a region with the lowest number of children with intellectual impairment enrolled in primary school in three consecutive years (Reginal Administration and Local Government [PORALG], 2016; 2017; 2018). This raised the interest to understand parents' experience in supporting their children with intellectual impairment in inclusive education since they are the most important to initiate the education of their children. Sixteen participants from Mpanda Municipal Council and Nsimbo districts in Katavi Region were involved. This includes five pupils with moderate intellectual impairment who were living with single parents who were the mothers; five parents of children with intellectual impairment and six

teachers (three head teachers and three class teachers) of the selected children.

Face-to-face semi-structured interview elicited the kind of social support parents provide to their children with intellectual impairment to manage learning in inclusive education. The method provided the researcher with an opportunity to further ask unplanned questions that were triggered by the information provided by the interviewees to generate deeper understanding. The collected data were subjected into thematic analysis. Thus, triangulation across participants was used to build a coherent justification of the themes. Since the study involved minor (pupils with intellectual impairment, who were under 18 years old), permission was sought from parents to allow their children to be interviewed.

Findings and Discussion

Data were analysed in relation to three kinds of social support which included tangible support (learning resources), emotional (acceptance and encouragement), and informational support (providing useful information, information on carrier choice), support on independent living skills and supervision of homework.

Tangible support to pupils with intellectual impairment

The findings from interviews with pupils with intellectual impairment revealed that they did not receive learning materials from their parents. One pupil said, “I do not have exercise books, pen or school bag” (Pupil 2, male, class II, school 1). These findings are supported by the teachers, who all stated that parents did not supply any educational materials for pupils with intellectual impairment.

One teacher had this to say:

Parents are not helping them. When they bring them to school, they feel like they have finished everything and sometimes they see them as a burden at home. Pupils with intellectual disabilities need learning materials, for example, exercise books, reading and mathematics book so that they can learn at home since they are slow learners; they refuse and think it is wastage of money (teacher 1, female, class teacher, School 2).

In addition, one parent had this to say, “He does not have exercise books because he cannot write. I do not think he can learn anything. It is wastage of money to buy exercise books for someone who cannot even write (Parent 3, female, single)”. This implies that parents considered their children with intellectual disability as the ones who could not learn anything. So, they did not see the need to provide them with even exercise books or pencils.

The findings revealed that pupils with intellectual impairment did not receive learning facilities from their parents even the basic ones like exercise books and pencils like other pupils without disabilities. These findings are contrary to the Tanzania education circular Number 3 of 2016 which states that parents have responsibilities to provide their children with school and sports uniforms, and all required learning materials including exercise books and pens/pencils regardless of their conditions (United Republic of Tanzania [URT] 2016). As the findings revealed, parents did not provide their children with those materials since they had low expectation of their academic performance. This implies that when parents found that the academic progress of their children with intellectual impairment was very low as compared to children without disability, they lost hope. They did not believe that their children could learn anything in school. Consequently, they became reluctant to provide them with learning materials. Based on the circular, children with disabilities have the right to receive learning materials from their parents the same as other children without disabilities including special learning materials so that they can cope with learning in inclusive education.

Furthermore, children with intellectual impairment need a lot of visual aids to enable them to learn basic concepts in inclusive education since they have limitations in learning abstract concepts (AAIDD, 2022). During interview, one teacher claimed that:

These parents of pupils with intellectual impairment think that after sending their children to school, they have finished everything. Remember, these children are slow learners. They can learn but slowly and most of the time they can learn better by seeing. But when you tell their parents to collect some equipment that is available in their environment for their children, no one will bring anything (Teacher 2, Female, class teacher, School 3).

The narration suggests that negative perceptions held by parents of their children learning can affect the way they support them on learning or they may not have the very basic education which may help them to support their children to learn. Campbell and Gilmore (2014) reported that children with intellectual disabilities have prevalence rates of mental health problems which in combination with the problems in communication, attention, self-regulation and behaviour disorders adds to challenges already facing them. It is possible for the parents to identify the needs of the specific child and provide them with relevant learning materials available in their environment which will assist the child to learn basic skills. Lundqvist (2016) argued that the support provision to children with disabilities was crucial while lack of support may risk creating circumstances where children

cannot participate and learn, and thereby not benefiting optimally from their education. This finding is contrary to the social model of disability which focuses on the removal of barriers and provision of appropriate services. The social model of disability stresses that problems faced by people with disabilities are the result of external factors and society failure to provide adequate and appropriate services (Petasis, 2019; Shakespeare, 2010).

Emotional support to children with intellectual impairment

Acceptance and love: Parents of children with intellectual impairment did believe that the disabilities of their children are God's wishes; so, they need to accept them as they are. This was narrated by one parent who said:

I feel good because scriptures inform us to be thankful for everything. I had to receive her as she is because she is a human being. I could not throw her away. It is how God created her, nothing can be changed (Parent 1, female, single).

The foregoing statement indicates that parents believe that all human beings are created by God. Thus, they cannot challenge God's work. Instead, they need to accept them as they are. This can be attributed to the reason that parents of the children with intellectual impairment do not take the initiative to register the children in schools. It was revealed that some parents of children with intellectual impairment did not bother to register their children to school because they perceived them as being incapable of learning or coping with school environment. The findings revealed that children with intellectual impairment were registered to schools after teachers' and other people's efforts to trace them and advise their parents to register them to schools. This was confirmed by one parent who had this to say:

They announced at the church that those with children with disability should send them to school, so I sent her to school. When I sent her, the headmaster said I will accept this child until the school for the disabled is complete, we will send her there (Parent 2, female, single)

Similar experience was also reported by another parent who said: 'I was not aware of her ability to go to school due to her condition, but some people came here and advised us to send her to school, and since then I took my daughter to school (Parent 5, female, single). This was also supported by teacher 4 who had this to say:

Most parents register their children with intellectual disabilities due to external forces. When we do the census, we realize that there are children with disabilities above six years old who have not been registered in schools. We started advising them to register

their children as most of them used to hide them (Teacher 3, male, academic and sport and games teacher, School 3).

The quotes revealed that parents of the children with intellectual impairment accept their children because there is no way they can reject them. This made them believe that it is their responsibility to take care of their children and they should remain as they are for the rest of their life. Parents viewed their children with intellectual impairment as people who could not participate in any social activity like other children. Aydin and Yamac (2014) were of the opinion that the way parents accept their children with disabilities determines the positive acceptance of the children in the society. That means parents can make their children accepted or not accepted depending on how they perceive their own children's disabilities. Parental love and acceptance given to children with disabilities strengthen them and give them confidence which, in-turn, determine their success in school life and child development.

Encouragement: The findings revealed that no one is encouraging children with intellectual impairment about their academic progress. The parents of children with intellectual impairment just let them go to school. They did not have hope that their children could learn anything from school. As a result, they did not encourage their children in academic matters. This was demonstrated by parent 1 who said: *“I have nothing to advise about her academic progress. Her progress is not good. She doesn't know even how to read. She has to go to school but I have no hope that she can learn.”* (Parent 1, female, single).

The similar view was voiced by Pupil 2 who said, *“My parents and teachers say nothing about my academic progress. I have never received a gift for any of the school activities”* (Pupil 2, male, class II, school 1).

This implies that parents of children with intellectual impairment hold negative attitude towards their children's learning. Parents saw their children with intellectual impairment as the ones who could not learn anything thus; they tended to ignore their academic matters. This makes parents allow their children with intellectual impairment just to attend schools with no hope that they will learn anything. This might be associated with teaching style in inclusive education which does not recognize the diverse needs of learners. Children with intellectual impairment in inclusive schools learn the same content using the same teaching style and resources as typical developing children that make them lag behind, as they cannot learn in the same pace as their peers without disability, as a result, they are considered incapable. Children with mild and moderate intellectual impairment are educable and can learn basic skills which could allow them to become independent (Sahay, Prakash, Khaique & Kumar, 2013).

Moreover, parental positive attitude, encouragement and support will give the children hope and confidence that can help them to grow stronger and more resilient. All the children need love, encouragement and support, and for children with intellectual impairment, positive reinforcement can help to ensure that they emerge with a strong sense of self-confidence and determination that will build the foundation for lifelong success. Children with intellectual impairment lack self-motivation and thus, they depend on external motivation rather than internal motivation because they always have fear to fail (Shree & Shukla, 2016).

Information Support

Provision of useful information: Teachers who participated in this study claimed that parents were not making follow ups of their children's progress at school. Teachers claimed that parents were not visiting the schools to seek information about their children learning or provide information to the teachers about their children's development that could help them to support their children in academic progress. This was claimed by teacher 3 who said that there was very low participation of parents since it was very rare to find parents with children with disabilities coming to school. He added that he had never met a parent who came to give advice about his/her child's ability (teacher 3, male, academic, sport and games School 3).

The foregoing views were supported by another teacher who had this to say:

Their cooperation is very low because they believe that once they bring their children to school, they have finished their responsibilities. It was expected that they could keep regular communication with teachers because they are the ones who know everything about their children (teacher 4, female, head teacher, School 3)

The above narrations indicate that teachers were missing useful information from parents which could help teachers to assist the children in the school environment to learn better in inclusive education. Also, parents missed important information from teachers that could help them to support their children. Parents thought that their responsibilities to their children end when they send them to school. These findings are contrary to the Tanzania education circular for implementation of fee free education which states that role of parents is to make follow-up of their children academic progress and performance (URT, 2016). Kisanga (2017) found out that the children with disabilities reached higher education because their parents played a great role by monitoring their learning and ensuring that they teach them at home to compensate what they missed in the classroom. Thus, parental support is very important since parents know their children's needs better than others. Odongo (2018) reported that children with disabilities were taken to school and left in the

care of the teachers who were overwhelmed by a large number of children in classes that they could not pay much attention to individual children with disabilities.

Parents are the ones who know more about their children's peculiarities than anybody else. Thus, their information is valuable for the success of their children's education. Parents can provide information about developmental characteristics of their children which, in turn, could help the teachers to meet the needs of the children with intellectual impairment in classroom teaching and learning. Parents are the central and most important link in the care, education and supervision of persons with intellectual impairment (Kendel & Merrick, 2007).

Information on career choice: The finding revealed that none of the parents had provided any guidance to his/her child with intellectual impairment information on career choice. All pupils with intellectual impairment who were interviewed claimed that they had never been advised about their future career by their parents. This was noted by Parent 3 who said: "*Haaahaaa! Now what shall I advise him. What will he be able to do? I don't really think if he can do anything. He cannot even work in my store, Haahaaa! He can't. He will be a homemaker*" (Parent 3, Female, single).

This statement indicates that parents of children with intellectual impairment had no hope that their children were capable of doing anything. They regarded their children as a burden of the family. It seems that parents failed to realize that learning difficulties did not mean being difficult in everything. Children with intellectual impairment are capable of performing different activities of which if guided it will help them to become independent adults. This was revealed in the narration by one teacher who had this to say:

The boy you interviewed is 13 years old but he is not assigned any piece of work at home. Here at school, he can clean the classroom and wash clothes. I also send him to market and he buys everything and he brings them but if you explain it to his parent, it becomes very hard to believe. His mental disabilities will not hinder him from bringing out the best in him (teacher 5, male, head teacher, School 1).

The narrations indicated that parents lacked an understanding of the capabilities of their children with intellectual impairment. Most of the pupils with intellectual impairment could not proceed with academic path beyond primary level. Thus, parents have the role to find the alternative path that could enable the pupils to live an independent life in the future. Pupils with intellectual impairment may not succeed in academic path but they can succeed in vocational path. It is important

to identify the potentials that children with intellectual disabilities have so that they can nurture and guide them in the right path. It is also important for parents to understand all educational options available for their children and be informed of the impact that their children's educational path and experiences may have on options and outcomes in future (Hirano & Rowe, 2016). It is only with the crucial information that parents could make informed decision on how best they can support their children to become independent adults. Moreover, Fabian and Pebdani (2013) contend that having disabilities expose individuals to unique experiences that may influence their career development. Hence, both teachers and parents need to understand these unique features of the children with intellectual impairment so that they can guide them to the right path.

Support on independent living skills: The findings revealed that other parents of children with intellectual impairment did not assign their children any piece of work to perform or teach them other life skills because they believe they have no capability to perform. During interview one parent had this to say:

Aaaa! No, I am not assigning her anything to do. I have no hope that she will be able to support herself. Even if she gets good education I don't know if she will be able to support herself. What will this person be able to do (Parent 4, female, single).

This was also supported by another parent who said: "He is not doing anything at home, it's just playing. What kind of work can you assign him, he's just playing. As I told you, he's just playing; he returns home when he feels hungry" (Parent 3, female, single).

The above narrations imply that parents of children with intellectual impairment perceived their children as being incapable of performing daily activities as children without disabilities. As a result, they demanded less and offer fewer opportunities to participate in home activities. In this regard, children with intellectual impairment could not learn much which make them dependent throughout their life. Parents need to assign their children with intellectual impairment different activities so that they can observe the potentials of their children and guide them to develop living skills. By providing them with independent living skills, children with intellectual impairment can adapt learning in inclusive education. In addition, it would help them to get along with others and adapt to various social conditions that would enable them to make healthier choice, resist negative pressures, and avoid risky behaviours.

Homework supervision: Parents who were interviewed explained that they did not help their children on academic matters because they could learn anything. For

them, they take them to school to reduce burdens at home and because they were forced to do so. During interview, one parent had this to say: “What can I teach him? He does not know how to write or read; he is not even assigned homework (Parent 5, female, single)”. This situation implies that pupils with intellectual impairment did not get support in academic matters whether from school or at home. Children with intellectual impairment in inclusive schools are neglected in academic matters. Most teachers did not consider them in the process of teaching and learning. They perceived them as being unable to learn, and that they do not pay attention to whether they are learning or not. This was revealed by one parent who said, “He is not given homework. Neither does he sit for a test. He is in standard three now” (Parent 2, female, single). Teachers claimed that these children could not even write; Teachers’ perception is contrary to Raty, Kontu and Pirttimaa (2016) who reported that students with intellectual impairment could learn different skills by using different strategies. They reported that students with intellectual impairment could learn different skills more effectively through the use of read by sight word or by phonics, decoding strategies, phonological decoding, combination of visual aids and discussion. This means that teachers should find an alternative way of accommodating these pupils in regular classes rather than neglecting them so that they can learn which, in turn, will motivate their parents to provide social support to their children with intellectual impairment. Previous studies reported that children with disability who managed to access higher education learning were those whose parents recognised that their role is not only to send their children to school but also support them at home, pay for extra classes and teach them at home to compensate for what they had missed in regular classes (Kisanga, 2017).

Conclusions

Children with intellectual impairment show limitations on intellectual functioning, adaptive behaviour and daily practical skills (AAIDD, 2022). Thus, they need not only tangible support but also emotional and informational support to manage their daily life. Children with intellectual impairment need close guidance to develop living skills that will help them to cope with learning in inclusive education and also to become independent adults in future. Likewise, parents have a crucial role to play in upbringing children with intellectual impairment. They have important information that could help teachers to assist their children at school since these children cannot learn in the same pace as their peers in inclusive education. Also, the way parents accept their children with intellectual impairment will determine how they will provide social support to them. That is, if parents accept their children with intellectual impairment positively, they will be in position to assist

them in all aspects of their life including their education, thus it improves their learning. Thus, inadequate social support provided by parents to their children with intellectual impairment acts as a barrier to the children to cope with learning in inclusive education.

Recommendations

Based on the findings of this study, the following recommendations were made. First it is recommended that parents should provide learning materials to their children with intellectual impairment so that they can assist their learning in inclusive education. Second, parents should involve their children with intellectual impairment in household chores so that they can learn independent living skills and identify the potential they have. Third, it is also recommended that parents should make a close follow-up of their children's academic and social progress in inclusive schools.

Reference

- American Association on Intellectual and Developmental Disabilities. (2022). *Definition of intellectual disability*. <https://www.aaidd.org/intellectual-disability/definition>
- Aydin, A., & Yamac, A. (2014). The relations between the acceptance and child-rearing attitudes of parents of children with mental disabilities. *Eurasian Journal of Educational Research*, 54, 79-98.
- Bagadood, N. H. (2022). Parental involvement and education of children with intellectual disabilities in Saudi Arabia. *International Journal of Computer Science and Network Security*, 22(3), 259.
- Bryan, T., Burstein, K., & Bryan, J. (2001). Students with learning disabilities. *Home Problems and Promising Practices*, 36(3), 167-180.
- Campbell, M. A., & Gilmore, L. (2014). The importance of social support for students with intellectual disability: An intervention to promote mental health and well-being. *Cypriot Journal of Educational Sciences*, 9(1), 21-28.
- Cohen, L., Manion, L. & Morrison, K. (2011). *Research methods in education*. (7th ed.). New York, NY: Routledge.
- Cornelius, D. J. K., & Balakrishnan, J. (2012). Inclusive education for students with intellectual disability. *Disability, CBR & Inclusive Development*, 23(2), 81 – 93.

- Fabian, E. S. & Pebdani, R. (2013). The career development of youth and young adult with disability. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: putting theory and research at work* (2nd ed.) (pp 357-384). New Jersey: John Wiley & Sons, Inc.
- Gal, E., Schreur, N., & Engel-Yeger, B. (2010). Inclusion of Children with Disabilities: Teachers' Attitudes and Requirements for Environmental Accommodations. *International journal of special education*, 25(2), 89-99.
- Gay, L. R., & Airasian, P. (2000). *Educational research: Competencies and application*. Islamabad: National Book Foundation.
- Hirano, K., & Rowe, D. (2016). A conceptual model for parent involvement in secondary special education. *Journal of Disability Policy Studies*. 27(1), 43 – 53.
- Jang, J. (2012). *The effect of social support type on resilience* [Unpublished doctoral dissertation]. University of Alabama, United State of America.
- Kandel, I. & Merrick, J. (2007). The child with disability: Parental acceptance, management, and coping. *The Scientific World Journal*, 7, 1799-1809.
- Kisanga, S. E. (2017). *Educational barriers of students with sensory impairment and their coping strategies in Tanzanian higher education institutions*. [Unpublished doctoral dissertation]. Nottingham Trent University, United Kingdom.
- Laing, C. (2016). *The impact of parental involvement on school success for children with intellectual disabilities*. [Unpublished Masters dissertation]. Memorial University of Newfoundland, St. John's.
- Lang, R. (2007). *The development and critique of the social model of disability*. London: Leonard Cheshire Disability and Inclusive Development Centre.
- LaRocque, M., Kleiman, I., & Darking, S. M. (2011). Parental involvement: The missing link in school achievement. *Preventing School Failure*, 55 (3), 115-122.
- Lundqvist, J. (2016). *Educational pathways and transitions in the early school years: Special educational needs, support provisions and inclusive education* [Unpublished doctoral dissertation]. Stockholm University.
- Mattson, M., & Hall, J. G. (2011). Linking health communication with social support. *Junker Shutter Stock*, 23(4), 22-45.
- Ministry of Education Science and Technology (2022). *National Strategy for Inclusive Education 2021/22-2025/26*. Dodoma: Ministry of Education Science and Technology

- Mitchell, D. (2015). Inclusive education is a multi-faceted concept. *Centre for Educational Policy Studies Journal*, 5(1), 9-30.
- Mohsin, M. N., Khan, T. M., Doger, A. H., & Awan, A. S. (2011). Role of parents in training of children with intellectual disability. *International Journal of Humanities and Social Science*, 1(9), 78-84.
- Ngata, A. G. (2011). *Challenges of teaching pupils with intellectual disability in inclusive primary schools in Tanzania* [Unpublished master Dissertation]. University of Dar es Salaam, Tanzania.
- Odongo, G. (2018). Barriers to parental/family participation in the education of a child with disabilities in Kenya. *International Journal of Special Education*, 33(1), 21-33.
- Oliver, M. (2004). The social model in action: if I had a hammer, In C. Barnes and G. Mercer (eds) *Implementing the Social Model of Disability: Theory and research*. Leeds: *The Disability Press*.
- Oliver, M. (1983). *Social Work with Disabled People*. Basingstoke: Macmillan.
- Oranga, J., Obuba, E., Sore, I., & Boinett, F. (2022). Parental involvement in the education of learners with intellectual disabilities in Kenya. *Open Access Library Journal*, 9(4), 1-18.
- Petasis, A. (2019). Discrepancies of the medical, social and biopsychosocial models of disability: A comprehensive theoretical framework. *The International Journal of Business Management and Technology*, 3(4), 42-54.
- President's Office Regional Administration and Local Government. (2018). Regional administration and local government: Basic education statistical abstract 2004-2017. Dodoma: President's office-regional administration and local government.
- President's Office Regional Administration and Local Government. (2017). *Pre – primary, primary, and secondary, adult and non-formal education statistics*. Dodoma: President's office-regional administration and local government.
- President's Office Regional Administration and Local Government. (2016). *Pre – primary, primary, and secondary, adult and non-formal education statistics*. Dodoma: President's office-regional administration and local government.
- Räty, L., Kontu, E. K., & Pirttimaa, R. (2016). Teaching children with intellectual disabilities: Analysis of research-based recommendations. *Journal of Education and Learning*, 5(2), 317-336.
- Sahay, A., Prakash, J. Khaique, A. Kumar, P. (2013). Parents of intellectually disabled children: A Study of their needs and expectations. *International Journal of Humanities and Social Science Invention*, 2(7), 1-8.

- Shakespeare, T. (2010). The social model of disability. In L. J. Davis. *The disability studies reader*. New York: Routledge (pp. 266-273).
- Shree, A & Shukla, P. C. (2016). Intellectual Disability: Definition, classification, causes and characteristics. *Learning Community*, 7 (1), 9-20.
- Sijaona, C. (2011). *Expanded enrolment and effective classroom management of pupils with intellectual disability* [Unpublished master dissertation]. University of Dar es salaam, Tanzania.
- Sultan, B., Malik, N. I., & Atta, M. (2016). Effect of social support on quality of life among orthopedically disabled students and typical students. *Pakistan Journal of psychological research*, 30 (3), 254-258.
- Tassé, M. J., Luckasson, R., & Schalock, R. L. (2016). The relation between intellectual functioning and adaptive behaviour in the diagnosis of intellectual disability. *Intellectual and developmental disabilities*, 54(6), 381-390.
- Thwala, K. S., Ntinda, K., & Hlanze, B. (2015). Lived experiences of parents of children with disabilities in Swaziland. *Journal of Education and Training Studies*, 3(4), 206-215.
- United Nations Educational Scientific and Cultural Organisation (1994). *The Salamanca statement and framework for action on special needs education*. Paris: United Nations Educational Scientific and Cultural Organisation
- United Republic of Tanzania. (2016). Education circular number 3 of 2016 on implementation of fee free education in Tanzania. Dar es Salaam: Ministry of Education Science and Technology.
- Xu, Y., & Burleson, B. R. (2001). Effects of gender culture, and support type on perceptions of spousal social support: An assessment of the 'support gap' hypothesis in early marriage. *Human Communication Research*, 27(4), 535-566.
- Xu, Y., & Filler, J. (2008). Facilitating family involvement and support for inclusive education. *The School Community Journal*, 18 (2), 53-72.

Bilingual Deaf Education: Enhancing Literacy among Deaf Learners in Secondary Education in Tanzania

Ildephonce Mkama

Department of Special Needs Education, Archbishop Mihayo University

College of Tabora-Tanzania

E-mail: mkamaijmc@yahoo.com

Abstract

Educating deaf students has been a concern of many education stakeholders. Due to inadequate research on deaf education in Tanzania, significant information about the learning of deaf students is missing. However, the adoption of inclusive education has not been of significant help to deaf students' literacy and learning. Consequently, less than 9% of deaf students in Tanzania have reached the secondary education level, while more than 80% drop out and/or fail. This paper explored literacy skills among Form Two deaf students in 24 secondary schools and found that all the studied students had some varying literacy challenges. They could not produce intelligible written texts in either Kiswahili or English language. This paper has highlighted specific literacy challenges and proposes a drill mechanism for promoting literacy among such students.

Keywords: *deaf education, literacy, bilinguality, learning*

Introduction

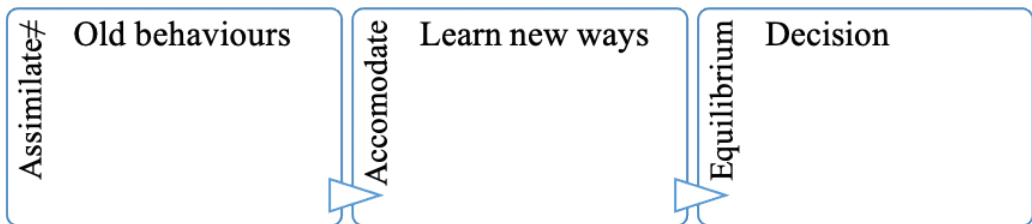
Educating deaf¹ children has been a continuous global debate that is grounded on diverse perspectives and beliefs among scholars and educational research (Mkama, 2021a). Recent research (Adoyo, 2007; Armstrong, 2009; Marschark, 2007; Mcilroy, 2018) has accounted for ways in which deaf learners can be educated not because of their 'disability', but because of their strengths, unique learning styles, and different cognitive capacities. The inability to use auditory paths for information input, makes deaf learners use perceptual input through sight and senses. Hence, as Marschark and Knoors (2014, p.1) underscore, "they are visual learners" and this makes their learning visual and tactile – connected with a sense of touch.

1 The term has been used for generic reference of deaf, Deaf, DeaF, Hard-of-Hearing-, and Hearing-Impaired person.

This contention observes what Marschark and Knoors (2014) underscored, “if we want to teach deaf learners effectively, we really need to learn from our teaching and make teaching ground in what we know about learning in general and about teaching in relation to learning in particular”.

Most deaf children are born to hearing parents and this denies most opportunities for language development background to the fact that most parents use spoken language for most of their communication. The delay in communication development in deaf children affects their social-emotional development (Marschark & Knoors, 2014). Language development in a child affects the learning process. Learning begins to grow when a child is conceived. At the conception stage, a fetus begins to learn to communicate not only with its mother but also with the environment around the mother. The conception stage marks the first milestone of brain development and hence the initial stage of learning development. Several scholars have accounted for how learning is a complex process that is interlocked by several factors. Jean Piaget has elaborated on six stages of sensory-motor development from the first month of a child after birth to 24 months. In such stages, Piaget identified adaptation, imitation, and reinforcement as the three learning stages of a child.

- i. Adaptation: a large part of learning occurs in this way. With adaptation, usually, a child uses past experiences for solutions to new problems. For example, in sucking chocolates, a child uses experiences of sucking the breasts of its mother. Three main processes are involved in the first adaptation stage.



Source: Adapted and modified from Johnson (2014)

As the figure suggests, adaptation is the natural tendency to adapt to one’s environment and it involves three interlocking elements; assimilation, accommodation, and equilibrium. Assimilation occurs when one assimilates new information with existing behaviours. Accommodation occurs when we encounter new information that either does not fit the current schemata or where no schema related to this new information currently exists, whereas equilibrium is the motivating force behind all learning. It is the constant striving for balance between new information and existing schemata. The three elements, which

entail stages of information processing, are predominant processes for learning development which are also undergone by deaf children.

- ii. Imitation: from every behaviour, a child imitates adults and/or neighbouring environments. The whole learning process is through imitation, hence the parent is expected to transfer all desirable behaviours to a child.
- iii. Reinforcement and reward: this happens when a child does something that brings results and is rewarded.

Deaf children pass through similar stages despite being disadvantaged by the language environments in which they are born and growing. Marschark & Knoors (2014) pointed out, 95% of deaf children are born to hearing parents and grow from hearing families who use spoken languages for much of their communication. Thus, both their language and social-emotional developments depreciate.

Bilingual deaf education

Bilingual deaf education emanates from the postmodernist view that not only underscores diverse ways to communicate (Mkama, 2021a) but also sees sign language as the main language to communicate with deaf persons (McIlroy & Storbeck, 2011, p. 495). This view is more humanistic and real because it sees the value of human beings in whatever status one might be, and thus considers a strong linguistic difference between sign and spoken languages, which is a major differentiating factor for deaf and hearing students.

Bilingual deaf education advocates for the Auditory-Vocal Modality – the use of spoken/written languages. With spoken language(s), only deaf students with residual hearing can benefit. However, the modality is beneficial in developing literacy skills in severely and profoundly deaf students. Auditory-Vocal Modality gives an avenue to deaf students to exercise a range of communication means within their range of severity of the hearing loss. This includes using cued speech, lip-reading, and written forms. The available research (Marschark, Gladys, & Knoors, 2014; Swanwick, 2017) has continually insisted that signed and spoken languages have the role of transferring linguistic aspects from one person to one another and the development of code blending. Thus, bilingual deaf education is viewed as the instrument for developing sign language fluency which is a foundation for second language learning in deaf children.

Generally, bilinguality requires the introduction of a bilingual curriculum in which both signed and spoken languages are taught as subjects and are subjected to

assessments on an equal basis. On the other hand, the introduction of a bilingual curriculum improves teachers' levels of sign language skills, and eventually, enhances communication adequacy between them and deaf students.

Tanzania has made concerted efforts to educate deaf children since its independence. However, in the early 2000s, there has been a huge shift in the provision of education to deaf students, and one of the huge shifts is through the introduction of sign language in education. The use of sign language in education paves a promising future for education achievement among the majority of deaf learners who essentially use sign language for their communication endeavours. The shift has witnessed great developments leading to the pronouncement of Tanzanian Sign Language in the National Policy of Education of 2014.

Other recent developments that have been reached include launching the first *digital Tanzanian Sign Language dictionary* with a large collection of 7200+ video signs and pictures along with their meaning in two languages – Kiswahili and English. This dictionary is comparable with the American Sign Language dictionary which has 40,000+ videos and signs (Mitchell, 2013). The preparation of the TSL dictionary is anticipated to provide teachers and students with adequate signs in different subject disciplines, hence reducing available anxieties among teachers when they set to teach deaf students (Brons & Namirembe, 2018; Mkama, et. al., 2015; Knoors, 2014). Despite these developments, deaf students have been reported to have unsatisfactory education outcomes. Mkama (2021a) identified that deaf students have consistently attained the lowest grades in examination results compared to hearing peers across the five years of analysis. In the Form Two National Assessment (FTNA), 346 students were registered among whom 30.3% (N=105) got division 0 and 51.7% (N=179) got division 4. The rest 17.9% (N=62) students got between divisions 1 and 3. Hence, 241 students were able to proceed to the next class, while 74.2% of them were those with division 4. These results compelled the researcher to explore literacy levels among deaf students. Hence, the objectives of this research are to explore literacy levels in written Kiswahili and/or English and propose language drills among deaf learners for enhancing their learning.

Methodology

The study involved a learning assessment among 428 Form Two deaf students who are enrolled in the selected 24² inclusive schools in Tanzania to assess, among others, language abilities among targeted students. These students were screened

2 Only selected 24 schools from Tanzania mainland.

when they were in their Form One, and hence this study is a continuation of preparing adequate interventions to enhance their learning. Since the study was meant to explore literacy levels among deaf students, secondary schools with deaf students were purposely sampled. The choice of secondary schools was attributed to the consistent reports of deaf students in secondary education to have been doing poorly in their academic performance as compared to their hearing colleagues. The study adopts a qualitative approach that allows for the collection of behavioural data. Hence, the Multilingual Assessment Instrument for Narrative (MAIN³) tool was chosen to allow the researcher to explore the language levels of students. The MAIN tool is beneficial to this kind of study because it can assess multi-language levels. Using the MAIN tool, students were shown a picture series, and each student was required to look at the pictures and narrate a story whether in sign language or spoken Kiswahili or English. All deaf students chose to use sign language to narrate a story despite their fluency levels. Notwithstanding, students were also encouraged to write the story on pieces of paper – in either language.

The data were analyzed thematically, and error analysis was used as the main tool for the analysis of errors committed during writing in Kiswahili or English languages. Analyses of errors were in line with Jack's (2022) contentions that when learners produce any second language, they may produce inaccurate forms that reflect several factors like the kind of communication they are engaging in, stages of language development, and strategies that the child has used to learn the language, among others. In the context of this study, Kiswahili and English are both second languages to deaf students whose first language is sign language.

Findings and Discussion

Results have shown that 3864 errors were committed by all deaf students in written Kiswahili and English. Table 1 below summarizes such language errors.

Table 1: Summary of Errors Committed

Language Error	Syntax	Morphology & Orthography	Phonology	Lexical/Semantic
Amount	2378	746	306	178
Percent	61.5	19.3	7.9	4.6

Analysis of errors from Table 1 indicates that syntax was the most difficult level with 2378 errors. At this level, most students were found to face difficulty in agreement and tense conjugation. However, 178 errors were found in diction and contextualized meaning. In Morphology and orthography, 746 errors were found in

3 The **MAIN (Multilingual Assessment Instrument for Narratives)** is an instrument for assessing narrative skills in children who acquire one or more languages from birth.

affixal marking, spelling, and orthographic systems while in phonology common errors were in sound patterning and substitutions. In general, all students were identified to produce unintelligible written text as opposed to intelligible signing.

These data inform that most students were affected by language transfer in which their written language structure corresponded with signing patterns. This transfer is what is called in linguistics “*negative transfer*” which is caused by structural differences between sign language and spoken Kiswahili/English (Jack, 2022). Marschark and Knoors (2014, p.164) have also affirmed about difficulties deaf students face in a written language. In their reading project, they found that deaf students had challenges in recognizing words, understanding word meaning, and grammar while challenges in grammar were leading (Marschark & Knoors, 2014, p.171). Figure 1 below describes a summary of their results.

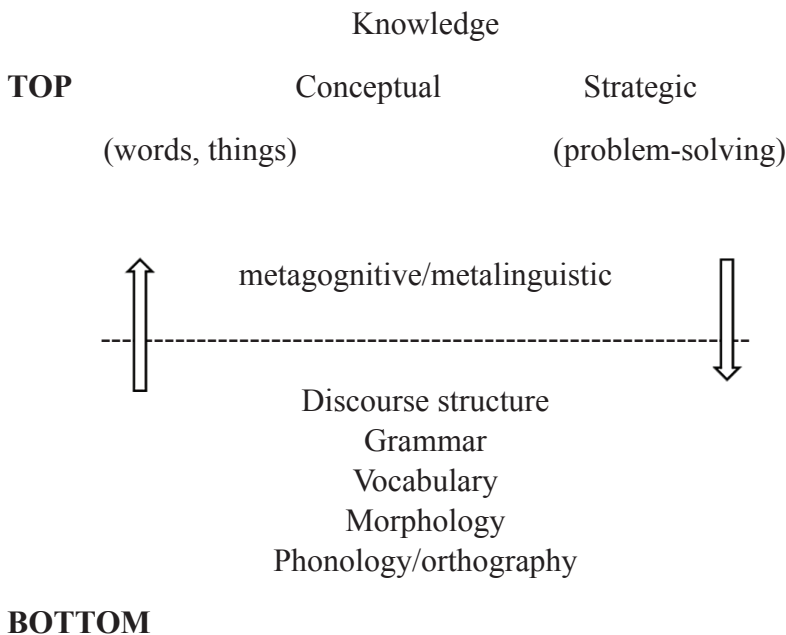


Figure 1: *Language complexity levels adapted from Marschark and Knoors (2014, p.164)*

Figure 1 indicates that deaf students have relative difficulties in grammar and discourse structures which then affect their understanding of things or words and/or problem-solving skills. Generally, language building is done in the context of use, and this underscores the need to adopt appropriate language drills.

Bilingual education has been advocated for its strengths in language drills among the deaf. Bilingual education recognizes both deaf persons as a linguistic-cultural group (Dammeyer & Marschark, 2016, p. 395) and the need of using spoken and sign(ed) languages for communication options among the deaf. In Tanzanian contexts, the emphasis has been put on the possibility of using written English/Kiswahili by deaf students (Mkama, 2021a). Deaf students in Form Two have been shown to have committed most errors in written languages rather than in sign language. Such errors are attributed to unsupportive linguistic-cultural environments for their learning. At the bottom line, the model takes an assertion that the deaf community is the linguistic-cultural group, hence orients hearing persons to the deaf culture and deaf history as is elaborated in Figure 2 below.

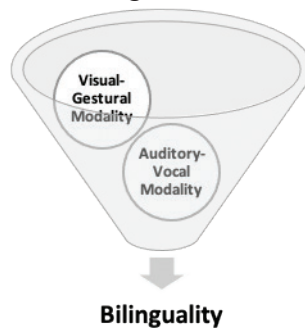


Figure 2: *The bilingual Model adopted and modified from Mkama (2021a).*

In earlier research, Mkama (2021a) & Mkama (2021b) argued for the usefulness of Bilingual deaf education in creating an inclusive school culture in which deaf students feel welcomed and protected. As introduced earlier, the Bilingual model considers the co-existence of signed language and spoken languages, in the Tanzanian context – Kiswahili and English. Thus, both language modes are co-currently fused into schools’ linguistic repertoires and thus forming a bilingual school community. In this regard, instruction in sign language will enable hearing students to learn sign(ed) language and be able to apply appropriate modalities in communicating with deaf students, hence breaking the communication barrier between them. In this aspect, therefore, students get exposed to the use of TSL and signed language dialects in various school contexts, through which they can form groupings of friendships. This situation is referred to as bilinguality – a situation in which two language systems are integrated within the context of language use.

Bilinguality offers a practical response to linguistic diversity and plurality in deaf education by creating an inclusive culture that responds to deaf students’ learning concerns. With bilinguality, students can form meaning from their linguistic experiences – both signed and spoken and can thus form a community of practice in which the value of diversity and plurality is considered. In supporting this,

Swanwick (2017, p. 83) emphasizes that bilinguality gives a space for bilingual students to migrate between codes and be able to learn such codes. These students use them in social contexts. In addition, bilinguality allows students to be flexible to use their language resources in order to maximize their communication and understanding. Figure 3 describes the role of bilinguality in the promotion of second language learning.

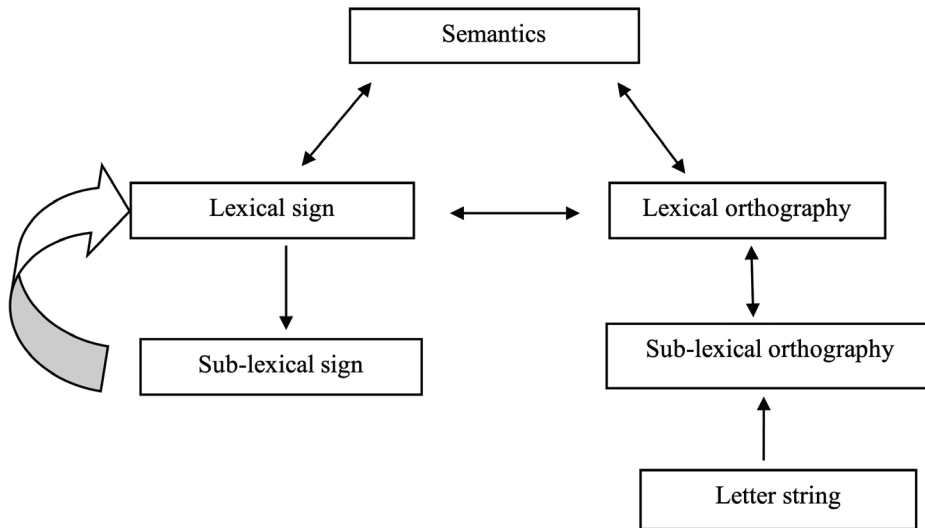


Figure 3: *Sign activation during visual word recognition by bilingual children: Adapted from Ellen & Marcel (2014, p. 82)*

With the language activation model above, Ellen and Marcel (2014, p. 82) have proposed the interconnectivity of two language modes. They have shown how one mode influences the activation of the brain in understanding the other mode. In their research which involved children of 9 years who were exposed to Dutch and NGT (Sign Language of the Netherlands), Ellen & Marcel (2014) identified the relatedness of spoken and sign language in brain activation and meaning formation. They noted:

There is a very positive influential relationship between written word recognition and co-activation of sign phonology in Deaf children. ...once lexical orthography is activated (i.e., recognizing the letter string d-o-g as the orthographical representation of the word dog), the sign translation of the activated written word is also activated (i.e., the sign DOG) through the direct link of their shared semantic features. Similarly, once the lexical sign is activated, activation feeds down to the composing sub-lexical sign elements (i.e., handshapes, movement, location, direction, and orientation features)” (p. 82).

With language activation, other sign lexical features that may share a semantic field may be co-activated as well (Marschark & Lee, 2014). Their findings are relevant to the current study which shows low abilities in written second languages among deaf students. However, despite the challenges of this model, of importance is the trans-linguaging aspect of bimodality that has been influenced by bimodal bilingualism in deaf education.

Conclusions

Language is of great contribution to other developmental areas like thinking, reasoning, and problem-solving. The findings of this study have indicated that all deaf students who were involved in the study had several errors in their language performance, hence making their written communication unintelligible. Being born in hearing families and living with speaking societies, deaf students have been linguistically disadvantaged in several ways including inadequate exposure to sign language environments. This situation has affected their sign language development, hence consistently developing both unmarked and unstandardized signs. Deaf students in secondary education in Tanzania have evidenced it, hence calling for appropriate language interventions including designing language drills and learning mechanisms to improve their literacy levels. Adequate levels of language competence enable students to understand the text and express their thoughts intelligibly in the respective language; the vice versa is also true. The adoption of inclusive education in Tanzania paves a significant milestone for the adoption of language programmes for enhancing language competence among deaf students. This paper has highlighted the need for the promotion of language skills along with teaching/learning.

Recommendations

The study has highlighted the status of literacy among deaf students in secondary education in Tanzania and unpacked its consequences in the light of producing intelligible texts. To assist them to develop literacy, this study makes the following recommendations.

- i. Language teachers ought to apply more reading exercises, and this will be of advantage to deaf students in increasing their language lexicon.
- ii. Language teaching approaches should be quite distinct in terms of engaging students to develop language skills. Hence, approaches like role play, storytelling, direct translation, and total language immersion should be mostly applicable.

- iii. Schools ought to enhance bilinguality in all aspects of learning like classroom pedagogy, assessment, and communication. Bilinguality is built through a Bilingual-Bicultural programme.
- iv. To complement this study and have a holistic approach to deaf education, further research may be done in the areas of classroom communication, pedagogy, and assessment and evaluation which are essential for promoting learning among deaf students.

References

- Adoyo, P. O. (2007). Educating Deaf Children in an Inclusive Setting in Kenya: Challenges and Considerations. *Electronic Journal for Inclusive Education*, 1-14.
- Armstrong, L. B. (Ed.). (2009). Policy, Experience and Change: Reflections of Inclusive Education. *International Review of Education*, 55, 437-461.
- Brons, M., & Namirembe, B. (2018). Improving Learning Outcome for All: Lessons Learned from Capacity Building of Teachers of the Deaf for Inclusive Classrooms in Tanzania. In A. Breedvert, & J. Jansen (Eds.), *Education for life in Africa* (pp. 179-194). Leiden, The Netherlands: Universiteit Leiden.
- Dammeyer, J., & Marschark, M. (2016). Level of Educational Attainment among Deaf Adults who Attended Bilingual–Bicultural Programs. *Journal of Deaf Studies and Deaf Education*, 394-402.
- Ellen, O., & Marcel, G. (2014). Bimodal Bilingual Cross Language Interaction. In M. Marc, T. Gladys, & K. Harry, *Bilingualism and Bilingual Deaf Education* (pp. 74-101). New York. Oxford University Press.
- Jack, C. R. (2022, July 19). *The Official Website of Educator Jack C Richards*. Retrieved from error-analysis: www.professorjackrichards.com
- Johnson, P. A. (2014). *Cognitive Development: Jean Piaget*. Mankato. Minnesota State University.
- Marschark, M. (2007). *Rising and Educating a Deaf Child: A comprehensive guide to the Choice, controversies, and decision faced by Parents and Teachers* (2nd ed.). New York: Oxford University Press.
- Marschark, M., & Knoors, H. (2014). *Teaching Deaf Learners: Psychological and Development Foundation*. USA: Oxford University Press.
- Marschark, M., & Lee, C. (2014). Navigating Two Languages in the Classroom: Goals, Evidence, and Outcomes. In M. Marschark, G. Tang, & H. Knoors, *Bilingualism and Bilingual Deaf Education* (pp. 213-241). New York: Oxford University Press.

- Marschark, M., Gladys, T., & Knoors, H. (Eds.). (2014). *Bilingualism and Bilingual Deaf Education*. New York: Oxford University Press.
- McIlroy, G. (2018). *Fragments of Silence*. Johannesburg: ABC Press.
- McIlroy, G., & Storbeck, C. (2011). Development of Deaf Identity: Ethnographic Study. *Journal of Deaf Studies and Deaf Education*, 16, 494-511.
- Mitchell, D. (2013). *American Sign Language Dictionary*. Retrieved from Home: www.signasl.org.
- Mkama, I., Philip, E., Namirembe, B., & Kilave, Y. (2015). Teaching Deaf and Hard of Hearing Learners: Testing Innovative Teaching Practice in Inclusive Secondary Schools in Tanzania. *International Congress of Education of the Deaf*, (pp. 1-9). Athens.
- Mkama, I. (2021a). *An In-depth Exploration of the First Phase of Inclusive Deaf Education in Tanzania*. Johannesburg: University of the Witwatersrand.
- Mkama, I. (2021b). *Removing Barriers to Inclusive Education for Tanzania's Deaf Learners*. Retrieved from Inclusive Education Initiative. All Rights Reserved: www.inclusive-education-initiative.org.
- Swanwick, R. (2017). *Language and Linguaging in Deaf Education: A framework for Pedagogy*. USA: Oxford University Press.

Access to Guidance and Counselling as a Determinant for Academic Performance among Students with Hearing Impairment in Tanzania

Wengi Mohamed Mchuchury¹ & Fidel Dassan Gwajekera²

^{1&2} College of Education, University of Dodoma-Tanzania

E-mail¹: mohamedw765@gmail.com

Abstract

This paper examines the extent to which access to guidance and counselling influences academic performance among students with hearing impairment in Tanzania. A mixed methods approach was employed to study the randomly selected 138 students with hearing impairment and a group of 12 participants constituting heads of school, academic teachers and school counsellors. It was found that academic performance among students with hearing impairment was determined by a number of factors among others including guidance and counselling services ($p = 0.043$). The study recommends that school administrators must be in the forefront in supporting and promoting guidance and counselling programs in schools.

Keywords: *hearing aids, discipline, school counsellors, learning environment*

Introduction

Guidance and counselling services are important tools in student development especially in improving their academic performance. When guidance and counselling services are missing in schools, students' adaptation becomes difficult, thus leading to low performance, misbehaviour and dropout. Guidance and counselling in Tanzania in different forms and with different interpretations have existed in societies for a long time before the colonial era. The school, as an important social institution, is required to help boys and girls, to develop their intellectual, social, physical and moral capacities.

Guidance and counselling is becoming slowly institutionalized and spread in educational institutions. Schools, for example, have, to a large extent, taken over the task of providing psychological support to boys and girls. Further, the Ministry of Education, has attempted to institutionalize the services within the education system by appointing career masters and mistresses to help students understand and develop interest in appropriate jobs or further education or training; to assess the students talents and capabilities and to encourage them to pursue careers or

further education best suited to them and to help students solve their personal problems which may affect their general progress in school.

Also, in Tanzania, Mgumba (2021) identified that the relationship between a teacher and a student is the most powerful element within the learning environment that forms the basis for social contact in which learning takes place. School counsellors play a crucial role in bridging this relationship between learners with hearing impairment and teachers. School counsellors, when consistently and frequently available and allowed to provide direct services to students, teachers and parents, can be a highly effective group of professionals who positively impact on students' aspirations, achievements, and offer financial aid knowledge (Acheru, 2015). Students appreciate guidance and counselling services in schools because it helps them cope with life challenges, and create good learning environment and develop interpersonal skills. It has been observed that some students with hearing impairment fail to seek counselling because the school counsellor is too old or too young, unpopular or of a gender not preferred by them (Camelford & Ebrahim, 2017).

Moreover, Maganga (2016) conducted a study on guidance and counselling for learners with disabilities in Kenya and found that guidance and counselling was helpful in the improvement of dependency, time wastages, self-regards and self-acceptance amongst many others. Guidance and counselling services cannot succeed if counselling facilities including resources (rooms, chairs, tables etc.), trained guidance and counselling teachers and time are inadequate (Boitt, 2016). , It was also noted that the availability of professionally trained counsellors in schools enhances compliance with the use of hearing aids by learners with hearing impairment through consistent counselling (Boitt, 2016; Oyekanmi, 2021). A teacher is a crucial resource in teaching and learning. Many challenges confront educators of students with hearing impairment, including diversity in the student population, critical period of language acquisition, the nature of linguistic exposure and the effect of amplification of sound to learners with hearing problems in the classroom (Acheru, 2015)

Guidance and counselling services supplement, strengthen, add real meaning to educational aspirations and improve self-understanding. Hence, this reduces social anxiety which then translates into improved performance (Acheru, 2015). Furthermore, Biswalo (1996) noted that schools have a two-fold crucial responsibilities which are to nurture students who have varying abilities, capacities, interest and unlimited potentials and prepare those individuals to become effective functioning members of their changing societies. Lack of specialized guidance and counselling services for students with hearing impairment in schools can lead to a range of negative

outcomes, including academic, social, and emotional difficulties. Thus, effective guidance and counselling services are not only crucial for normal learners, but for all students as noted by Parveen (2017). Therefore, all students require guidance and counselling service in order to develop their academic, social and personal competence.

Despite the recognition of guidance and counselling as essential support services for students with hearing impairments in Tanzania, limited access to these services may be a significant contributing factor to low academic performance among this population. Therefore, this study investigated the extent to which access to guidance and counselling services can determine academic performance among students with hearing impairments in Tanzania. Specifically, the study was guided by three objectives, namely to analyze the factors influencing the academic performance among students with hearing impairment; examine the accessibility of guidance and counselling services to students with hearing impairment and to examine the challenges hindering the provision of guidance and counselling services to students with hearing impairment.

Research Methodology

Research design and area

This study employed a convergent parallel design, which requires a researcher to collect qualitative and quantitative data in the same phase during the research process and integrate the entire data during analysis process. It was conducted in Njombe and Iringa regions and involved public secondary schools. The regions were chosen based on the fact that students with hearing impairment in the selected schools in these regions had good performance compared to other regions. For example, while 4 students with hearing impairment from Iringa region joined the advanced secondary education from 2017 to 2020, in Njombe region 7 students with hearing impairment joined the advanced secondary education. Moreover, the two regions were among the regions with a big number of students with hearing impairments whereby Njombe had 126 and Iringa 106 students with hearing impairment.

Sampling techniques and data collection methods

The population of this study constituted heads of school, school counsellors, academic teachers and students with hearing impairment from the selected schools. This population was considered to have sufficient data on the access of guidance and counselling as a determining factor for academic performance among students with hearing impairment in secondary schools in Tanzania. Out of 150 participants

involved in this study, 138 were students with hearing impairment and 12 came from the category of heads of school, academic teachers and school counsellors. All students were from form One to form Four classes and all participants were drawn from three secondary schools in Njombe and Iringa regions.

The sampling techniques employed in this study were simple random sampling and purposive sampling techniques. A simple random sampling was employed in selecting 138 students with hearing impairment which included 75 from Njombe and 63 from Iringa regions. The heads of school, school counsellors and academic teachers were selected through purposive sampling because they were considered to have important information about the contribution of guidance and counselling in improving academic performance among students with hearing impairment.

On the other hand, the study employed interview, focus group discussion and questionnaire to collect data from the participants. Semi-structured interview was administered to school counsellors, heads of school and academic teachers. The interview method was administered by an expert who was not a school teacher from the respective schools. There was a pressing need to hire an expert since the researchers did not have expertise in the sign language. Before embarking on data collection, the researchers had to train and orient the sign language expert on the interview questions. Each interview session lasted between one hour and one hour and a half. The interview was employed in this study because it permits flexibility in the sequence of discussions and it makes the participant comfortable in providing in-depth information about the topic under study. Interview provided data on the accessibility of the guidance and counselling services to students with hearing impairment and how guidance and counselling for students with hearing impairment is conducted. The researchers established rapport with participants and created a safe environment in order to allow them to express their views freely.

The questionnaire was employed to collect data about accessibility of guidance and counselling services and factors influencing the academic performance among the students with hearing impairment. The researchers distributed the questionnaires in person to participants and collected the completed questionnaires. This method was useful because the participants were located in the same geographical area, which allowed face-to-face interaction with the participants. The questionnaire method was chosen due to its strength of being free from the bias of the researcher as the respondents answer the questions in their own words and at their own pace.

Conversely, focus group discussion was also employed in data collection. Each focus group discussion comprised eight students; each session lasted between 45 minutes and one hour. This amount of time was sufficient to obtain rich data.

Focus group discussion is considered to be a useful strategy for facilitating people to explore and clarify their views and attitudes in ways that would not easily be achieved in a one-to-one interview (Kitzinger, 1995).

Data analysis plan

The quantitative data were subjected to descriptive statistical analysis. The data were coded, entered into the computer and analysed with the help of Statistical Package for Social Sciences (SPSS) version 20. The quantitative data were subjected to descriptive statistical analysis. Also, multiple linear regression analysis was performed to determine the factors influencing academic performance among the students with hearing impairment. SPSS was employed because of its ability to handle bulky data and to perform all of the analyses covered in the text and much more (Field, 2009). On the other hand, qualitative data were subjected to thematic analysis.

Ethical considerations

All ethical considerations were taken into account including obtaining ethical clearance letter from relevant authorities and asking for participants' consent to participate in the study. The researchers explained the purpose of the study to the study participants. Thereafter, the researchers asked the participants to sign the informed consent form for those who were willing to participate in the study. Participants were free to join or withdraw from the study without any harm. In addition, the researchers ensured confidentiality of the obtained information and anonymity of the participants and schools. Schools involved in this study were referred to by letters of alphabet.

Findings and Discussion

Factors influencing the academic performance among students with hearing impairments

The study, among other things, assessed the factors that influence the academic performance among the students with hearing impairment. To achieve this objective, the study analysed the data which were obtained from both students and school counsellors through questionnaire. Multiple linear regression analysis was performed to determine the factors influencing academic performance among the students with hearing impairment. The dependent variable which was the academic performance was regressed with independent variables which are guidance and counselling services, availability and usage of hearing aids, teachers' academic

qualifications and professional qualities in teaching. Other independent variables were teaching and learning facilities, availability of teachers, teaching and learning methods, moral and social support, physical environment, learners' motivation for learning, school environment and home environment. Table 2 summarises the factors influencing academic performance among students with hearing impairment.

Table 1: *Factors Influencing Academic Performance among Students with Hearing Impairment*

Model B	Unstandardized Coefficients		Standardized Coefficients	T	Sig. Lower Bound	95.0% Confidence Interval for B	
	Std. Error	Beta				Upper Bound	
(Constant)	4.960	.990		5.010	.000	3.000	6.919
Teachers' Academic Qualifications and Professional Qualities in Teaching	.004	.175	-.002	-.021	.030*	-.350	.343
Moral and Social Support	.090	.095	.084	.945	.346	-.099	.279
Physical Environment	-.156	.153	-.093	-1.021	.309	-.460	.147
Availability and the usage of Hearing Aids	-.323	.416	-.068	-.776	.004*	-1.146	.500
Teachers' Attitude	.042	.117	.032	.356	.723	-.190	.273
Teaching and Learning Methods	-.505	.234	-.196	-2.155	.033*	-.969	-.041
Teaching and Learning Facilities	-.158	.358	-.039	-.442	.015*	-.866	.550
Availability of teachers	-.643	.461	-.124	-1.395	.041*	-1.554	.269
Guidance and counselling services	-.200	.293	.097	-1.035	.043*	-.182	.532
Learners motivation to learn	.014	.097	.013	.141	.688	-.178	.206
School environment	.067	.101	.060	.659	.511	-.133	.267
Home environment	.138	.108	.115	1.283	.202	-.075	.352

Table 2 indicates that academic performance among students with hearing impairment was determined by factors such as availability and the usage of hearing aids ($p = 0.004$), teaching and learning facilities ($p = 0.015$), teachers' academic qualifications and professional qualities in teaching ($p = 0.030$), teaching and learning methods ($p = 0.033$), availability of teachers ($p = 0.041$) and guidance and counselling services ($p = 0.043$). The findings indicate that the availability and usage of the hearing aids by students with hearing impairment may enhance their academic performance due to the fact that some of their teachers rely on verbal communication since they are not conversant with the sign language. So, the usage of the hearing aids helps to amplify the teacher's voice during the lesson. Therefore, being able to hear what is being taught enhances students' academic performance

since the students' difficulties in hearing and understanding the lessons taught by the teachers are minimized.

The study findings correspond with the findings by Srinivas and Venkatkrishnan (2016), who indicated that when there is a lack of hearing aids and the problems are severe, students do not have the necessary resources to facilitate learning and then it is likely that their academic performance will get affected in a negative manner. Hearing impairment imposes problems of listening to the instructions and explanations given by the teachers and it is associated with poor language development. It impedes the communication abilities of students and, hence their academic performance gets influenced in a negative manner (Srinivas & Venkatkrishnan, 2016; Siahi & Maiyo, 2015). On the same breath, the hearing facilities are very crucial for students with hearing impairment when the learning process is practised. Hearing aids help to amplify sounds during the learning process (Gudyanga, Mudihwa & Wadesango, 2014). The findings also showed that teachers' academic qualifications and professional qualities had statistical influence on the academic performance of the students with hearing impairment at ($p = 0.030$). Indeed, the teachers have an imperative role to influence the academic performance of the students as they are bestowed with the authority to direct all the classroom teaching and learning activities.

Moreover, the results indicated that guidance and counselling services have positive influence on academic performance among the students with hearing impairment ($p = 0.043$). This implies that guidance and counselling services are more likely to improve the academic performance among students with hearing impairment. These findings concur with the study findings by Maganga (2016) who reported that students with hearing impairment in secondary schools face numerous problems and difficulties that normal students experience. Some of the students with hearing impairment may even get involved in violent and criminal acts, drug abuse, HIV, other sexually transmitted infections, teenage pregnancies, induced abortions and unemployment. Such factors have a direct impact upon their academic performance and lives and may hamper their psychological approach. The students may, to a larger extent, even experience the problems of depression, trauma or stress. The guidance and counselling services should be effectively provided in schools in an attempt to help the students to provide solutions to their problems, focus upon their studies, and become responsible members of the community (Maganga, 2016).

Access to guidance and counselling services

The second objective of the study sought to examine the accessibility of guidance and counselling services for the students with hearing impairment. To achieve

this objective, quantitative data collected from the students' questionnaire, school counsellors, heads of school and academic teachers were analysed. The students' questionnaire had a set of statements in the form of a Likert Scale in which five scales were used to rate the responses whereby number 1 was rated as 'strongly disagree' and number 5 was rated 'strongly agree'. The analysed data were summarized in terms of mean and standard deviations as depicted in Table 3.

Table 2: *Accessibility of Guidance and Counselling Services*

Statement	Mean	SD
Guidance and counselling services are provided to students on study habits	4.3	1.2
We provide students with guidance and counselling on time management	3.6	0.9
Guidance and counselling services are provided to students with hearing impairment on their self-awareness and discipline	4.6	1.1
Students who experience a sudden drop in their grades are referred to guidance and counselling department in our school	2.9	0.8
School counsellors provide G&C services to the students about their career development	2.7	0.5
We guide students on how to give attention and improve in all subjects	3.2	0.7
Students with hearing impairment are counselled on personal hygiene, good manner and respect to others in the community	4.5	0.2
Guidance and counselling services are provided to students on subject selection	4.2	0.9
We guide and counsel students on how to overcome examination anxiety	2.5	0.5
Guidance and counselling are provided on how to prepare for the end term and national examinations	3.8	0.7
Students were counselled on subject combination choices	2.6	0.9
The school counsellor and other teachers provide G&C services to students with HI to set goals for their future life	1.9	1.0

The results of the study revealed that most of the students were guided on their self-awareness and discipline with the mean score of 4.6. This is based on the fact that there is no success in learning process without discipline. So in order to perform well in their subjects, students are required to be disciplined in terms of time management, performance of the activities related to as well as attending the classes regularly. They should also respect their teachers so as to improve their academic performance. Moreover, to support the findings, the same observation was identified during the interview with the school counsellor when quoted saying:

I provide guidance and counselling services to students in various aspects but mostly in academic issues to which we counsel them in study skills, behavioural education versus education and life skills and their future life. These study skills entail planning time table for their personal studies, as well as subject selection by considering their abilities in the subject.

(Interview with the Counsellor of School C, November, 2022)

In addition, the academic teacher from school A also provided insights into the same aspect and was quoted saying:

Guidance and counselling services are provided in our school for less than hundred (100%) percent because I participate in other school duties but I try as much as I can to provide the G & C services. Most of the guidance and counselling services that I provide to students are centred on good manner and discipline. They also focus on studies, academic performance, counselling on study habit and sometimes, the family challenges. I have a program of contacting the students' parents so as to solve those challenges. This helps to build confidence among the students and improve their academic performance (Interview with academic teacher of School A , November, 2022)

Also, in the same line during the interview with the head of school from school B, she was quoted saying:

In our school, every teacher provides G &C services to students with hearing impairment because teachers are the guardians. So, all the staffs provide counselling in different aspects like hard working behaviour, time management, discipline and so forth. Every teacher sometimes identifies the challenges and gets them transferred to the counselling department. (Interview with the Head of School B, November, 2022)

Further, the majority reported that they were provided with guidance and counselling services regarding the selection of the subject with the mean score of 4.2. The students with hearing impairment are guided and counselled on personal hygiene, good manner and respect to others in the community with the mean score of 4.5. Also, these students are guided and counselled on the study habits with the mean score of 4.3 whereas guidance and counselling services on how to prepare for the end term and national examination are provided to students with hearing impairment with the mean score of 3.8. The statement on guiding and counselling students on time management scored the mean of 3.6. This implies that students with hearing impairments who received guidance and counselling services, were guided and counselled in a variety of areas which aimed at enhancing their learning behaviour and, thus improving their academic performance.

Likewise, Maingi, Mulwa, Maithya, and Migosi (2017) claim that secondary school

education is crucial for career decisions. Teachers should guide the students on the careers and allow them to consult from their own angle and decide on the subjects they should choose for the enhancement of their own dream careers.

On the same way, Ibrahim, Ghavifekr, Ling, Siraj and Azeez (2014) indicate that learners get motivated when studying their preferred subjects. They perform better in the subjects of their choices than those which are compulsory. This is because from within they feel that they have done it on their own free will. No one has pursued them to have the subjects. Also, they get a positive attitude towards what they feel that they have taken with their own free will. Positive attitude gives them the desire to perform better. Even in instances when there is content that they have not understood, they consult and visit the teachers individually to understand better. That is the reason why most students start performing well after choosing subjects even if earlier they were taking the same subject and not performing well on the same. Based on the findings, the study suggested that it is important for the teachers to guide and counsell students about subject selection prior the actual time they are required to make the selection.

In support to that finding, Siah and Maiyo (2015) reported that guidance and counselling is good for learners' improvement in academic performance as they will have better means of understanding what they have learnt in class. They will avoid relating some subjects to certain gender since anyone can do anything and perform well in it (Hill et al., 2016). Therefore, school counsellors and teachers should prioritize guiding students on academic performance through improving their study skills.

Challenges hindering the provision of G&C services to students with hearing impairment

Under this objective, the researchers were interested in finding out the challenges that hinder the provision of guidance and counselling services among students with hearing impairment in the selected schools. Based on the study findings, the respondents revealed that challenges hindering guidance and counselling services include but are not limited to lack of hearing aids, lack of counsellors with sign language specialties, inadequate guidance and counselling facilities and counsellor's workload as shown in Table 3.

Table 3: *Challenges Hindering the Provision of G&C for Students with Hearing Impairments*

Challenges	Responses	Percent of Cases
Inadequate school counsellors specializing in sign language	113	81.9
School counsellors heavy teaching workload	24	17.4
Insufficient guidance and counselling facilities	86	63.3
Scarcity of hearing aids	138	100

Despite guidance and counselling being provided in these schools, the school counsellors were not qualified for counselling practices and neither they were they competent in sign language which is a common and major means of communication used by students with hearing impairment. To support the findings, the head of school from school A had the following to say:

We use the normal teachers who did not specialize in neither sign language nor guidance and counselling. It is very difficult to practise but we have to practise it and, in fact, it is very useful for the performance of the students with hearing impairment. (Interview with the Head of School A, November, 2022)

The findings are in line with the findings by Parveen (2017) who revealed that there is still insufficient assistance in secondary and higher education institutions to enable students achieve their career aspirations. However, students might, therefore, be encountering an increasing need to acquire relevant career information that will enable them seek better paid jobs. Many schools have previously appointed some teachers as career masters without providing them with the necessary training and facilities for professional advice. Patterson, Hayes and McIntire (1974) argue that the counsellors with such attributes as having interest in student welfare, willingness to serve others, devotion to study, competence, confidence, commitment and, generally, having a good personality makes them best teachers to serve as school counsellors. On the contrary, the school counsellors who have compromised personalities, poor attitudes towards work and lack of commitment result in bad school counsellors.

Similarly, failure to clearly define roles and responsibilities in the implementation process affect the implementation of G & C programs. Lack of continuing professional development of school counsellors is also another factor that affects the implementation of G&C programs in secondary schools in the sense that school counsellors who do not attend such training remain outdated because they are not equipped with new techniques, materials and information among other things (Camelford & Ebrahim, 2017).

The study findings also indicated that the guidance and counselling facilities were inadequate. This implies that proper facilities are needed to ensure the proper

functioning and efficiency of guidance and counselling services. The facilities such as guidance and counselling room, proper furniture, bookshelves and the like are necessary. In order to have the quality guidance and counselling services, there should be a number of facilities which include office space, bookshelves, drawers, files, time and reference books. This finding is consonant with that of Boitt (2016) who noted that guidance and counselling activities or programs cannot thrive if G&C facilities are inadequate. Indeed, inadequate facilities can hinder implementation of guidance and counselling programs in many ways. The findings of the current study indicate that all school counsellors who were involved in the study reported that the limited space for operating hindered the implementation of the guidance and counselling programs. To this effect, the researchers observed that there was limited space for G&C services in all the three schools studied leading to limited provision of G&C services to students with hearing impairment.

Further, in conjunction with the findings, Owusu-Agyeman and Larbi-Siaw (2018) identified that there is slow growth of guidance and counselling in educational systems which are attributed to lack of funds, training facilities, and high turnover of school counsellors to greener pastures and inadequate trained school counsellors. All these factors hinder the provision of guidance and counselling services in one way or another.

The findings comply with those by Parveen (2017) who identified that there is still insufficient assistance in secondary and higher education institutions to enable students to achieve their career aspirations. In addition, school teacher's heavy teaching loads and other responsibilities such as administrative and teaching duties in the school leave little time for them to meet pupils who are in need of guidance and counselling services. However, students today indicate a higher need for career guidance than students in the previous decade. Students might therefore be encountering an increased need to acquire relevant career information that will enable them to seek better paid jobs.

Conclusions

This study has revealed that factors such as scarcity of hearing aids for students with hearing impairment, inadequate number of school counsellors specializing in sign language, insufficient guidance and counselling facilities and the school counsellors' teaching workload seem to negatively impact the provision of guidance and counselling services to students with hearing impairment. The study therefore concludes that, collaborative efforts between different stakeholders such as teachers, counsellors and the school administration coupled with the availability of assistive devices such as hearing aids are key to improving access and quality of guidance and counselling services in schools. In schools where students with hearing

impairments are given enough attention, increasing awareness of the importance of guidance and counselling services for these students is of utmost importance as a way to improve their academic performance. It is therefore right to argue that access to guidance and counselling services is critical for supporting the academic performance of students with hearing impairment in Tanzania.

Recommendations

In view of the results of this study, the following recommendations are made: First, school administrators must be in the forefront in supporting and promoting guidance and counselling programmes by ensuring that guidance and counselling services to students with hearing impairment are given priority because they are the ones mostly affected by various challenges compared to normal students. Secondly, the government should ensure the availability of hearing aids for learners with hearing impairments. Thirdly, school counsellors, who are mostly teachers should be allocated low workloads to enable them to have an ample time to attend students with hearing impairment.

References

- Achero, S. O. (2015). *Impact of counselling on compliance on use of hearing aids by learners with hearing impairment in primary schools* (unpublished master of education dissertation), Jomo Kenyatta University.
- Biswalo, M. P. (1996). *An introduction to guidance and counselling in diverse African contexts*. Dar es Salaam: Dar es Salaam University Press.
- Boitt, M. L. (2016). Evaluation of the challenges in the implementation of the guidance and counselling programme in Baringo County secondary schools, Kenya. *Journal of Education and Practice*, 7(30), 27–34.
- Camelford, K. G., & Ebrahim, C. H. (2017). *Factors that affect implementation of a comprehensive school counselling program in secondary schools*. Vistas: The American Counselling Association.
- Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). London: Sage Publications Ltd.
- Gudyanga, E., Mudihwa, C., & Wadesango, N. (2014). The extent of bullying in some schools in Zimbabwe: A psychological perspective, with the notion of designing an intervention model. *Journal of Social Sciences*, 40(1), 65-74.
- Hill, F., Mammarella, I. C., Devine, A., Caviola, S., Passolunghi, M. C., & Szűcs, D. (2016). Maths anxiety in primary and secondary school students: Gender differences, developmental changes and anxiety specificity. *Learning and Individual Differences*, 48(1), 45-53. <https://doi.org/10.1016/j.lindif.2016.02.006>

- Ibrahim, M. S., Ghavifekr, S., Ling, S., Siraj, S., & Azeez, M. I. K. (2014). Can transformational leadership influence on teachers' commitment towards organization, teaching profession, and students learning? A quantitative analysis. *Asia Pacific Education Review*, 15(2), 177–190. <https://doi.org/10.1007/s12564-013-9308-3>
- Kitzinger, J. (1995) Qualitative research: Introducing focus groups. *BMJ*, 311, 299 – 302
- Maganga, J. H. (2016). *Factors affecting students academic performance: A case study of public secondary schools in Ilala District, Dar es Salaam, Tanzania* (unpublished master dissertation), University of Dar es salaam.
- Maingi, D., Mulwa, D., Maithya, R., & Migosi, J. (2017). Influence of school physical facilities on students' discipline in public secondary schools in Makueni County, Kenya. *American Journal of Education and Learning*, 2(1), 34–42.
- Mgumba, B. F. (2021). The status of counselling services for students with visual impairments in Tanzanian universities. *Journal of Humanities & Social Science (JHSS)*, 10(5), 23-45.
- Owusu-Agyeman, Y., & Larbi-Siaw, O. (2018). Exploring the factors that enhance student–content interaction in a technology-mediated learning environment. *Cogent Education*, 5(1), 1456780.
- Oyekanmi, M. A. (2021). Effectiveness of counselling on hearing aid adherence among students with hearing loss in Nigerian schools. *International Journal of Pediatric Otorhinolaryngology*, 14(1), 15-27.
- Parveen, Z. (2017). Educational effectiveness of the 5E model for scientific achievement of students with hearing impairment. *Journal of Baltic Science Education*, 16(5), 723-732.
- Patterson, L.E., , Hayes, R.W. & McIntire, P.R. (1974). Careers in operation: Industry as a laboratory for counsellor development. *Counsellor Education and Supervision*, 14(1), 64-70. <https://doi.org/10.1002/j.1556-6978.1974.tb01995.x>
- Siahi, E. A., & Maiyo, J. K. (2015). Study of the relationship between study habits and academic achievement of students: A case of Spicer higher secondary school, India. *International Journal of India*, 7(7), 134–141.
- Srinivas, P., & Venkatkrishnan, S. (2016). Factors affecting scholastic performance in school children. *IOSR Journal of Dental and Medical Sciences*, 15(7), 47–53.

Promoting Support Services of Special Education Units for Enhancing Educational Achievements of Students with Disabilities in Tanzanian Universities

Batista Francis Mgumba¹ & Lucas Luhende Kija²

¹ & ² Faculty of Education, Dar es Salaam University College of Education – Tanzania

E-mail¹: bamgumba@yahoo.com

Abstract

This study examined support services offered by special education units in promoting quality education for students with disabilities in Tanzanian universities. It employed a qualitative approach under multiple case study design. The study was conducted in Dar es Salaam at the University of Dar es Salaam (Mwalimu Julius Kambarage Nyerere Mlimani Campus and Dar es salaam University College of Education). Two disability specialists and ten students with disabilities were purposively sampled. Findings revealed shortage of trained disability personnel and disability specialists were more committed to handling academic and administrative duties rather than social and psychological roles. Thus, support services offered by the special education units should expand beyond traditional educational and administrative roles to address social and psychological needs of students with disabilities.

Keywords: *special education units, students with disabilities, support services, university*

Introduction

In recent years, more and more tertiary institutions have been focusing on the mainstreaming of students with disabilities worldwide. This is due to the call for increased inclusivity within universities with the claim that it should be the university's responsibility to respond to the needs of all students (Morina, 2017). Initiatives for inclusion of students with disabilities in the mainstream of tertiary institutions involve making reasonable adjustments and providing support services for students with disabilities to ensure full participation and equal opportunities in learning (Mbuva, 2019). In order to respond to the diverse needs of students with disabilities, units have been established to offer specialised support services

to those students (Al-Hmouz, 2014; Kija, 2017; Mbuva, 2019; Mgumba, 2018). Units coordinating support services for students with disabilities in higher education institutions (HEIs) have been given a variety of names including Disability Unit, Special Education Unit and Disability Support Unit (Bhalalusesa, 2012; Fakoya & Fakoya, 2015; Foundation of Tertiary Institutions of the Northern Metropolis (FOTIM), 2011). Mbuva, 2019). This article uses the name *Special Education Unit* to refer to the office responsible for provision of special support services to students with disabilities in HEIs.

In America, postsecondary support services began to increase after World War II with the advent of a disability resource programme at the University of Illinois to assist veterans who needed rehabilitation (Council for the Advancement of Standards in Higher Education (CAS), 2006; Reynolds & Fletcher-Janzen, 2002). However, the expansion of resources for students with disabilities in universities occurred after 1973 following the emphasis on the implementation of Rehabilitation Act which required institutions receiving federal funding to provide non-discriminatory equal access to programmes and facilities for individuals with disabilities (Reynolds & Fletcher-Janzen, 2002). Most campuses experienced a significant growth in the number of students with disabilities. Consequently, the field of disability resources was developed to accommodate the influx of students with disabilities (Evans et.al.2017). At the beginning, disability services were housed in students' affairs. Other campuses chose to house the office in an academic department such as psychology, counselling, special education, or education (Evans et.al. 2017).

FOTIM (2011) surveyed the functions of special education units in South African HEIs. It was found that, functions of special education units varied greatly. The longer the unit had been in existence, the broader the scope of services to students with disabilities. Common responsibilities undertaken by special education units (though not all were offered in all institutions) included: policy development; awareness raising; auditing physical accessibility and assisting when access issues arose; provision and maintenance of assistive technology devices; changing learning materials into accessible formats; sorting out compensatory time for examinations and tests; assisting with applications for governmental bursaries and grants; counselling; negotiation when conflicts arose; acting as an accessible social hub for students to interact and socialise; as well as acting as diversity champions and change agents.

In Tanzania, Education for All (EFA) has been of great concern in the discussion of support services for students with disabilities. In 1994, the Government of Tanzania ratified the Salamanca Statement and Framework for Action on Special Needs Education. The Salamanca statement proclaims that every child has unique

characteristics, interests, abilities and learning needs. Therefore, education systems and programmes should be designed and implemented to take into account the wide diversity of these characteristics and needs in regular schools. In 2009, Tanzania ratified the Convention on the Rights of Persons with Disability and its Optional Protocol. Article 24 of the convention recognises and emphasises on equal opportunity to education for persons with disabilities without discrimination. It calls for governments to provide a reasonable accommodation of the individuals' requirements and support services required within the general education system (United Nations, 2006). By ratifying those conventions and declarations, Tanzania committed herself to removing barriers in infrastructures, materials and educational services offered to students with disabilities. In that respect, the Government of Tanzania is committed to two goals: First, to ensure that systemic and structural barriers that obstruct certain groups of Tanzanians from realising their right to access, fully participate, learn, and complete education in all levels are removed; Second, to ensure that in all levels of education, all learners do learn together regardless of any difficulties or differences they may have (United Republic of Tanzania-URT, 2021). To realise these goals, the government of Tanzania has taken measures to address disability issues by formulating various policy guidelines and strategies such as the National Policy on Disability of 2004; Persons with Disabilities Act of 2010; the national strategy on inclusive education (2009-2017); the National strategy on Inclusive education (2018-2021); and the National Strategy for inclusive education (2021/2022-2025/2026).

In the same line, educational institutions at all levels have developed programmes that aim at supporting students with disabilities in realising their right to access, complete and benefit from the education system. The University of Dar es salaam (UDSM) with its constituent colleges is the pioneer in establishing the special education units at tertiary level dating back to 1978 when two students with visual impairment were enrolled (Kija, 2017). The units offer specialised support services to students with disabilities. These support services include: assistive technology support services; transcription and production of materials in accessible formats; ensuring test accommodation during examinations; sensitizing students with disabilities and the community on disability issues; purchasing and managing special facilities and materials for students with disabilities; providing technical support to university lecturers on issues related to teaching students with disabilities; rendering counselling services to students with disabilities; and ensuring social and physical accommodation for students with disabilities in learning (Harbour, 2009; Mbuyha, 2019; UDSM, 2022). Students with disabilities range from students with hearing impairments, visual impairments, physical impairments, learning disabilities, to those with emotional and behavioural disorders (Mantsha,

2016). UDSM has been and is serving students with hearing, visual, and physical impairments (Kija, 2017; Mgumba, 2018; UDSM, 2022). Special education units ensure that students with disabilities are enrolled in their academic programmes, attain reasonable accommodations, and have access to key services necessary to enable them achieve their academic and social goals. The Units are also expected to pioneer equality and equity for students with disabilities including disability mainstreaming in all policies and practices at UDSM (Kija, 2017; UDSM, 2022).

Best practices of UDSM in supporting students with disabilities worth noting include the outstanding services in the provision of material and human support to students with disabilities; maintenance of quality scanned and transcribed student material; and the use of modern assistive technology in the learning process (Kija, 2017; Mgumba, 2018). To ensure that students with disabilities get the appropriate services and in accordance with the university plans, UDSM has developed a policy on disability and special educational needs with five key objectives which aim at ensuring that prospective and current staff and students with disabilities are not discriminated during provision of services; anticipatory action is taken to provide inclusive access to University facilities and services; reasonable adjustments are put in place for staff, students, prospective staff and students with disabilities to enhance their productivity; equality of opportunity for students and staff with disabilities is established to promote their recruitment, retention, and progression; and, a positive working and learning environment for students and staff with disabilities is promoted (UDSM, 2022).

However, studies have indicated that in supporting students with disabilities, special education units are faced with a number of constraints. They include resistance from management and some faculty staff members; unavailability of disability policies; inadequate assistive technology and devices; lack of knowledge on assistive technology and special needs education to supporting staff; inaccessible infrastructures; transport constraints; communication barriers, unfriendly working environment and Health constraints (Al-Hmouz, 2014; Mbuva, 2019; Tungaraza, 2010; UDSM, 2022). Institution's leadership and staff play essential roles in providing effective special education services in the universities. They can not only accelerate inclusivity of students with disabilities in the mainstream learning environment but also expand knowledge of special needs education among members (Sun & Xin, 2020).

Various studies (Bhalalusesa, 2012; Kija, 2017; Lyakurwa, 2018; Mgumba, 2018; Rushahu, 2017) on provision of support services for students with disabilities in Tanzanian HEIs have been conducted. These studies revealed constraints that students with disabilities encounter when interacting and studying in HEIs.

However, little information is documented on support services offered by special education units in HEIs and the extent to which those services meet the diverse needs of learners with disabilities in Tanzania. Thus, this study examined how support services offered by special education units can promote quality education for students with disabilities in Tanzanian universities. Specifically, the study explored barriers encountered by special education units, as well as psychosocial roles of the special education units in enhancing quality education for students with disabilities in Tanzanian universities.

Methodology

Research approach and design

The study employed a qualitative approach to studying behaviour. This approach allows in-depth and detailed understanding of the studied problem by interviewing participants in their natural settings and learning about the problem from their viewpoints (Creswell, 2014). Moreover, the approach allowed social intimacy, direct conversations and discussions between researchers and participants to take place. To effect the study, the researchers employed a case study design. A case study is used to develop in-depth analysis of a programme, event, activity, process, one or more individuals in real-life within a unique instance (Cohen, et al, 2018; Cresswell, 2014). A case study design was used to facilitate in-depth investigation of the operation of the special education units in offering support services to students with disabilities.

Area of the study

This study was conducted in Dar es Salaam at UDSM (MJKNMC) referred to as IST.1 and DUCE referred to as IST.2. These HEIs were chosen because they have well established special education units that support students with disabilities.

Participants

The research sample was derived from a population of students with disabilities and disability specialists. It consisted of 12 participants (six females and six males). Six participants were recruited from MJKNMC and six from DUCE, of whom, two were disability specialists and 10 students with disabilities. Among students with disabilities, two were in the first year, four in the second year and four in the third year. Research participants were purposively sampled based on their experience, expertise and accumulated knowledge on disability issues.

Data collection

Data were generated through semi-structured interviews. Semi-structured interviews allow researchers to ask several basic questions while making follow-up to the given responses (Cohen, et al., 2018; Creswell, 2014). Interviews were tape-recorded after seeking participants' consent. Thereafter, the researchers transcribed the recorded interviews into ink-print format. Data were subjected to thematic analysis. Themes and sub-themes were coded manually by identifying recurring themes in the transcripts. To arrive at a theme, the researchers categorised data with common elements. Multiple validating strategies including: using rich descriptions to convey the findings, presentation of discrepant information that runs counter to the themes; and, spending prolonged time in the field as proposed by Creswell (2007) were employed to determine the accuracy of study findings.

Consideration of research ethics

Throughout this study, the researchers observed all research ethics including securing research permit from relevant authorities for entrance to the field. On top of that, the respondents signed an informed consent. The researchers ensured the participants on adherence to confidentiality, privacy and anonymity. The participants were free to join or withdraw from the study at any time without any harm or risk. All these ethical issues were considered prior to the field work, during data collection and during writing the report.

Findings and Discussion

This study examined support services offered by special education units in promoting quality education for students with disabilities in two sampled HEIs in Tanzania. This section deals with presentation and discussion of the study findings. The findings are presented under the following themes and subthemes. The main themes are: functions of special education units; barriers encountered by special education units; and, social and psychological roles of special education units. The sub-themes are: trained disability staff; adapted equipment and facilities; students' awareness of support services; statistics of students with disabilities; and, screening and assessment of students' disabilities.

Functions of special education units

A special education unit is a section within the university administrative structure established to address the unique academic and social needs of students with disabilities (Mgumba, 2018). The idea is that each HEI must have a unit (be-it a department, centre or unit) that addresses both academic and social needs of

students with disabilities. Two disability specialists were interviewed on the responsibilities of special education units in supporting students with disabilities. The findings indicated that special education units were responsible for developing policies on special needs education; community awareness raising on disability issues; converting learning materials into accessible formats; ensuring physical accessibility; maintenance of assistive technology devices; purchasing, storing and distributing materials for students with disabilities; providing technical support to university lecturers on lecture delivery modes and examinations; guiding first year students with disabilities during annual orientation sessions; provision of psycho-social support to students with disabilities; acting as a bridge between the university management and students with disabilities in all administrative and educational aspects; and, supporting students with disabilities in the field during teaching practice and practical training sessions. Their responses combined social, educational, administrative and psychological roles. Mantsha (2016) notes that special education units offer specialised services to students with disabilities that facilitate their access and integration into mainstream faculties.

Barriers encountered by special education units in HEIs

Concerning barriers encountered by special education units in supporting students with disabilities in the sampled HEIs, responses from participants identified five barriers, namely shortage of disability specialists; inadequate adapted equipment and facilities; limited students' awareness of the available support services; poor record keeping of students with disabilities; and, absence of screening and assessment services of students' disabilities in their course of learning. They revealed that IST.1 owned a policy on special needs education that was referred to as a *Policy on Disability and Special Educational Needs*, which was approved in 2022. IST.2 did not have its own policy. However, one participant said, "The institution is in the process of preparing its own policy". She emphasized:

In actual fact, there is no policy that guides the provision of support services to students with disabilities. A committee is formed to steer the preparation of the policy. However, much has been done to support students and staff with disabilities. Currently, students with disabilities receive all educational and social services from the university through the existing special needs education unit. For lecturers with visual impairments, the university has also employed personal assistants whose number is equal to the number of lecturers. Therefore, all lecturers with visual impairments have personal assistants. (Reported by one female disability specialist from IST.2).

The above quotation implies that, whereas the special education unit at IST.1 implemented its functions in accordance with the available policy, IST.2 provided services to students and staff with special needs by responding to the needs as they emerged. However, it was noted that provision of services to students and staff with disabilities in this institution was effective. On top of that, by the time this article was developed, a committee for developing a policy on disability at IST.2 had been commissioned to ensure that there is a comprehensive policy that provides commitments and guidelines on provision of support services to students with disabilities.

Trained disability staff

Findings from interviews revealed that there was a shortage of trained human resources to administer services in the special education units. Both units were running shortage of trained staff such as note-takers, human readers, special education teachers, Braille transcribers and sign language interpreters. At the same time, it was indicated that the units lacked assistive technology specialists, physiotherapists, audiologists, speech-language pathologists, orientation and mobility specialists, sighted guides, ophthalmologists, rehabilitation counsellors and mentors.

One transcriber can save three students with visual impairments and two human readers per student (Kija, 2017). Participants reported that IST.1 had four Braille transcribers, four sign language interpreters and 45 readers to serve 151 students with disabilities. On the other hand, IST.2 had two Braille transcribers, one sign language interpreter, one speech therapist and 23 human readers/note-takers to serve 62 students with disabilities. Analytically, both special education units had a large number of students with disabilities compared to the number of trained staff to save them. The available trained staff, although limited in number were only in two categories: braille transcribers and sign language interpreters. Human readers/note-takers on the other hand, were recruited without any specialised training and worked under contractual bases. Indeed, both special education units experienced a mismatch between the number of students with disabilities and trained staff. Disability staff had a higher working load than the required standard. Studies by Al-Hmouz (2014); Kija (2017); Mbuva (2019); and FOTIMU (2011) affirmed that shortage of human, financial and physical resources has been an agenda for discussion in education for students with disabilities worldwide. Proper allocation of human and financial resources for students with disabilities depends to a great extent on the availability of reliable statistics of students with disabilities; well stipulated disability policies; institutional financial position, priority level, and community member's awareness of disability issues. Interestingly, it was noted that both special education units had moved further ahead by purchasing tri-motorcycles for smooth shuttle of students with disabilities.

Adapted equipment and facilities

Interview responses indicated that the special education units encountered shortage of adapted equipment and facilities such as hearing aids, heavily lined booklets, white canes, crutches, wheelchairs, talking calculators, computers installed with screen readers, perkins brailers, braille/talking watches, closed-circuit televisions, voice recorders, magnifiers, refreshable braille display, braille embossers, scanners, thermoform machines, talking dictionaries and braille books. Since most of these facilities were purchased during the establishment of the units, most of them were outdated and worn out; therefore, they required a serious repair. One participant revealed the extent to which support services in the special education units were affected by inadequate trained personnel and facilities. He explained:

In our university, each student with disability has an assistant employed by the university and most of the materials are transformed in accessible format such as braille, large print and audio. Our university has almost all facilities we need. However, we do not have technicians specialised in repairing those facilities. (Reported by a second year female student with disability from IST.2).

All in all, the importance of adapted equipment and facilities for students with disabilities in HEIs is emphasized by Mantsha (2016) who considers availability of adaptive equipment/technology (adjustable chairs and desks, table lamps, hearing aids, book turners, Perkins Brailers, talking calculators, braille, large print, audio materials) as an important aspect in promoting learning of students with disabilities in HEIs.

Students' awareness of support services

Concerning students' awareness of support services offered by the special education units, data from interviews revealed that disability specialists used to hold meetings to enlighten students with disabilities on the available support services. However, students with disabilities reported unavailability of accessible written materials about support services leading to their limited awareness. A second year student with disability from IST.2 emphasized the following:

Most of the students with disabilities joined the university with no information on the available services for students with disabilities. As a student with visual impairment, I could not access information in the campus which is in ink print. Even if they displayed information on the notice boards, I could not

access it. I, however, realized later that even the campus notice boards did not supply information on services the university renders to students with disabilities. Therefore, some of the students with disabilities remain uninformed until they are notified by lecturers during lecture sessions.

In critical situations, students with disabilities may present themselves and request for appropriate support services. However, according to Getzel and Thoma (2008) and Matonya (2016), this is always not the case; first-year students may not know which adjustments are available to them at the university. Access to services depends on physical, communication and information manipulation by students with disabilities. All in all, it is the responsibility of the university to publicise and provide the recommended adjustments that will give the student access to quality education.

Statistics of students with disabilities

The findings from interview with disability specialists revealed that record-keeping systems in the studied HEIs were not designed to collect information on students' disabilities, types of support services needed and ways of accessing them. As a result, there was no correlation between the number of enrolled students with disabilities and support services offered. It was reported by the disability specialist from IST.2 that, the special education unit had maintained a register of students with disabilities who received disability related services, but the register was not comprehensive. She emphasised:

We are facing a serious problem in obtaining the accurate numbers of students with disabilities because some of them are reluctant to disclose their disabilities. Worse still, in the administrative structure of the university, there is no officer who tracks students with disabilities during admission time. Because of that, it is not easy to estimate the real demands of services and facilities needed for them to achieve their educational goals successfully.

The situation revealed by the participant in the quotations above is a clear evidence that universities have not established a database for keeping records of students with disabilities leading to ad hoc planning of support services. Ad hoc planning limits proper performance of the special education units. The planning of support services to be offered by these units ought to be collaborative; that is involving students with disabilities and the team of experts from various disciplines. Absence of disability statistics has made special education units more reactive in their approach to provide support services. This means that HEIs start thinking

of students with disabilities after their arrival. They have to adopt a pro-active approach by determining disability affairs in advance so as to create a conducive learning environment prior to the opening of universities (Kija, 2017).

Screening and assessment of students' disabilities

Concerning the screening and assessment of students' disabilities, it was revealed by braille transcribers that their offices did not have experts and facilities for disability testing and screening. It was further stated that university academic and administrative staff relied solely on information communicated to the universities by students themselves during registration. One disability specialist from IST.2 stated:

Students tend to come to our office to report about their learning needs so that they can be supported. The challenge we face is that screening of disabilities is not done in our institutions. What we receive from students are documents that indicate their disabilities with verification from the medical doctors. The whole process took place when they were applying for studies.

The quotation above implies that, if there is no screening of students to determine the degree of their impairment, it is likely that an adjustment that will be made may not match with the level of impairment of the student because screening and assessment are the key to finding out the needs of the learners (Ministry of Education and Vocational Training, 2012). For instance, a student may be given large print while he/she requires braille.

Generally, it was found that both special education units adopted a reactive approach in meeting the desired learning needs of students with disabilities. They dealt with the needs of individual students when needs arose. They never attempted to anticipate and plan for the learning needs of students with disabilities prior to enrolment. This was clearly explained by one participant who said:

Currently, universities deal with students with disabilities on an ad-hoc manner, that is, they are reactive. Universities begin to think of what to provide to students with disabilities after their arrival. They don't plan in advance (Reported by a female second year student with disability from IST.1).

Therefore, planning in advance for expected services to students with disabilities is important. This can only be achieved if there are well organised and furnished special education units with proper coordination and management, policies, guidelines, statistics of students with disabilities and disability awareness programmes.

Social and psychological roles of special education units

Regarding the social and psychological roles of special education units in rendering quality services for students with disabilities in studied HEIs, interview responses from disability specialists revealed that, one of the responsibilities of special education units was provision of psycho-social support to students with disabilities. However, it was argued by (75%) of participants (students with disabilities) from both institutions that staff in special education units, were more active and committed to performing academic and administrative duties than social and psychological roles. Participants argued that persons with disabilities need social support in various areas including orientation and mobility, interaction, entertainments, sports and games, disability awareness and counselling. One participant elaborated:

I was told that braille transcribers are specialists in counselling persons with disabilities, but what I realised is that in many cases they supervise readers and distribute facilities for students with disabilities. We are forced to seek counselling support from other people who are not trained on special education (stated by the 1st year male student with disability from IST.2).

Another participant added:

I needed advice from the special education unit when I missed a loan. The special education officers instructed readers to send me to the Dean of students for counselling support. I went to the Dean of Students whose officers assisted me to request for the loan board to consider my application once again. Eventually, I received the loan (Reported by the 3rd year female student with disability from IST.1).

The quotations above indicate that, unavailability of psycho-social services made the total learning of students with disability more challenging. However, it was noted that in a situation where disability specialists failed to play their social and psychological roles, students with disabilities sought assistance from other offices and individuals including Dean of student's offices, faculty Deans, counsellors, academic advisors and peers. Studying the roles of the special education unit at UDSM, Bhalalusesa (2012) discovered that the aspect of psychological support and counselling to students with disabilities was not given priority by disability specialists. Fangwi (2020) & Mbuva (2019) emphasize that disability specialists have to offer to students with disabilities services that focus on intellectual growth, effective communication, enhanced self-esteem, realistic self-appraisal, clarified values, career choice, leadership development, healthy behaviour, meaningful

interpersonal relationships, independence, collaboration and participation in individual counselling and support groups, interaction, problem solving strategies, physical therapy and sports. This is a broader spectrum of service delivery to students with disabilities by the special education units. Provision of these services has to be guided by a well described policy. Therefore, any accredited HEI must have a policy on disability and special education needs for proper functioning of special education units to promote equal and equitable access to quality education for students with disabilities.

Conclusions

This article examined support services offered by the special education units in promoting quality education for students with disabilities in Tanzanian HEIs. The study findings revealed that special education units encountered some barriers in providing support services to students with disabilities. These include shortage of disability specialists; adapted equipment and facilities; lack of students' awareness on support services offered by the special education units; absence of disability screening and assessment services, and unavailability of reliable disability statistics. Based on the study findings, it can be concluded that despite the constraints revealed by the study, special education units play a pioneering role in ensuring provision of appropriate support services to students with disabilities for their social and academic excellence. With flexibility in designing programmes to support students with disabilities, special education units are expected to ensure that individual differences and needs are equally accommodated by extending services to unaddressed concerns.

Recommendations

- (a) Since educational materials and support services for students with disabilities are expensive; universities have to allocate an adequate budget for special education units' operations.
- (b) The special education units should prepare disability sensitisation and empowerment programmes to students with disabilities and the university community to awaken them on disability issues. For instance, the Units can host training workshops to sensitise and educate university lecturers, technical and administrative staff about teaching and supporting students with disabilities; organising a disability awareness week to university community; and preparing empowerment workshops to encourage students with disabilities to introduce themselves to the university community, liaise with their lecturers and develop the habit of attending various empowerment

workshops that can aid them in their personal development.

- (c) Universities have to prepare policies that stipulate support services and facilities needed to enhance learning of students with disabilities while committing themselves to implement those policies.
- (d) Universities are advised to have a stable and up to date record keeping systems of students with disabilities and services offered by the special education units. Such records can help in planning and budgeting for the future requirements of the special education units.
- (e) Comprehensive screening and assessment centres should be part and parcel of the special education units in the universities. Such centres can help the units to determine the type and severity of disabilities for proper placement and decision on types of services to be offered.
- (f) Support services offered by the special education units should go beyond the traditional education and administration by including social and psychological aspects such as self-determination, sports and games, guidance and counselling services.

References

- Al-Hmouz, H. (2014). Experiences of Students with Disabilities in a Public University in Jordan. *International Journal of Special Education* 29 (1), 1-8.
- Bhalalusesa, E. (2012). *Learning experiences of students with visual impairment at the University of Dar es Salaam* (Unpublished M. A. Dissertation). Dar es Salaam: Dar es Salaam University Press.
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th Ed). Oxon: Routledge.
- Council for the Advancement of Standards in Higher Education (CAS). (2006). *CAS Self-Assessment Guide for Disability Support Services*. Washington: Author.
- Creswell, J.W. (2007). *Qualitative inquiry and research design: Among five approaches* (2nd Ed). London: SAGE.
- Creswell, J.W. (2014). *Research design: Qualitative, quantitative, and mixed methods approach* (4th Ed.). Thousand Oaks: SAGE.
- Evans, N, J., Broido, E, M., Brown, K. R., & Wilke, A. K. (2017). *Disability in higher education: A social justice approach*. San Francisco: Jossey-Bass.

- Fakoya, S.A. & Fakoya, M.B. (2015). Students with visual impairments quest for information and the constraints faced in a rural University context: *Journal of social Science*. 42, 223-228.
- Fangwi, M. L. (2020). Contemporary counselling strategies for persons with disabilities. *International journal of humanities social sciences and education*, 7(9), 58-68.
- Foundation of Tertiary Institutions of the Northern Metropolis (FOTIM). (2011). *Disability in Higher Education Project Report 2009-2011*.
- Getzel, E.E., & Thoma, C.A. (2008). Experiences of college students with disabilities and the importance of self-determination in higher education settings. *Career development for exceptional individuals*, 31 (2), 77-96.
- Harbour, W. S. (2009). The relationship between institutional unit and administrative features of disability services offices in higher education. *Journal of postsecondary education and disability*, 21(3), 138-154.
- Kija, L. L. (2017). *The influence of learning support services on academic progress of University students with visual impairments in Tanzania* (Unpublished PhD thesis). Dar es Salaam: Dar es Salaam University Press.
- Lyakurwa, S.E. (2018). *Universal design for learning towards achieving inclusive higher education in Tanzania*. Oslo: University of Oslo.
- Mantsha, T. R. (2016). *Educational support of students with disabilities at institutions of higher learning in South Africa: A case study of the University of Venda*. (PhD Thesis). Limpopo: University of Limpopo.
- Matonya, M. (2016). *Accessibility and participation in Tanzanian higher education from the perspectives of women with disabilities*. University of Jyväskylä.
- Mbuvha, T. (2019). Kinds of support offered by the disability unit to students with disabilities at institutions of higher learning in South Africa: A case study of the University of Venda. *Journal of Student Affairs in Africa*, 7(2), 5773.
- Mgumba, B. F. (2018). *Access to counselling services for students with visual impairment in the Universities: Focus on social-psychological and educational needs* (Unpublished PhD Thesis). Dar es Salaam: Dar es Salaam University Press.
- Ministry of Education and Vocational Training. (2012). *Guidelines for education support, resource and assessment service*. Dar es Salaam: Author
- Moriña, A. (2017). Inclusive education in higher education: Challenges and opportunities. *European Journal of Special Needs Education*, 32(1), 3-17.

- Reynolds, C.R., & Fletcher-Janzen, E. (2002). *Concise encyclopaedia of special education: A Reference for the education of the handicapped and other exceptional children and Adults* (2nd Ed). Hoboken: John Wiley & Sons.
- Rushahu, B. G. (2017). *Guidance and counselling services to students with disabilities in higher learning institutions in Tanzania: Practices and implications*. PhD, Carl von Ossietzky Universität Oldenburg.
- Sun, A. Q., & Xin J. F. (2020). School principals' opinions about special education services, preventing school failure: *Alternative education for children and youth*, 64 (2), 106-115.
- Tungaraza, F.D. (2010). Accomplishments and constraints facing students with disabilities at the University of Dar es Salaam: Thirty years of navigating the hill. *Papers in education and development*, 29, 134-155.
- United Nations. (2006). *Convention on the Rights of Persons with Disabilities*. Geneva: Author
- University of Dar es Salaam. (2022). *Policy on Disability and Special Educational Needs*. Dar es Salaam: Dar es Salaam University Press.
- United Republic of Tanzania (2021). *National Strategy for Inclusive Education (2021/22-25/2026)*. Ministry of Education, Science and technology.

Challenges and Coping Mechanisms in Sign Language Interpretation at the University of Dar es Salaam

Fatuma Yusuph Semunyu¹ & Bernadetha Rushahu²

¹Old Tanga Secondary School-Tanzania

²School of Education, University of Dar es Salaam-Tanzania

E-mail¹: semunyufatuma@gmail.com

Abstract

This qualitative study explored sign language interpreters' challenges and coping mechanisms in sign language interpretation for deaf students at the University of Dar es Salaam. Six sign language interpreters were purposively selected for interviews. The study revealed that interpreters' efforts to provide interpretation were hindered by their inadequate preparation for interpretation, the difficulty interpreting content of students' courses of specialisation, and varying signs. The study further uncovered that interpreters adjusted themselves by reading subject materials from the internet and lexicalised signs. It is suggested that to improve interpretation, lecturers collaborate with interpreters by sharing subject materials and holding regular briefings. It is further recommended that for meaningful interpretation services, the quality of sign language interpretation should be enhanced.

Keywords: coping mechanism, deaf, sign language, sign language interpretation,

Introduction

The onset of inclusive education has led to an increase in students with disabilities having access to higher education. However, higher education contexts have been found to be challenging when it comes to the teaching and learning of students with disabilities, such as those who are deaf (Kisanga, 2020). For the inclusion of deaf students to be meaningful, the provision of support services like sign language interpretation to this population of learners is vital (Powell, 2013; Oppong, Fobi & Fobi, 2016). In this study, the term “deaf” is used to indicate a broader definition referring to all degrees of hearing loss that depend on sign language interpretation. Notwithstanding the potential of providing interpretation to the students, sign language in Tanzania is relatively new in the field of linguistics and has yet to attract many researchers and linguists in particular (Tcherneshoff, 2019).

In Tanzania, the available education policies, legislation, and guidelines advocate for sign language interpretation support services in public places. For example, the Education and Training Policy (ETP) of 2014 stipulates that sign language is to be used in communication between deaf people and other people as well as to be taught as a subject at various levels of education and training (MoEVT, 2014). Thus, the recognition of sign language in public places and educational institutions, in particular, is revolutionary in the education of deaf students. The National Strategy of Inclusive Education [NSIE] of 2018 (MoEST, 2018), built on the achievements of the former NSIE of 2009, endorsed in strategy 2.1 that “Sign language and alternative communication means can be used in addition to spoken language or written language. Sign language interpreters should be used where teachers cannot communicate in sign language with their deaf learners” (p. 29). However, there had been no official training for interpreters since the 1990s (World Federation for the Deaf [WFD] 2008) to work at the university level. This compelled UDSM to employ graduates with bachelor’s degrees in special needs education to provide interpretation services because of their sign language skills.

Generally, it is acknowledged that sign language interpretation is a landmark in the education of deaf students, especially at the university level (de Freitas, Delou, Amorim, Teixeira, & Castro, 2017). The great significance of sign language interpretation has been affirmed to provide educational support services to students who are deaf in an inclusive education setting by removing the communication barrier during the teaching and learning process (Oppong et al., 2016). Sign language interpretation facilitates communication as the interpreter stands as a bridge to connect two people who do not understand each other’s language (de Freitas et al., 2017). In this regard, an interpreter is the ear and voice of a deaf student to interpret what is said and voice what is signed (Adade, Appau, Mprah, Fobi, & Marfo, 2022). In providing simultaneous interpretation, interpreters deliver the source information’s intended meaning into the target language with a slight delay after the source is uttered (Janzen, 2005). In that regard, in order to convey faithful information, the interpreter uses different strategies to cope with the linguistic challenges they encounter (de Wit, 2010). The interpreter needs coping mechanisms due to the interpreting environment as well as the demand associated with language because of the linguistic nature of the language (Dean & Pollard, 2001). Though, practically, it is evident that even interpreters with extensive experience and much familiarity with deaf students appear to fail to provide sufficient interpretation services.

Given the importance of sign language interpretation in facilitating communication during teaching and learning at the university level in Tanzania, the mastery of sign

language interpretation skills is essential. The best way to determine proficiency in sign language interpretation is through the provision of formal sign language training. Evidence indicates that sign language interpretation training programmes in Tanzania are informally and formally provided (WFD, 2008). There had been no formal training or certification for interpreters since the 1990s (Kortekisalo, 2015). The formal training was first provided in 2017 at the University of Dar es Salaam (UDSM) at the certificate level (UDSM Undergraduate Admission Procedures, 2022–23). Yet, according to the academic trend of deaf students' enrolment in Tanzanian education settings, certificates in sign language interpretation are unsatisfactory, especially in higher education institutions.

It has been noted by Glaser and Van Pletzen (2012) that providing sign language interpretation to deaf students has not been a simple operation. University interpretation is highly dependent on interpreters' skills, as universities have a wide range of skills and knowledge of the varied array of courses and topics. However, there is no legislation deciding the necessary level of qualification interpreters should attain before working at the university level (Woodall-Greene, 2021). This mirrors Napier and Baker (2004), who found that the deaf students' understanding of lectures through sign language interpretation ranges from 50–90% instead of 100%. According to Powel (2013), interpreters need to have subject-specific knowledge to perform their job effectively. The same was observed when Oppong et al. (2016) noted that the quality of sign language interpreting services was a major issue of concern to deaf students who used sign language interpreting services to access information during lectures. Several studies have questioned whether interpretation is indeed the most suitable method by which to educate deaf learners (Swift, 2012).

Studies by Kisanga (2020), Rushahu (2017), Komba, Shughuru, Kusenha, & Kapinga, (2017), and Jalang'o (2016) have demonstrated that the learning process of students who are deaf in Tanzania is more complex. In many cases, deaf students face communication barriers due to a lack of sign language skills and quality interpretation services. According to Mihega (2014), deaf students also have varied backgrounds in language and signing skills depending on where they pursued their primary and secondary education. These are either special or inclusive schools where sign language and speech are the dominant modes of communication. Schools further have different signing systems due to Tanzania's tier linguistic system, where ethnic languages are spoken at home, primary school teaching is in Kiswahili, and secondary school level teaching is in English (Jalang'o, 2016).

Despite the complexities of providing sign language interpretation to deaf students, the University of Dar es Salaam, as a public university, provides sign language

interpretation for deaf students. However, there is little, if any, research evidence about sign language interpretation and how it is done in university settings. Studies so far conducted at the university have focused on sign language interpretation as a challenge to the communication of deaf students. Nothing is mentioned about the challenges of interpretation faced by interpreters and their coping mechanisms in supporting the learning of deaf students who are naturally heterogeneous, with varied educational histories, sign language, and diverse subjects of specialization. From this background, this paper explores challenges and coping mechanisms in sign language interpretation at the University of Dar es Salaam. The study was guided by two research questions, including:

- i. What challenges do sign language interpreters encounter during interpreting for deaf students at the University of Dar es Salaam?
- ii. How do sign language interpreters cope with the challenges encountered in the process of providing interpretation services to the deaf student?

Methodology

The study used a qualitative research approach because of its nature to allow understanding and interpretation of the meaning an individual or group ascribes to a social problem and because it involves data typically collected in participant settings (Creswell, 2014; Creswell & Creswell, 2018). The study was conducted at the University of Dar es Salaam (UDSM) on its two campuses, namely, the Mwalimu Nyerere Mlimani campus and the Dar es Salaam University College of Education (DUCE) campus. The UDSM was chosen for this study because it is the oldest university in the country with a history of enrolling deaf students. The first partially deaf student joined the university in 1990. In 2006, a student who was totally deaf joined the university, and this was the first time the university hired a sign language interpreter to facilitate communication (Tungaraza, 2012). The two campuses were selected because they had special education needs units that provide sign language interpretation services to deaf students. Records from SENU indicated that by 2021, the UDSM would have six sign language interpreters, four at Mwalimu Nyerere Mlimani campus and two at DUCE (UDSM-SENU, 2021). These participants were purposely selected because of the role they play in facilitating deaf students' learning. The interpreters were the key mediators in facilitating communication and were thus considered to be able to inform about the challenges experienced and their coping mechanisms. Data were collected from six sign language interpreters using semi-structured interviews.

The data were subjected to thematic analysis. This enabled the process of identifying, analysing and recording themes extracted from the data. Data were summarised,

coded, categorised and compared to establish themes as proposed by Bryman (2016); Braun & Clarke (2013). The themes were extracted from quotes. The verbatim quotation assigned to the interpreters were identified as Interpreter 1, 2, 3 etc and campuses were identified as CA and CB.

Findings and Discussion

Challenges encountered by sign language interpreters

The study sought to explore challenges sign language interpreters encountered when providing interpretation services to deaf students. Interpreters' experiences revolved around four main themes: inadequate preparation for interpretation; difficulties in interpreting all courses of the students; difficulties in interpreting from sign language to spoken language; and the existence of sign variations.

Inadequate preparation for interpretation

On inquiring how preparation for interpretation was done, the findings revealed that there was inadequate preparation for interpretation because there was no sharing of teaching and learning materials between sign language interpreters and the lecturers before lecture. The sign language interpreters and deaf students had a tendency to discuss the expected terms that would be used in the lecture. Before interpreters attend the lecture sessions, they would ask for the course outline from deaf students to see the topics that would be taught in a particular subject. From the course outline, interpreters would read the topics from their computers while in their offices. Interpreters were provided with free access to the internet; thus, they went through the topics to familiarise themselves. In the course of reading, they discover terms that have no signs, which they note down for discussion with deaf students on sign language to be used for particular terms when it happens in the course of the lecture. However, interpreters perceived that their preparation did not help much because they did not know the exact vocabulary that the lecturer would use, and oftentimes lecturers used technical terms different from what interpreters had anticipated and been prepared for. One interpreter said:

As an interpreter, it is my responsibility to get a course outline from the students. In the course outline, you see what topics will be covered, and so through the internet, I read and find some vocabularies and sit down with students to see through those vocabularies and agree on the kind of signs we will use. Sometimes, we prepare ourselves with the vocabulary, but when we enter the classrooms, the lecturer uses other difficult technical words that are complex to understand (Interpreter 5, CB).

The quote above indicates that interpreters prepare themselves for interpreting by agreeing with deaf students on what signs should be used and getting the teaching schedule was insufficient. This suggests that interpreters did not prepare adequately for interpretation but just interpreted whatever the lecturers prepared to teach. The findings are incongruent with the study by Knox (2006), who reported four aspects of preparation regarded as essential for effective interpretation to occur, including preparation for the materials, settings, visual aids, and physical surroundings in which the interpretation should occur. This was especially relevant when there were several subjects across the different disciplines, presenting with them the specialised terminologies. With respect to preparation for the materials, interpreters need to ask for lecture notes, printouts of PowerPoint presentations, and prior knowledge the students might be assumed to possess on the subject. Powell (2013) viewed that preparation allows the interpreters to discuss how they will represent jargons and concepts prior to the lecture. Similarly, Deneke (2017) expressed that not knowing the subject content erodes the interpreter's confidence and displays fear in their faces. As it was reported in previous studies, in this study, it was rather challenging for the sign language interpreters to prepare for the interpretation because interpreters were not asking for teaching materials from lecturers. This implies that students who are deaf were denied their right to fully access the lectures facilitated by interpretation.

Difficulty interpreting the content of students' courses of specialisation

Interpreting all contents of courses that were studied by deaf students using sign language interpretation was another challenge identified by interpreters. During interviews, interpreters revealed that there was no course of specialisation in interpretation. They provided interpretation services in whichever courses deaf students undertook. Although sign language interpreters were interpreting all courses contents for the deaf students, they experienced some difficulties interpreting courses of specialisation as opposed to general courses like Development Studies and Education since courses of specialisation use technical terms whose orthography and pronunciation are difficult to master. Interpreters felt more at ease when they interpreted general courses or subjects which they had some knowledge. It was argued that interpretation needed proper understanding of the content to be interpreted so as to have a wide choice of words; otherwise, interpreters get stranded, as illustrated by one of the interpreters:

I interpret all of them; I work in the School of Education, and I interpret psychology, management and everything. I am also a classroom interpreter for a sociology student, and that is where I feel the best. I would rather take sociology than psychology because

of my background as a sociology interpreter. One course that is specifically challenging to me is Kiswahili. It is challenging and tiring to cover all those topics that you never studied and all those theories that you never had a proper understanding of. We are not doing perfectly because an educational interpreter needs to have areas of expertise for a wide choice of signs to use (Interpreter 1, CB).

The interview quote indicates that interpreters do not interpret the content of courses of their specialisations. Although interpreters were providing interpretation services to all student courses, they felt comfortable dealing with or interpreting subjects with which they were familiar. They faced difficulty interpreting all content of all courses because of inadequate knowledge on those courses. They argued that interpretation needed proper understanding of the content to be interpreted so as to have a wide choice of signs. In addition, the participants viewed it as challenging to interpret unfamiliar subjects because they often got tired and therefore became ineffective and unconfident in interpreting. This finding aligns with what was reported by Powell (2013) that university interpretation was very different from community interpretation. Due to the nature of the lectures, an interpreter really needs to be familiar with the discourse environment and, preferably, have subject-specific knowledge. Similarly, Woodall-Greene (2021) revealed that the collegiate setting is challenging because of the variety of interpretation assignments, including interpreting in engineering and vet-type classes where a lot of vocabularies are used. Al Hashimi, Sadoun, Almahoozi, Jamel, & Hassan (2021) reiterates that an interpreter must be familiar with the specialisation and the course content, as well as the terminology that will be interpreted. This will facilitate the translation process by minimising the time that may be wasted by the lecturer in explaining the content to the interpreter while also attempting to explain it to the students.

Difficulty interpreting from sign language to spoken language (voicing)

The study also examined how interpreters sign the spoken language and translate the sign language into voice (voicing). The aim was to explore how sign language interpreters perceived the utterance from lecturers, hearing students, and students who are deaf and their ability to deliver it in a target language. The findings revealed that interpreters were more skilled in interpretation from spoken language to sign language than vice versa. Interpreters viewed voicing students' sign language as challenging because of the signs variation and because they are not used to speaking during lecture sessions. In this regard, one interpreter said:

Any interpreter can tell you that going from voice to sign is a bit

easier than going from sign to voice. The reason behind this is that when interpreting from voice to sign, you sign the signs that you are aware of, but when interpreting from sign to voice, sometimes you receive signs that you are not aware of. Also, most of the work here is done by signing rather than voicing. I can speak when students want to consult any person; when there is a meeting or place where we need to talk, I can speak for them. I voice according to the context, and that's where the problem comes in, especially when a student realises that I said something differently from what a student signed (Interpreter 6, CB).

The quote indicates that signs that were not harmonised are not familiar to sign language interpreters to comprehend and interpret into voice. The implication here is that interpreters were challenged with understanding signs that were used by deaf students, and that hindered them from speaking for deaf students because they might understand the sign differently from what was intended by the deaf students. Interpreters were of the view that they were used to interpreting from voice to sign language. This implies that the more they practised interpreting, the more skilled they became at interpreting to voice. The findings concur with those of Haug, Bontempo, Leeson, Napier, Nicodemus, Bogaerde & Vermeerberge (2017), who reported both high and low levels of confidence in the interpreter's language production when working in signed and spoken languages. However, a slight trend towards higher confidence was noted when the deaf leader rated the interpreter's performance in sign language rather than spoken language. Similarly, a study by Nicodemus and Emmorey (2013) reported that sign language interpreters had experience and training in interpreting from L1 (English) into L2 (ASL) because there was a greater demand for English (spoken language) to sign language than sign language to English.

Variation of signs

The study also examined how sign language interpreters had experienced different signs when they were interpreting during teaching and learning. The finding reveals two aspects of sign variations that challenged interpreters, including the geographical location and educational background of the interpreter and deaf students. With regard to geographical location, interpreters reported that they face differences like any other language because languages are the product of the community. In this situation, the interpreter and deaf student may differ in the use of the signs. Regarding education background, deaf students were taught sign language in different schools, some in special schools and others in inclusive schools. These schools have different orientations toward teaching deaf students sign language.

One interpreter narrated:

We meet different deaf students with different signs, and they have been experiencing different local signs. It takes us some time to get to know each other. For example, one of my students, when joining the university, came with the notion of orienting me; she wanted to orient me to her signs, claiming that I could not fit in to interpret in the class. I remember I once signed a certain sign referring to China; the sign that a student had was different from mine. The sign I used was new to the deaf student she rejected the sign. So, it is the responsibility of the interpreter to be flexible to accommodate the communicative needs of the client. I abandoned the other one that I had and adapted the one that my client was using (Interpreter 2, CB).

Regarding the differences in the signs, specifically, the challenges revolved around two aspects: how to identify differences in signs and their respective meanings and how to negotiate, match, and harmonise the signs and their respective meanings. Interpreters consider that students who are deaf come with different signs compared to the harmonised Tanzania Sign Language. The misunderstandings and resistance of the deaf students to adopt the signs of the interpreters demand that the interpreters adapt instantly and use new signs in the proceeding lecture sessions. These findings are incongruent with the study by Deneke (2017) in Zambia, which found that although most deaf students come from different provinces, which is a factor that contributes to the likelihood of variation in sign language, the findings revealed no challenges were encountered due to variation in sign language. In addition, the finding echoes Chibwe's (2015) finding that interpreters, students who are deaf, and teachers experience sign variation during teaching and learning, which hampers the learning experiences of the deaf.

Sign language interpreters' coping mechanisms

The study revealed that sign language interpreters were able to navigate through interpretation by applying coping mechanisms, including reading subject content materials from the Internet and the formulation of signs and fingerspelling, in order to cope with challenges encountered during the interpretation process. These strategies are presented and discussed in the following sub-sections:

Reading subject-content material from the internet

Sign language interpreters reported searching and reading on the Internet in order to familiarise themselves with the students' course teaching and learning materials

that they were unfamiliar with. Interpreters reported using student subject course outlines to establish what to read that was expected to be taught. They viewed reading as facilitating familiarisation with the content, which enhanced interpretation in a way that students could easily understand. Interpreters also perceived that understanding the content beforehand that was to be presented made it easier to translate it into another language without hesitation in the middle of the session. Further reading of the subject content also helped interpreters to prepare signs of some vocabularies in advance before the lecture hour. One interpreter revealed:

I normally spend a lot of time reading on the Internet before lecture sessions. From the students' course outline, you see what topics one has to cover, and so through the Internet, I read and found some vocabulary. Though I read and find vocabularies, I still have to sit down with my students and agree on the vocabularies that we will use so as to reduce misunderstanding of signs (Interpreter 4, CA).

Interpreters revealed that reading the subject content on the internet in advance helped them understand the lecture for interpretation. In addition, interpreters believed that reading the related subject contents from the Internet helped them to be aware of some vocabulary that might be used in the lectures. They also perceived that interpreting without prior information was difficult, and reading the material that was not prepared in advance for the lecture also hindered meaningful interpretation. The present findings are inconsistent with those by Mapson (2017), who revealed two linguistic coping mechanisms used by sign language interpreters in education settings, namely, transitional style and omission. In transitional style, an interpreter switches between free and literal interpretation, a combination particularly common in higher education settings. The sign language interpreter also consciously and unconsciously uses omission within the lexically dense text or speech, which is often grammatically complex and subject-specific.

Sign's formulation and fingerspelling

Formulating signs and fingerspelling was another coping mechanism revealed in the findings. It was revealed by sign language interpreters that they used fingerspelling for things that did not have established signs in the sign language and created signs from the spelled or written word(s) that had no signs. The formulation of the signs was done after mutual agreement between the interpreter and the deaf student was reached. An interpreter would fingerspell the word, and deaf student would suggest the sign, or the interpreter may formulate the sign but first discuss it with the deaf student until they agree with the sign to be used.

I and my student(s) decide on the signs to be used, you see! During

the lecture, sometimes a word comes up that is new to me. For you to understand and for me to give you what the lecturer says, maybe I write the word (finger spelling) or write it on the paper. After the lecture, we discuss what sign to use. We agree on what sign to use for a certain word or vocabulary, so next time when the same vocabulary is repeated, we will have already formulated our sign for use. We fingerspell, and though this has an effect, it consumes time because we use spellings that sometimes deaf students do not understand and ask us to repeat (Interpreter 3, CA).

It appears that sign formulation and fingerspelling, which were reported as coping strategies, enabled them to facilitate communication during teaching and learning, especially on the subjects they were less familiar with. The findings of this study are congruent with earlier findings by Adam (2012), who reported that finger spelling has two functions in sign languages. It can bridge a lexical gap either because there is no existing lexical equivalent in the host sign language that is a proper noun or if a lexical sign is unknown to the signer. Fingerspelling may also be used as a form of code-switching, where words from spoken language are introduced into sign language for specific purposes such as emphasis and clarification. In the current study, the findings indicate that interpreters work in a collaborative manner in order to achieve success in offering interpretation services for deaf and hard-of-hearing students. de Freitas et al. (2017) noted the use of the manual alphabet to replace the unknown signs and to encode temporarily new signals with and/or in agreement with the students with hearing impairment and officially use it in that particular situation.

Implications of the findings

Under the Education and Training Policy (ETP) of 2014 in Tanzania, the National Strategy of Inclusive Education (NSIE) of 2018, and the United Nations (2006) Convention of People with Disability, students who are deaf have the right to access education, and the sign language interpretation profession is an important aspect for deaf students to access university education. In this regard, more professional training in sign language interpretation and support in the university are vital for interpreters to facilitate teaching and learning for deaf students who are using sign language in their learning. Deaf students should have access to language and become bilingual, which is TSL and the language of instruction (Kiswahili and English), and bicultural between the hearing and deaf cultures. In that way, they are prepared to attend inclusive educational settings. If sign language interpreters were not prepared with skills and knowledge appropriate to the demands of sign language interpretation in university settings, there is a possibility of providing

inadequate sign language interpretation services that facilitate communication during the teaching and learning process.

Conclusions

Based on the findings, one may conclude that sign language interpretation service provided in a regular education is not easy for sign language interpreters. The challenges facing sign language interpreters affect their intention to facilitate communication of deaf students during teaching and learning. Inadequate preparation of interpreters, difficulty interpreting content of student's courses of specialisation and difficulty voicing, held down the possibility of deaf students to realise their academic potentials because they were studying courses that were unfamiliar to interpreters. The fact that the interpreters provided ineffective interpretation made them feel incompetent while providing interpretation services. Sign language interpreters could provide faithful interpretation that would enhance learning of deaf students if they had sign language interpretation skills and relevant basic knowledge of the subjects that are interpreted.

Recommendations

On the basis of the preceding conclusions, sign language is very technical and it is in its own merit. For successful sign language interpretation, the university may need to rethink of providing in-service training and in-house workshops to sign language interpreters. This would serve to orient interpreters in some courses that they do not have education background. This orientation could also create enabling environment for lexicalising signs to ensure interpreters' capacity to navigate university discourse including the complex disciplines such as Science, Technology Engineering and Mathematics (STEM).

Likewise, the study recommends that sign language interpreters should be part of a multidisciplinary teaching team to allow collaboration between them and lecturers for the benefit of students who are deaf. The teamwork would serve to ensure appropriate understanding of courses facilitated by interpretation and adequate preparation of interpretation by previewing lecturers' teaching and learning materials before the actual classroom interpretation assignment.

It is evident that interpreters are more familiar with social science courses. The university could consider recruiting sign language interpreters with various educational specialties. The specialties should include social sciences, natural sciences and mathematics which would ensure the provision of quality interpretation services to all deaf students who are using interpretation services in their learning.

References

- Adade, R., Appau, O., Mprah, W. K., Fobi, D. & Marfo, P. S. (2022). Factors influencing sign language interpretation services in Ghana: The interpreter's perspectives. *Journal of Interpreters*, 30(1), 1-21. <https://digitalcommons.unf.edu/joi/vol30/iss1/1>.
- Adamu, R. (2012). Language contact and borrowing. In R. Pfau, M. Steinbach & B. Woll (Eds), *Sign language: An international handbook* (pp 841-861). De Gruyter Mouton.
- Al Hashimi, S., Sadoun, J., Almahoozi, Y., Jamel, F. S & Hassan, N. (2021). Examining perception on inclusion of deaf and hard of hearing students in art and design higher education in Bahrain. *Cogent Arts and Humanities*, 8(1), 1-23. file:///C:/Users/User/Downloads/Examining_perceptions_of_inclusion_of_deaf_and_har.pdf.
- Braun, V. & Clarke, V. (2013). Teaching Thematic analysis: Overcoming challenges and developing strategies for effective learning. *The Psychologist*, 26(2), pp. 120-123 http://www.thepsychologist.org.uk/archive/archive_home.cfm?volumeID=26&editionID=222&ArticleID=2222.
- Bryman, A. (2016). *Social research methods* (5th ed.). Oxford University Press.
- Chibwe, J. (2015). *Contribution of sign language variations to academic performance of learners with hearing impairment in selected Copper belt and Lusaka special primary schools in Zambia*. Master of Education in Special Education, University of Zambia, Zambia.
- Creswell, J. W. & Creswell, J. D. (2018). *Research design: Qualitative, quantitative and mixed approaches* (5thed.). Sage.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative and mixed approaches* (4th ed.). Sage.
- De Wit, M. (2010) .Linguistics coping strategies from international sign to English. *EUMALSI*, 3(1), 1-23.
- de Freitas, C., Delou, C. M., Amorim, G., Teixeira, E. & Castro, H. C. (2017). Sign language interpreter: Perception analysis about working with deaf students in a federal institute of education, science and technology in the northern region of Brazil. *Creative Education*, 6, pp. 657665. <https://www.scirp.org/journal/paperinformation.aspx?paperid=75901>.
- Dean, R. & Pollard, R. Q. (2001). The application of demand-control theory to sign language interpreting: Implication for stress and interpreter training. *Journal of Deaf Studies and Deaf Education*, 6(1), 1-14.

- Deneke, Y. G. (2017). *Accessibility of sign language services to the deaf in tertiary education institution: A case of the university of Zambia and Zambia institute of special education*. Master thesis, University of Zambia. <http://dspace.unza.zm/bitstream/handle/123456789/5625/Yohannes%20corrected%20Dissertation.pdf?sequence=1&isA>.
- Glaser, M & Van Pletzen, E. (2012). Inclusive education for deaf students: Literacy practices and South African sign language. *Journal of South African Linguistic and Applied Language Studies*, 30(1), 25-37.
- Haug, T., Bontempo, K., Leeson, L., Napier, J., Nicodemus, B., Bogaerde, B. & Vermeerberge, M. (2017). Deaf leaders' strategies for working with signed language interpreters: An examination across seven countries. *Across Language and Culture* 18(1), pp. 107-131.
- Jalang'o, C. V. (2016). *Educational challenges and coping strategies among students with hearing disability in Tanzania inclusive public secondary schools*. Unpublished PhD (Education) thesis, University of Dar es Salaam, Tanzania.
- Janzen, T. (2005). *Topics on sign language interpreting: Theory and practice*. Amsterdam, John Benjamin Publishing Company.
- Kisanga, S. E (2020). Barrier to learning faced by students who are deaf and hard of hearing in higher institutions in Tanzania. *PED*, 37(2), 201-218. <https://scholar.google.com/citations?user=vsvwdyUAAAAJ&hl=en>
- Knox, S. (2006). Sign language interpreting in an academic setting: Preparation strategies and consideration. *New Series*, 3(1), 183-204.
- Komba, W., Shughuru, P., Kusenha, N. S & Kapinga, O. (2017). *Research report in implementation of inclusive education in higher learning institution (HLIs) in Tanzania: A case of three universities in Tanzania*. Open Society Initiative for East Africa.
- Kortekisalo, M. (2015). *A study of qualification process and competencies of sign language interpreters in African context: a contribution to the process of establishing a sign language training programme in Ethiopia*. Theses, Diaconia University. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3698981/>.
- Mapson, R. (2017). Book review: linguistic coping strategies in sign language interpreting. *International Journal of Interpreter Education*, 6(1), pp. 70-73. <https://tigerprints.clemson.edu/ijie/vol9/iss1/9>.
- Migeha, J. D. (2014). *An analysis of academic performance of students with hearing impairment in secondary schools in Tanzania*. MA (Education) thesis, The Open University of Tanzania.

- Ministry of Education and Vocational Training [MoEVT] (2014). *Sera na mafunzo ya elimu*. Dar es Salaam, Tanzania: Ministry of Education and Vocational Training.
- MoEST. (2018). *National strategy on inclusive education (NSIE) 2018-2020*. Dar es Salaam: Ministry of Education Science and Technology (MoEST).
- Napier, J. & Baker, R. (2004). Accessing university education: Perception, preferences and expectations of interpreting by deaf students. *Journal of Deaf Studies and Deaf Education*, 9(2), 229-238.
- Nicodemus, B. & Emmorey, K. (2013). Direction asymmetries in spoken and signed language interpreting. *Biling (Camb Eng)*, 16(3), 624-636. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3698981/>.
- Oppong, A. M., Fobi, D., & Fobi, J. (2016). Deaf students' perception about quality of sign language interpreting service. *International Journal of Educational Leadership*, 7(1), 63-73. <https://www.researchgate.net/publication/322636038>
- Powell, D. (2013). A case of two sign language interpreters working in post-secondary education in New Zealand. *International Journal of Teaching and Learning in Higher Education*, 23(3), 297-304.
- Rushahu, B. G. (2017). *Guidance and counselling services to students with disabilities in higher learning institutions in Tanzania: Practice and implication*. PhD thesis, University of Oldenburg.
- Swift, O. B. (2012). *The role of signed language interpreters in postsecondary education settings in South Africa*. Master of Art in Linguistics thesis: University of South Africa
- Tcherneshoff, K. C. (2019). *Na nyinginekutokanjeya Tanzania: Discussions of Tanzania sign language in a demissionizing context*. Master's (African studies/Art) thesis, University of Helsinki. <https://core.ac.uk/download/pdf/224642576.pdf>.
- Tungaraza, F. D. (2012). Sixty years of special need education in Tanzania: Celebrating audacity, commitment and resilience. *A Journal of Contemporary Research (LWATI)*, 9(1), 86-109.
- United Nations [UN]. (2006). *Convention on the rights of persons with disabilities and optional protocol (CRPD)*. United Nations.
- University of Dar es Salaam [UDSM]. (2021). *Special Education Needs Unit (SENU)*. University of Dar es Salaam.
- University of Dar es Salaam [UDSM]. (2022/23). Undergraduate programmes and admission procedures: Office of the Deputy Vice Chancellor

- (Academic) and Director of undergraduate studies. https://www.udsm.ac.tz/upload/20220707_030412_UDSM_AdmissionHandbook_2022_2023.pdf.
- Woodall-Green, T. (2021). Collegiate sign language interpreters: A case study. Doctor of Philosophy, Oklahoma State University. https://shareok.org/bitstream/handle/11244/330895/WoodallGreene_okstate_0664D_17222.pdf?sequence=1.
- World Federation of the Deaf, (2008). Global Survey WFD regional secretary for Southern and Eastern Africa (WFD RSESA) by the World Federation of the Deaf and the Swedish National Association of the Deaf. <http://www.wfdeaf.org/wp-content/uploads/2011/06/5.-RSESA-Regional-Survey-Report-No-5-English-Version.pdf>.

Intervention Services for People with Disabilities in Tanzania (1961-2022): What Lessons do we Learn?

Cosmas Boniface Mnyanyi
Faculty of Education, The Open University of Tanzania
E-mail: cosmas.mnyanyi@yahoo.co.uk

Abstract

The study aimed to determine intervention services for people with disabilities in Tanzania from 1961–2022, specifically for specific types of disabilities such as visual, hearing, deaf-blind, intellectual, autism, and physical impairments. Data were collected using Google Scholar, and interviews. The study involved a sample of 26 respondents. The data were analysed using thematic analysis approach. Findings indicated that efforts were made to document the need for intervention services for people with disabilities, but these services were disconnected and disorganised. Challenges related to accessibility, affordability, acceptability, availability, and quality of intervention services for people with disabilities were also documented. The study recommends that the Government, policymakers, and researchers should invest in intervention services for people with disabilities to enhance their participation and contribution to socio-economic development.

Keywords: *intervention services, disability, adapted curricular, adapted skills training*

Introduction

People with disabilities face challenges in accessing social services due to limitations caused by the disabling conditions and availability of intervention services (Njelesani et al., 2011; Kuper et al., 2016; Lee, 2012). According to Kisanji (1995), disability is the disadvantage or restriction of activity caused by a contemporary social organisation which takes no or little account of people who have physical impairment and thus excludes them from the mainstream of social activities. Over 80% of people with disabilities live in developing world where poverty and limited access to health services affect their development and lead to severe occupational deprivation (Hansen & Blaskowitz, 2018; Sofu & Wicks, 2017; WHO, 2005; WHO, 2011).

According to Saran et al. (2020), people with disabilities have many unmet needs in low and middle-income countries resulting from low availability of intervention services in the six domains including: health, education, livelihood, social and empowerment. For the case of health intervention, people with disabilities in most developing world do face challenges related to rehabilitation needs, accessing mainstream health-care services, and consequently have poor health (Njelesani et al., 2011). Kisanji (1995) notes that though education interventions started in 1950s in Tanzania, few children with disabilities access education as a result of community's folk belief system, customs and values within the cultural system. In order to increase access to education, it was proposed to develop a sense of ownership, participation and involvement of parents, people with disabilities and the community at large in decision making and choice of actual disability intervention services (Kisanji, 1995). Further, Kuper et al. (2016) notes that where interventions are planned to improve the quality of life of people with disabilities in most cases are not adapted to their needs.

Studies in Tanzania indicate prevalence of disability to be on increase and less effort are documented on disability and intervention services (Hansen et al., 2018; Njelesani et al., 201: United Republic of Tanzania [URT], 2008). According to Hansen et al. (2018) there is a critical need to reduce stigma to people with disabilities as they are frequently shunned by neighbours, seen as a financial burden by their families, and even occasionally killed. Reduction of stigma calls for education interventions including allowing people with disabilities to have access to vocational education to free them from dependence. Each type of disability does have special intervention strategies. For example, Witchger et al. (2018), found improvement in six occupational performance areas: self-care and personal hygiene, household activities, farming, animal husbandry, community and church participation, income-generating activities during their evaluation to an intervention toward vocational skills training for people with physical disabilities in Tanzania. Mnyanyi (2014) found that teachers' facilitation on teaching and learning of children with visual impairment enrolled in inclusive classrooms improved when teachers prepared and used inclusive teaching and learning resources.

According to Bright et al. (2018), health related interventions including rehabilitation services for people with disabilities to optimize functioning through a range of specific health services—diagnosis, treatment, surgery, assistive devices, and therapy in low – and middle-income countries (LMICs) is limited. With increased improvement in health services in developing world, life expectancy is increasing and fewer efforts are needed in place for old people and people with disabilities in terms of lifelong learning, disability experts, access to skills training and access to intervention services. Kisanga and Kisanga (2020) note that learners with visual

impairment in higher education are dependent users of assistive technology devices as they depend on sighted people and more skilled users. Reducing overdependence of people with disabilities require developing curricular and training resources that will cater for the needs of people with disabilities. Creating and using adapted curriculum empowers people with disabilities on the use of technology so that they can improve in using the technological resources and enhance accessibility to social services including access to education and information.

Special education as an intervention to access to education for children with disabilities in Tanzania started being implemented to children with visual impairment in 1950 and later on schools for children with hearing an intellectual impairment were established (Mnyanyi, 2014). Another intervention on access to education for children with disabilities was the implementation of inclusive education that calls for school culture, policy and practice to change so as to allow all children including those with disabilities to access education (Vetoniemi & Kärnä, 2021). UNESCO (2018) identified different elements needed for inclusive education as government and finance; laws and policy; curriculum and learning materials; personnel (teachers, school leaders and support staff); schools; and communities, parents and students. The implementation of inclusive education is in line with the United Nations Convention that ‘the right to inclusive education encompasses a transformation in terms of culture, policy and practice in all formal and informal educational environments to accommodate the different requirements and identities of individual students (UN 2016). The UN (2016) statement calls for education system to remove barriers to learning for all children. School practices that limit implementation of inclusive education include competitive ethos, rigid curriculum compliance, disregard on diversity, and survival in the face of resource limitations (Andrews et al., 2021).

The current study was conducted to assess provision of intervention services for people with disabilities in Tanzania from 1961 to 2022 in the hope of planning for better services for people with disabilities. The main objective is to identify and summarise the information available about disability and intervention services in Tanzania. The study is guided by the following question, “What is known from the existing literature on intervention services for people with disabilities in Tanzania? This study responds to two objectives

- 1) to determine intervention services for people with disabilities documented between 1961-2022 in Tanzania
- 2) to determine intervention services for specific types of disabilities: visual impairment, hearing impairment, deaf-blind, intellectual impairment, autism and physical impairments in Tanzania

Methodology

The study employed a systematised scoping methodology as proposed by Munn et al., (2018) and a documentary review for the interventions for people with disabilities in Tanzania from 1961 to 2022. After the documentary review, a total of 26 (13 Special needs trained teachers, 9 persons with disabilities and 4 parents of children with disabilities) were selected to participate in this study. These respondents (13 experts and 13 recipients of intervention services) were selected by purposive and snowballing techniques as indicated in Table 1. The special needs education teachers were included in the study for the purpose of providing information regarding interventions made in the provision of education for people with disabilities. People with disabilities were selected to provide information on availability of intervention services and their perception of the quality of the services. The nine people with disabilities in this study included 2 persons with intellectual impairment who participated in vocational education at Dar Es Salaam Vocational Training Centre in Dar Es Salaam and 4 people with visual impairment who participated in ICT skills training at the Open University of Tanzania. Three people with physical impairment were pursuing their studies at degree level at the Open University of Tanzania and one was a tri-cycle driver providing transport services in Dar es Salaam. The consulted experts in special needs education had a teaching experience of over 10 years and among the 26 respondents 9 were people living with disabilities. Data were collected from January 10th to February 9th, 2023.

Table 1: *Type of Respondents*

Type of respondents	Specialisation	Number	Total
Special Needs Education Teachers/ facilitators	Visual Impairment	2	13
	Deafblindness	3	
	Deaf	2	
	Intellectual impairment	3	
	Autism	3	
People with disabilities	Physical Impairment	3	09
	Intellectual impairment	2	
	Visual Impairment	4	
Parents	Parents of children with Autism	2	04
	Parents of children with intellectual impairment	2	

The Google Scholar search engine was chosen for the purpose of obtaining published data from different sources that can easily be accessed. In the advanced search words phrases used included “Intervention services for people with disabilities in Tanzania”, and changed at the exact phrase “disability”, “visual impairment”, “deafblind”, “deaf”, “intellectual impairment”, “physical impairment” and “autism”. Further in the advanced search changed “with at least one of the words” in each

of the exact word: “Intervention Tanzania Disability Handicap”, “Intervention Tanzania visual impairment blind low-vision”, “Intervention Tanzania deafblind”, “Intervention Tanzania deaf hearing impairment, hard of hearing”, “Intervention Tanzania intellectual impairment cognitive”, “Intervention Tanzania physical impairment” and “Intervention Tanzania autism” respectively. In all the searches conducted at least one word “intervention” was to be included in all the searched documents for years from 1961-2022 without including patents and citations. The idea behind was to obtain all the literature on intervention available online through Google Scholar search engine. The study was limited to online resources and 26 respondents who were interviewed.

The selected documents were thematically classified and analysed to obtain information on intervention services for people with disabilities in Tanzania with a specific focus on the intervention for people with disabilities, interventions for specified type of disability and the challenges facing provision of intervention services. Data from key informants and the literature were analysed using open coding (Corbin & Strauss, 2007) that generated themes.

Findings and Discussion

The literature search indicated that, a number of studies have been conducted from 1961 to 2022 with regard to disability and intervention in Tanzania in different areas of disability as a general concept and specific types of disability including visual impairment, hearing impairment, deafblind, intellectual impairment, physical impairment and autism (Table 2).

Table 2: *Studies on Intervention Services for People with Disabilities in Tanzania*

Type of studies	Number of articles	Percentage
Disability	17,700	58.4%
Visual impairment	3,110	10.3%
Deafblind	97	0.3%
Deaf	4,430	14.6%
Intellectual impairment	429	1.3%
Physical impairment	889	2.6%
Autism	3,730	12.5%
Total	30,285	100.0%

Intervention services for people with disabilities

Findings indicate 58.4% of studies focused on intervention services for people with disabilities in a general sense. The interventions were related to education, screening services, training special needs teachers, rehabilitation services, access

to lifelong learning and access to adapted social protection (Table 3). The quality of people with disabilities depends on willingness of community members to accept and include them in all forms of activities including the development of factual knowledge, beliefs, languages, leadership system, religion, works of art, values and a set of economic activities (Kisanji, 1995). Improving the quality of life of people with disabilities requires rehabilitation services from six domains: health, education, livelihood, social and empowerment. There is a shortage of rehabilitation services in Tanzania which are mostly found in hospitals where they are expensive (Njelesani et al., 2011).

Kuper, et al. (2016) propose an intervention on having social protection schemes that are adapted to meet people with disabilities specific needs. Similarly, Kuper et al. (2020) stress on disability-inclusive development as often people with disabilities fall behind in income, education, health, and wellbeing. This poses challenges in the quality of their life.

A review study by Lehtomäki et al. (2014) focused on studies related to access to education from 1998-2008 that indicated challenges related to shortages of teachers specialising in special needs education, shortages of materials, for example, for people with visual impairment, shortages of braille machines, typewriters, textbooks and audio-books; less access to equipment and learning resources after completing the education cycle, especially, for the people who are blind; less use of assistive technology and ICT related solutions in education; and shortages of professional development courses among teachers. There is less evidence on professional development for teachers facilitating braille skills learning for children with visual impairment. The World Health Organisation [WHO] (2012) proposes an intervention to start in early childhood education to enhance access to education and learning.

Table 3: *Disability Intervention Services Studies*

Studies	Intervention strategy
Kisanji (1995)	Increasing access to basic education for children with Physical (motor) disabilities, blindness deafness, intellectual disabilities
Tungaraza (2012a).	Increasing access and success for learners with disabilities through screening, increased resources, training special needs teachers
Njelesani et al. (2011)	Increasing access to rehabilitation services for people with disabilities
Kuper et al. (2016)	Increasing access to adapted social protection
Aldersey et al. (2011)	Calls for accountability to be included in the National Disability Policy
Lehtomäki et al. (2014).	Increasing access to lifelong learning for persons with disabilities
WHO (2012)	Calls for improved access to intervention in early childhood education

Intervention services for specific type of disability

In this study, one of the objectives was on availability of intervention services for each type of disability. In this paper representation was from people with visual impairment, deaf people, deaf-blind people, people with hearing impairment, autism, and intellectual impairment.

Visual impairment

People with visual impairment experience functional limitations of the visual system that may be characterised by irreversible vision loss, restricted visual field and decreased contrast sensitivity, increased sensitivity to glare as well as decreased ability to perform activities of daily living, such as reading or writing (Kavitha et al., 2015; Naipal & Rampersad, 2018). In other words, visual impairment refers to impairment in vision such that, even with correction, it adversely affects a student's educational performance. The term includes both partial sight and blindness. Partial sight refers to the ability to use vision as one channel of learning if educational materials are adapted, for example, use of large print or vision devices like calibrated glass or video or a computer screen with enlarged text. Blindness refers to the prohibition of vision as a channel of learning, regardless of the adaptation of materials. According to Kisanga and Kisanga (2020) people with visual impairment in higher education are over dependent. To reduce dependence of students with visual impairment, there is a need to increase availability and accessibility of assistive technology (AT) devices and products usage and skills training opportunities.

Several studies focused on prevalence, causes and possible intervention strategies for visual impairment (Dineen et al., 2006; Kingo & Ndawi, 2009). Causes of visual impairment included cataract, trachoma, glaucoma and congenital anomalies. Intervention proposed were as follows: increased awareness to the community on causes of visual impairment, conducting eye screening for early treatment and intervention programmes and creating partnership between school and health organizations for supporting teachers so that they can identify early signs of visual impairment from students. In terms of school setting, Kapinga and Aloni (2023) notes that there is a need to enhance people with disabilities self-esteem through providing opportunities that build self-esteem including accessibility to education and skills training.

Table 4: *Visual Impairment Intervention Studies*

Studies	Intervention strategy
Kisanga & Kisanga (2020)	Increasing availability and accessibility of AT devices and products usage and training opportunities
Mnyanyi (2009, 2014)	Increasing in-service teacher-training on special education to support learners with visual impairment and supporting teachers in changing their teaching practices.
Tungaraza (2012b)	Increasing efforts on screening for informed early intervention and proper curriculum adaptation
De Groot, Meurs and Jacquet (2019).	Increasing use of contact intervention to reduce stigma among people with visual impairment including those with albinism

Deafblind

According to Zwanenburg and Tesni (2019) ‘deaf-blindness’ refers to combined hearing and vision loss. Although most individuals with deaf-blindness have some functional use of vision and hearing. The combination of the two losses greatly impairs the ability to gather auditory and visual information. This creates intensive communication and learning needs that cannot be met by programmes designed solely for persons who are blind or have low vision, or persons who are hard of hearing or deaf. People who are deaf-blind require modifications to suit their needs in all kinds of information; social interaction and communication; orientation and mobility; activities of daily life and in reading and writing (Göransson, 2008; Gullacksen et al., 2011). As such, people who are deafblind pose challenges in facilitating teaching and learning process and in participating in socio-economic activities (Zwanenburg & Tesni, 2019).

In Tanzania education services for people with deaf-blindness started in 1993 at Uhuru Mchanganyiko unit in Dar es Salaam. Since then, more children with deaf-blindness are being enrolled. In 2021, the government of Tanzania through Tanzania Institute of Education prepared an adapted curriculum for children with deaf-blindness. In a search of documents about deaf-blindness, only 97 (0.3%) were found, indicating the field is at its infancy stages and more research is needed. Enrolment for children with deaf-blindness in 2021 was 271(19 in pre-primary) indicating increased awareness to the community about the disability. However, none of the studies met the criteria set for further analysis. According to WHO and UNICEF (2022), there is a need to increase access to assistive technology for persons with deaf-blindness.

Deaf

Deaf community have challenges in spoken language and as a general rule deaf people depend on sign language of which the general community do not use

and are unaware. According Batamula and Pudans-Smith (2017) deafness can be understood in terms of pathological or medical that considers deafness as a physical disability and cultural model that looks at a deaf person as belonging to a culture with its language and norms. The deficit model focuses on how to give the deaf person ability to hearing. Developing sign language skills among community members in which the deaf and non-deaf participate can ensure fully participation of the deaf community in the socio-economic activities in the society and receive gainful employment and or establish income-generating activities.

Lee (2012) notes that there are interventions in Tanzania to people with disabilities including access to information, access to learning and using sign language, creating support networks, participation in community development initiatives, and providing school supplies. In ensuring participation of deaf individuals, there is a need to ensure they participate in designing, implementing and evaluating targeted deaf interventions projects in the community. Intervention in education has to focus on the issue of linguistic access to curricular material and about pedagogy in deaf education that started way back 1870 (Johnson, 1989). Similarly, Hall et al. (2019) found that a deaf person needs to master at least one language (spoken or signed) to reach their full potential. Barriers to full participation of deaf community in developing nations is attributed to severely low funding for prevention, early detection, inflexible curriculum and rehabilitative programs (Tungaraza, 2012a). Other barriers include delays in diagnosis, social attitudes, local customs, and cultural bias. Learning among deaf children is influenced by communication, degree of hearing loss, presence or absence of other disability, age of hearing loss, social and family environment, early identification and early intervention, context and intensity of services that call for enhanced early screening, assessment and intervention to enhance access to information and learning (Mkongo, 2019; Batamula & Pudans-Smith, 2017).

Table 5: *Hearing Impairment Intervention Studies*

Studies	Intervention strategy
Batamula & Pudans-Smith (2017).	Increasing community participation among deaf through facilitating Tanzania Sign Language to deaf and non-deaf
Lee (2012)	Access to information, learning and using sign language, creating support networks, aid, access to school
Boonstra et al. (2015).	Increasing access to education and training of deaf people
Mkongo (2019)	Increasing access to early identification, assessment and intervention in pre-primary education Increasing supply of teachers with knowledge and skills to facilitate learning of deaf children in pre-primary education.

Intellectual impairment

Intellectual impairment is referred to as a disability characterized by significant limitations both in intellectual functioning and in adaptive behaviour as expressed in conceptual (language and literacy; money, time, and number concepts; and self-direction), social (interpersonal skills, social responsibility, self-esteem, gullibility, naïveté (i.e., wariness), social problem solving, and the ability to follow rules/obey laws and to avoid being victimized), and practical skills (activities of daily living (personal care), occupational skills, healthcare, travel/transportation, schedules/routines, safety, use of money, use of telephone) that are learned and performed by people in their everyday lives manifested before age 18 (Harris & Greenspan, 2016; Shree & Shukla, 2016).

Table 6: *Intellectual Impairment Intervention Studies*

Studies	Intervention strategy
Machogu (2014).	Increased participation in learning focusing on the content or what to teach; teaching and learning methods; methods of assessment; the organization and management of the classroom; and the organization and management of the school timetable
Stone-MacDonald (2012).	Increased participation in socio-economic activities through developing adapted culturally and socially relevant curriculum
Sylvester (2017).	Increased participation of learners with intellectual disability through developing and adapting primary school adapted syllabus

Interventions services for people with intellectual disability include dietary and language interventions. Dietary intervention prevents intellectual disability caused by Metabolic disorders and language intervention increases functional communication. People with intellectual disability show delayed functioning on pragmatic aspects of language, such as turn taking, selecting acceptable topics for conversation, knowing when to speak, knowing when to be silent, and similar contextual skills (Shree & Shukla, 2016). According to Stone-MacDonald (2012) people with intellectual impairment require adapted culturally and socially relevant curriculum providing knowledge and skills they will be able to use after graduation.

Special needs teachers interviewed in this study indicated that people with intellectual disability had interventions about training on adaptive games as in many cases they participated in Special Olympics, training in units where they learn functional skills and some joined vocational training for developing technical skills. All the interviewed teachers trained in special education to facilitate learning of people with intellectual impairment indicated a shortage of curriculum for formal and vocational education. One of the teachers said:

I feel challenged when it comes to intervention for people with intellectual impairment. There are fewer opportunities to learn functional skills. In their school education, less consideration is given to developing adapted curriculum for these children. For example, adapted syllabus for children with intellectual impairment Level I to III has not been updated since 2007. For children with severe intellectual impairment, there is no continuation after basic education, as there is still not developed adapted curriculum for vocational education. Only few in Dar es Salaam join Chang'ombe Vocational Training Centre for vocational skills. I do not know how they are certified in vocational education [RTIII, 12.10.2022].

These findings are in line with those of Machogu (2014) and Sylvester (2017) who see a need for flexibility in the implementation of school curriculum. For effective provision of intervention services for people with intellectual impairment, there is a need to capacitate educators and develop adapted curriculum to meet their learning needs in formal, non-formal, informal and vocational skills training (Tungaraza, 2012a; Kuper et al. (2016).

Physical impairment

In this aspect, physical impairment is taken as a form of disability that prevents individuals from walking and participating in daily activities. According to Bright et al. (2018) studies on rehabilitation for persons with disabilities in low-and-middle-income countries, indicated a diversity of measures taken to address disability issues and that there was evidence that access to rehabilitation is low among people with disabilities. The right to health is a global concern. The aim of WHO (2018) on Universal Health Coverage (UHC) is to “ensure that all people have access to needed promotive, preventive, curative, rehabilitative, and palliative services they need, of sufficient quality to be effective, while ensuring that the use of these services does not expose the user to financial hardship”, People with disabilities in developing countries can hardly achieve the goal of UHC. In this study findings indicate fewer efforts have been made toward supporting persons with physical impairment (Kuper et al., 2016; Seif, 2017). There are uncoordinated services and less training of experts for further innovation in the area of physical impairment.

Table 7: *Intellectual Impairment Intervention Studies*

Studies	Intervention strategy
Kuper et al. (2016).	Access to health care
Mahande et al. (2007).	Access to surgical services
Seif, S. (2017).	Provision of mobility support devices

For people with physical impairment, like others, intervention services are invisible. Rarely, one gets information as to where to get services. As one of the physically impaired persons noted:

I got accident and lost my both legs. I got treatment in hospitals and I had challenges on obtaining a wheelchair due to the high cost and later I had to start using a wheelchair that I learnt myself on how to operate as I had no one with such knowledge. I think we need some disability centres where one can get all the services including assistive devices and training on how to use the device (RP1, A physically challenged individual, 8.12.2022).

The findings indicate uncoordinated efforts between the health sector and other providers of services that enhance coping skills for social partition in the community.

Autism

Autism is considered a disability from a medical and legal standpoint. According to these perspectives, the condition makes it difficult for a person to interact with their environment.

Autism interventions in Tanzania are few. According to WHO (2004), autism spectrum disorder (ASD) or autism is a neurodevelopmental disorder characterized by marked impairments in social interaction and communication accompanied by a pattern of repetitive, stereotyped behaviours and activities, with delay in social interaction and language occurring prior to the age of three. People with autism have challenges in both receptive and expressive language. Learners with autism have difficulties understanding body language, context, abstract and figurative language. Interventions services include behavioural interventions, speech therapy and special facilitation skills like eye gaze intervention and picture exchange communication. Generally, no one intervention works for all, calling a need to develop adapted curricular that guide their learning progress.

Studies	Intervention strategy
Harrison et al. (2016).	To enhance knowledge and skills about autism to medical doctors for early screening, diagnosis and intervention
Harrison et. al. (2014).	To enhance Autism assessment competency among practitioners by developing assessment/ observation tools and training on how to use for early identification, screening, assessment and intervention
Naqvi et al. (2022).	Increasing knowledge on autism among teachers so as to be able to provide appropriate

In an interview with trained teachers in facilitating learning of children with disabilities and the parents of children with autism it was found that intervention services were inadequate. Teachers indicated challenges on having adapted curriculum for children with autism. Similarly, parents faced a challenge to find academic and vocational education institutions that provide education for children with autism for enhancing their partition in socio-economic development. This is what respondents said:

I have some knowledge on disability. But not much on how to support people with autism. I learnt as a general subject knowledge during college training. I later specialised on intellectual impairment. I face challenges in my work as I did not learn about autism and how to facilitate learning. I received some knowledge during a seminar. It is that knowledge I use to facilitate learning. However, I teach what I can manage as there is no adapted curriculum for persons with autism even that of intellectual impairment has never been updated since 2007 (Duliduli, Specialist teacher 10.10.2022).

Where parents can afford sending children to school, teachers are not knowledgeable about how to support the children. Teachers face challenges related to capacity building on how best to support children with disabilities (Harriso et al., 2016; Harrison et al., 2014). Issues on intervention are related to: accessibility, affordability, acceptability, availability and quality. Intervention services for people with disabilities, if available, are rarely known. Where intervention services are available in most cases, they are unaffordable. With shortages of adapted curriculum and capacity building for staff rarely are institutions offering the services acceptable as it is difficult to ensure the quality of training. Developing intervention services for people with disabilities faces challenges in developing countries where chances for innovation are limited, training institutions are not adequately funded and disability is on increase due to challenges in health sector and less developed social support services.

Conclusions

In Tanzania since 1961 to 2022 there are a number of improvements made in providing intervention services to persons with disabilities. Intervention services provided are mainly on medical treatment, assistive devices, access to education, skills training, counselling, economic empowerment, and creation of lifelong learning opportunities. With medical treatment one of the challenges is the shortages of the links between health practitioners and those providing intervention services. For example, after one is diagnosed having impairment, there are few referrals to

institutions providing intervention services. Where intervention is available, they are difficult to locate. In the education sector, there are efforts on education services for people who become disabled at adult age, as there are less available centres where one can receive coping strategies after becoming disabled. Based on these findings, in Tanzania, intervention services for people with disabilities since 1961 to 2022 were offered and were uncoordinated. Most of the intervention services were linked to health and education. Fewer efforts have been made to develop intervention services for people who become disabled at adult age and there are less intervention services related to vocational skills training.

Recommendations

This study recommends for the government to support institutions to develop intervention services to support people with disabilities. This will enable these people to learn functional and vocational skills that enhance their participation and contribution to socio-economic development. The intervention services for people with disabilities have to be linked to the health sector. For the education and vocational institutions, there is a need for the government and other stakeholders to support development and implementation of adapted curriculum for vocational skills training. On locating for intervention services, there is a need for the government and stakeholders to create a database for intervention services for each type of disability.

References

- Aldersey, H. M., & Turnbull, H. R. (2011). The United Republic of Tanzania's national policy on disability: A policy analysis. *Journal of disability policy studies*, 22(3), 160-169.
- Andrews, D., Walton, E., & Osman, R. (2021). Constraints to the implementation of inclusive teaching: a cultural historical activity theory approach. *International journal of inclusive education*, 25(13), 1508-1523.
- Batamula, C., & Pudans-Smith, K. (2017). Examining language and access for deaf in Central Tanzania. *International journal of education and social science* 4(9)20-29
- Boonstra, S., Duffy, D., Hartzell, Z., Keech, B., & Polga-Hecimovich, P. (2015). Improving and expanding access to primary education for deaf/hard of hearing children in Tanzania. Minnesota: University of Minnesota.
- Bright, T., Wallace, S., & Kuper, H. (2018). A systematic review of access to rehabilitation for people with disabilities in low-and middle-income countries. *International journal of environmental research and public health*, 15(10), 2165.

- De Groot, T., Meurs, P., & Jacquet, W. (2019). The effect of contact interventions on the stigma of people with albinism in Tanzania. *Journal of Visual Impairment & Blindness*, 113(5), 464-469.
- Dineen, B., Foster, A., & Faal, H. (2006). A proposed rapid methodology to assess the prevalence and causes of blindness and visual impairment. *Ophthalmic epidemiology*, 13(1), 31-34.
- Göransson, L. (2008). *Deafblindness in a life perspective: Strategies and methods for support*. Malmo: Mo gårds förlag.
- Gullacksen, A. C., Göransson, L., Rönnblom, G. H., Koppen, A., & Jørgensen, A. R. (2011). Life adjustment and combined visual and hearing disability/deafblindness an internal process over time. *Stockholm: Nordic Centre for Welfare and Social*, (2011).
- Hall, M. L., Hall, W. C., & Caselli, N. K. (2019). Deaf children need language, not (just) speech. *First Language*, 39(4), 367-395.
- Harris, J. C., & Greenspan, S. (2016). Definition and nature of intellectual disability. In: Singh, N. (eds). *Handbook of evidence-based practices in intellectual and developmental disabilities. Evidence-based practices in behavioural health*. Switzerland: Springer
- Harrison, A. J., Long, K. A., Manji, K. P., & Blane, K. K. (2016). Development of a brief intervention to improve knowledge of autism and behavioural strategies among parents in Tanzania. *Intellectual and developmental disabilities*, 54(3), 187-201.
- Harrison, A. J., Zimak, E. H., Sheinkopf, S. J., Manji, K. P., & Morrow, E. M. (2014). Observation-centered approach to ASD assessment in Tanzania. *Intellectual and Developmental Disabilities*, 52(5), 330-347.
- Johnson, R. E. (1989). Unlocking the curriculum: principles for achieving access in deaf education. Working Paper 89-3.
- Kapinga, O. S., & Aloni, M. (2023). Measuring levels of self-esteem of students with visual impairments in regular schools in Tanzania. *British Journal of Visual Impairment*, 41(2), 388-399.
- Kavitha, V., Manumali, M. S., Praveen, K., & Heralgi, M. M. (2015). Low vision aid—A ray of hope for irreversible visual loss in the paediatric age group. *Taiwan journal of ophthalmology*, 5(2), 63-67.
- Kingo, A. U., & Ndawi, B. T. (2009). Prevalence and causes of low vision among schoolchildren in Kibaha District, Tanzania. *Tanzania journal of health research*, 11(3), 111-115.

- Kisanga, S. E., & Kisanga, D. H. (2020). The role of assistive technology devices in fostering the participation and learning of students with visual impairment in higher education institutions in Tanzania. *Disability and Rehabilitation: Assistive Technology*, 17 (7), 791-800.
- Kisanji, J. (1995). Interface between culture and disability in the Tanzanian context: Part I. *International journal of disability, development and education*, 42(2), 93-108.
- Kuper, H., Davey, C., Banks, L. M., & Shakespeare, T. (2020). Trials and tribulations of collecting evidence on effectiveness in disability-inclusive development: A narrative review. *Sustainability*, 12(18), 7823.
- Kuper, H., Walsham, M., Myamba, F., Mesaki, S., Mactaggart, I., Banks, M., & Blanchet, K. (2016). Social protection for people with disabilities in Tanzania: A mixed methods study. *Oxford Development Studies*, 44(4), 441-457.
- Lee, J. C. (2012). *They have to see us: An ethnography of deaf people in Tanzania* (Doctoral dissertation, University of Colorado at Boulder).
- Lehtomäki, E., Tuomi, M. T., & Matonya, M. (2014). Educational research from Tanzania 1998–2008 concerning persons with disabilities: What can we learn? *International journal of educational research*, 64, 32-39.
- Machogu, M. (2014). *Teachers' knowledge and adoption of inclusive education for children with intellectual impairment in Tanzania: The case of inclusive primary schools in Bunda district* (Doctoral dissertation, The University of Dodoma).
- Mahande, M., Tharaney, M., Kirumbi, E., Ngirawamungu, E., Geneau, R., Tapert, L., & Courtright, P. (2007). Uptake of trichiasis surgical services in Tanzania through two village-based approaches. *British journal of ophthalmology*, 91(2), 139-142.
- Mkongo, J. I. (2019). *Inclusion/integration of children with hearing impairment in pre-primary education in Tanzania* (Doctoral dissertation, lmu).
- Mnyanyi, C. B. (2009). Developing teachers' work for improving teaching and learning of children with visual impairment accommodated in ordinary primary schools. *European Educational Research Journal*, 8(2), 336-351.
- Mnyanyi, C. B. (2014). *Changing Teachers' Practices in Regular Schools Enrolling Children with Visual Impairment: An Action Research Project in Tanzania*. Åbo Akademis Förlag, Åbo Akademi University Press.

- Munn, Z., Peters, M. D., Stern, C., Tufanaru, C., McArthur, A., & Aromataris, E. (2018). Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC medical research methodology*, 18(1), 1-7.
- Naipal, S., & Rampersad, N. (2018). A review of visual impairment. *African Vision and Eye Health*, 77(1), 1-4.
- Naqvi, N. C., Wong-Goodrich, S. J., Martinage, A., Gordon, S. L., DeCuffa, J. A., & Collins, M. (2022). Increasing knowledge of autism spectrum disorders among urban special educators in Tanzania: Results from three teacher training workshops. In *Research anthology on inclusive practices for educators and administrators in special education* (pp. 880-898). IGI Global.
- Njelesani, J., Couto, S., & Cameron, D. (2011). Disability and rehabilitation in Tanzania: a review of the literature. *Disability and rehabilitation*, 33(22-23), 2196-2207.
- Saran, A., White, H., & Kuper, H. (2020). Evidence and gap map of studies assessing the effectiveness of interventions for people with disabilities in low-and middle-income countries. *Campbell Systematic Reviews*, 16(1), e1070.
- Seif, S. (2017). *The Role of CHAWATA in facilitating the provision of rehabilitation services to people with physical disability in Tanzania a case of Nyamagana district, Mwanza* (Master dissertation, SAUT).
- Shree, A., & Shukla, P. C. (2016). Intellectual Disability: Definition, classification, causes and characteristics. *Learning Community-An international journal of educational and Social Development*, 7(1), 9.
- Sofu, F., & Wicks, A. (2017). An occupational perspective of poverty and poverty reduction. *Journal of Occupational Science*, 24(2), 244-249.
- Stone-MacDonald, A. (2012). Preparing children with developmental disabilities for life in the community: A Tanzanian perspective. *Education and training in Autism and developmental disabilities*, 255-268.
- Sylvester, S. M. (2017). *An investigation on the management of the 2007 Tanzanian syllabus for intellectually impaired pupils in promoting life skills* (Master dissertation, The Open University of Tanzania).
- Taasisi ya Elimu Tanzania. (2021). Mtaala Rekebifu wa Elimu ya Msingi kwa Mwanafunzi mwenye Uziwikutoona Hatua I-III. Dodoma: Wizara ya Elimu, Sayansi na Teknolojia
- Tungaraza, F. D. (2012a). Inclusive education in Tanzania: Are all learners identified and their needs known? *LWATI: A journal of contemporary research*, 9(3).

- Tungaraza, F. D. (2012b). Sixty years of special needs education in Tanzania: Celebrating audacity, commitment and resilience. *Lwati: A Journal of Contemporary Research*, 9(1).
- Vetoniemi, J., & Kärnä, E. (2021). Being included—experiences of social participation of pupils with special education needs in mainstream schools. *International Journal of Inclusive Education*, 25(10), 1190-1204.
- WHO & UNICEF (2022). *Global report on assistive technology*. Geneva: World Health Organization and the United Nations Children’s Fund (UNICEF).
- Witchger Hansen, A. M., & Blaskowitz, M. (2018). From dependence to interdependence: A holistic vocational training program for people with disabilities in Tanzania. *Annals of International Occupational Therapy*, 1(3), 157-168.
- World Health Organization (2005). *Preventing chronic diseases: a vital investment. WHO global report*. Geneva: World Health Organization.
- World Health Organization. (2011). *World report on disability*. Geneva: WHO.
- World Health Organization. (2012). *Early childhood development and disability: A discussion paper*, Geneva: WHO.
- World Health Organization (2018). *Universal Health Coverage and Health Financing*. Geneva: WHO.
- Zwanenburg, A., & Tesni, S. (2019). *Guidelines on best practice for persons living with deafblindness*. CBM: Germany.

PED EDITORIAL POLICY AND NOTES FOR CONTRIBUTORS

Papers in Education and Development (PED) is a peer-reviewed journal dedicated to the analysis of educational problems and issues from a multidisciplinary point of view. Contributions are invited from authors in a variety of academic disciplines whose work has significant implications for educational policy and/or practice both in Sub-Saharan Africa and beyond. The journal is published twice a year. The Editorial Board accepts research-based analytical papers, original research reports, book reviews and short communications.

Notes for contributors

1. Manuscripts should be sent electronically to the Chief Editor, *Papers in Education and Development (PED)*, School of Education, University of Dar es Salaam-Tanzania via E-mail: papersineducation@gmail.com, copy to ped@edu.udsm.ac.tz.
2. On the first page of your manuscript, indicate the title of the paper, the names, institutional affiliation, postal and e-mail addresses of the author(s). If a paper has more than one author, indicate which author is responsible for correspondence concerning your submission. On the second page, provide the title and an abstract of no more than 120 words, as well as up to five key words which do not appear in the title.
3. The entire manuscript must be typed in 1.5 spacing with ample margins (at least one inch) in Times New Roman, font size 12. All pages must be numbered at the bottom left. The manuscript must be set in *UK English* language default.
4. Full-length analytical papers and research-based articles should contain at most 8,000 words. Book reviews and short communications must not exceed 4,000 words.
5. All manuscripts submitted will be refereed by at least two scholars of proven competence in their areas of specialisation. Nevertheless, the final decision regarding publication shall reside with the Editorial Board.
6. Papers submitted for publication in the *PED* must not have been published or be under consideration for publication elsewhere. This is an important matter of ethics but also of copyright.

7. References and reference citations should follow the style of the *American Psychological Association* (APA) version six. Please take time to study this style and the associated rules, as submissions that do not follow these APA guidelines will not be accepted.
8. The titles of journals must not be abbreviated. They must appear in full.
9. Papers accepted and published by PED become the copyright material of the Journal, unless otherwise specifically agreed.
10. Authors of published articles will receive a free copy of the journal issue.