

Assessing Effectiveness of In-Service Teachers' Professional Development Programme towards Equity and Inclusion in Education for Children with Disability in Dodoma, Tanzania.

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Abstract

This study assessed the effectiveness of the in-service Teacher Professional Development Programme (TPDP) as an intervention to enhance Inclusive Education (IE) for Children with Disabilities (CwDs) in Dodoma, Tanzania. Specifically, it assessed teachers' diversity in knowledge, attitudes, and beliefs towards educating CwDs while striving for equity and inclusivity in mainstream classrooms. It explored the challenges in the implementation of IE to enhance equity and IE. The study found that the in-service TPDP led to an increase in teachers' knowledge and positive attitudes towards the inclusion of CwDs in regular classrooms, ensuring diversity and equity. Challenges hindering equity in the provision of IE include poor infrastructure, high numbers of children, and poor sanitation arrangements. Barriers preventing CwDs from going to school include distance and lack of transportation. The study suggests that further TPDP is needed for the identification and assessment of the learning needs of CwDs, especially those with learning difficulties.

Keywords: Equity, children with disabilities, inclusive education, in-service teacher professional development.

Introduction

Individuals with disabilities constitute a significant minority group, accounting for approximately 15% of the global population, which exceeds one billion people (World Health Organization [WHO], 2011). In developing nations like Tanzania, where access to social services, including education, is often limited, the majority of individuals with disabilities, particularly children aged 0-14 years, face significant challenges (WHO, 2011). Despite efforts to provide quality and equitable education, Children with Disabilities (CwDs) frequently find themselves among the most marginalized and excluded groups (UNICEF, 2013). In response to these challenges, Inclusive Education (IE) has emerged as a crucial framework aiming to provide equitable and accessible education for all learners, including those with disabilities. However, successful implementation of inclusive practices requires well-equipped teachers with the necessary knowledge and skills (Pit-ten Cate et al., 2018; UNESCO, 1994). Unfortunately, in many developing countries such as Tanzania, a shortage of trained teachers in IE hinders the effective implementation of inclusive practices (UNICEF, 2013). Tanzania stands among the nations that embraced the framework of IE, and adopted it in the country by 1998 (Possi & Milinga, 2017)). To facilitate the effective implementation of IE, Tanzania has been actively formulating the National Strategies on IE (NSIE) since 2009 (URT, 2009). The strategies have been implemented progressively, and the present phase, which spans from 2021/2022 to 2025/2026, marks the third iteration (URT, 2021). The formulated NSIE emphasizes the imperative of incorporating inclusive practices within schools to ensure equity and accessibility for all children including CwDs. To achieve this, the strategy centres on enhancing

teacher skills development in inclusive pedagogy, adapting the curriculum, and offering comprehensive support services, especially catering to the special needs of the children.

Despite the government's efforts to promote inclusive practices within schools, a study conducted by the Tanzania Cheshire Foundation (TCF) in primary schools across the Dodoma region unveiled a lack of teachers equipped with the necessary skills in IE. This scarcity of trained teachers poses a significant challenge in ensuring that children with special needs, particularly those with disabilities, receive an education of equal quality to their peers (Kyambo, Basela, Pembe & Deluca, 2023). To address this predicament, an intervention project was implemented in Dodoma, Tanzania. The project, conducted by Leonard Cheshire (LC) -UK in partnership with TCF conducted a four-year Comic Relief-funded intervention project that among others, implemented in-service teachers' professional development through training skills on IE and inclusive classroom teaching skills. The primary objective of this initiative was to support the government's efforts by providing training to in-service teachers within Dodoma City and the Chamwino district. The project focused on enhancing the skills and capacities of the teachers in the sampled project schools, empowering them to effectively assist CwDs (CwDs) attending inclusive schools. The project aspired to serve as a model for replication in other parts of the country.

As part of the comprehensive activities undertaken by the IE project, a survey was conducted among teachers to assess its effectiveness as a strategic mechanism to foster equity and inclusion in education for CwDs in Tanzania. Therefore, this paper presents the empirical findings on the assessment of the effectiveness of an IE intervention designed to improve in-service teachers' skills to be able to ensure equity and inclusion of CwDs in inclusive classrooms in low-income educational settings in Tanzania.

Objectives

Specifically, the study addressed two research objectives: To assess the changes in teachers' knowledge, attitudes and beliefs towards equity and inclusion of CwDs in education after participating in an in-service professional development programme; and to explore the challenges faced by teachers in implementing IE practices for CwDs following the in-service professional development programme.

Literature Review

This section provides a comprehensive literature review that covers two essential aspects relevant to IE in the current study. Firstly, it examines the legal and policy frameworks at both international and national levels that pertain to IE. Secondly, it focuses on conducting an empirical literature review on the effectiveness of in-service Teacher Professional Development Programmes (TPDP) in promoting IE.

Legal and Policy Frameworks Relevant to IE at International and National Levels

The legal and policy frameworks relevant to IE at international and national levels were studied in light of the study's purpose. It delves into the practical implementation of the policies, which safeguard the rights of CwDs and promote their educational opportunities. In addition, the review encompasses how national policies relate to international conventions and frameworks. IE is an educational system in which all learners, regardless of their various backgrounds and abilities, are enrolled, actively engaged, and achieve within regular educational settings and other educational programmes (URT, 2021). Worldwide, several international conventions and declarations support and promote the IE approach. The United Nations adopted the Universal Declaration of Human Rights (UDHR) in 1948. Article 26 of the 1948 Universal Declaration of Human Rights emphasizes the importance of education as a fundamental human right. This has been interpreted to encompass the IE principle, which assures equitable access to education for all individuals. The 1989 United Nations Convention on the Rights of the Child (CRC) is another convention. Even though the CRC does not specifically address education, it highlights the rights of children, including those with disabilities, to an education that is focused on realizing the child's full potential. It supports IE by emphasizing the importance of ensuring equal access to education for all children (URT, 2021).

Furthermore, during the World Conference on Special Needs Education in 1994, the Salamanca Statement and Framework for Action was accepted, emphasizing the importance of IE as a tool for achieving education for all (UNESCO, 1994). It gives countries a framework for developing IE policies and practices. Tanzania was among the several countries that adopted this. Another convention is the Convention on the Rights of Persons with Disabilities (CRPD). The CRPD was established by the United Nations in 2006 (UN, 2006) and Tanzania ratified the CRPD in 2009. This convention emphasises the rights of people with disabilities, particularly the right to education. Article 24 explicitly addresses the right to IE, laying out the concepts and requirements for fostering IE environments.

The Education for All (EFA) Goals and Sustainable Development Goals (SDGs) number four (4) are the fundamental international initiatives focusing on IE described in this study. The EFA movement sought to promote universal access to high-quality education by focusing on several major objectives. While not solely concerned with IE, these objectives emphasize the importance of equity and access. The fourth Sustainable Development Goal (SDG 4) focuses on quality education and includes targets and indicators for inclusive and equitable education (UN, 2018). The conventions and agreements provide the basis for the legal and right framework for promoting IE globally. Various countries, including Tanzania, have adopted these conventions and agreements to ensure the implementation of IE. Tanzania has undertaken various initiatives aimed at promoting IE to ensure that all children, regardless of their backgrounds and abilities, have access to quality education, as emphasized in various global declarations. Within international frameworks, the government has developed and endorsed several guidelines, curricula, and strategic documents that support IE.

According to the URT (2021), the government has approved eleven (11) documents that support IE. These documents include the Guideline for Teaching IE (2005) – Swahili Version, Toolkit for Creating Inclusive Learning Friendly Environments (2012), Guideline for Providing Education Services to Children with Albinism and those with Low Vision (2012) – Swahili Version, Guideline for Educational Support, Resources, and Assessment Services (2013), National Guideline for Water, Sanitation, and Hygiene for Tanzanian Schools (2016), Guideline for Identifying Special Needs in Learning Reading, Writing, and Arithmetic Skills (3Rs) for Children (2016) – Swahili Version, School Quality Assurance Framework and Handbook (2017), TCU Handbook for Standards and Guidelines for University Education in Tanzania (2019), NSIE (2018-2021), Guideline for Implementing the Secondary Education Curriculum for Deaf Students (2020) – Swahili Version, and Dictionary of Tanzanian Sign Language (2020) – Swahili Version. All these documents support IE in Tanzania. Above all, in response to the UN declarations, Tanzania formulated the National Policy on Disability (NPD) of 2004 which serves as guidelines for service delivery to persons with disabilities in various sectors, including education. Tanzania's commitment to ensuring the rights and services to inclusivity culminated with the enactment of the Persons with Disabilities Act (PDA) of 2010. This act acknowledges the rights of individuals with disabilities in Tanzania and promotes their active involvement in all societal aspects, including education. This was to ensure a legal framework in the implementation of equity and inclusion of persons with disabilities in social, economic, political and cultural aspects of the country. Such efforts have been reflected in the Education and Training Policy (ETP) of 2014 which was designed to provide high-quality, accessible, and IE for all Tanzanians. This policy places a strong emphasis on integrating learners with disabilities into mainstream schools and creating supportive learning environments (URT, 2014). It is conceivable that the country had made considerable legal and policy guidelines aimed at ensuring equal opportunities for education to acquire the required knowledge and skills.

Despite the existence of these supportive policy guidelines and strategic documents for IE in Tanzania, effective implementation of IE remains challenging, particularly in terms of teachers' ability to promote equity and inclusion of CwDs in inclusive classrooms. This has called for both national and international educational stakeholders to join efforts in ensuring equity and inclusion in education for CwDs. It is through this context the current study was developed to assess the effectiveness of in-service teachers' professional development towards enhancing equity and inclusion in education for CwDs in Chamwino district and Dodoma city in Dodoma, Tanzania.

Effectiveness of In-Service Teacher Professional Development in Promoting Inclusive Education

In the field of education, the effectiveness of in-service TPDP in promoting IE is a matter of considerable importance. As IE is increasingly recognized as a fundamental right for all students, it becomes crucial to conduct a study focusing to the effectiveness of in-service TPDP in promoting IE. Therefore, the empirical studies in this study focused on TPDP, equity and inclusion in education. While numerous studies worldwide have investigated TPDP with a focus on equity and inclusion, there is a lack of research in Tanzania specifically addressing these aspects in education. This literature review aims to provide an overview of relevant studies that directly or indirectly contribute to this research topic. The

following paragraphs present a selection of these studies. The study by Chitiyo et al. (2019) explored the professional development needs of both general and special education teachers in Ghana regarding students with disabilities in an inclusive environment. The study utilized a quantitative research design and employed a survey instrument comprising both Likert-type and open-ended questions to collect data from the participants. The study included a sample of 232 teachers selected through convenience, purposeful, and simple random sampling techniques. Both quantitative and qualitative thematic analysis methods were used to analyze the collected data.

The study's key findings indicate that the participating teachers in Ghana felt inadequately prepared to teach students with disabilities in inclusive classrooms. The majority of the participants expressed the importance of professional development in addressing their needs. The teachers identified various topics presented to them as important, and they were able to rank these topics based on their perceived importance. Additionally, a slight majority of the teachers supported the idea of educating students with disabilities together with their peers. Overall, the study contributes to the understanding of teachers' professional development needs in the context of IE in Ghana. The implications of the findings emphasize the importance of tailored professional development programmes, involving teachers in the process, and promoting inclusive practices in Ghana's education system.

Ackah-Jnr (2020) conducted a study in Ghana to explore the in-service professional development and learning experiences of teachers implementing IE in early childhood education settings. Specifically, the study investigated the types of professional development activities teachers engage in, understand the perceived importance of professional development, and identify the challenges associated with professional development for IE. The study employed an interpretive exploratory case study design. The researchers collected qualitative data through interviews with teachers and headteachers. The study involved 20 participants, including four headteachers and 16 teachers from four early childhood learning centres and schools. The findings specify that teachers engaged in both formal and informal professional development activities to enhance their readiness, efficacy, competence, and preparedness for IE. Professional development was perceived as crucial for improving teachers' learning and motivation for practice. The effectiveness of professional development was influenced by various challenges within the teacher, school, and system levels. The study highlights the importance of motivating teachers, revitalizing formal professional development programmes, and supporting teachers' informal learning activities to enhance their knowledge, skills, and disposition for IE.

The study by Kubacka and D'Addio (2020) explored the role of teacher education and professional development systems in fostering inclusive practices. The study employed a literature review approach to gather relevant information and data on teacher education and professional development for inclusion. The authors collected information from a range of international studies, reports, and databases to support their analysis and findings. Thus, the study utilized a desk-based research methodology. The authors reviewed available research on IE and examined

the role of teacher education and professional development in promoting inclusive practices. The findings indicate that teachers play a central role in accommodating students of all abilities and backgrounds in inclusive classrooms. Inclusive teaching and learning require teachers to recognize the diverse experiences and abilities of every student. It was also revealed that there is a need for inclusive teacher training and professional development systems to empower teachers worldwide. Data on the extent of teachers' education and qualifications is limited globally, particularly in low-income countries. Many teachers, especially in low-income contexts, lack sufficient training and support for inclusion. Existing teacher education systems may still be influenced by exclusionary practices, hindering IE efforts. Generally, the study highlights the importance of teacher education and professional development in promoting inclusive practices.

Ahmed, et al. (2021) conducted a study on an Evidence and Gap Map (EGM) to identify and analyze the existing evidence on interventions for TPDP focused on disability inclusion in low- and middle-income countries (LMICs) in the Asia-Pacific region. The study employed a literature review approach to determine the levels of evidence for TPD interventions and identify areas where there is a lack of evidence. The study employed an evidence and gap-mapping methodology. Different studies were included and then mapped based on their characteristics, such as study design, target population, intervention type, and outcomes measured. The evidence was categorized into different levels, ranging from systematic reviews and meta-analyses to individual studies. Based on the evidence and gap mapping, the study revealed that there is limited research on TPD interventions for disability inclusion in LMICs in the Asia-Pacific region. The available evidence primarily consisted of individual studies with relatively weak study designs. The findings also indicated a lack of evidence on the effectiveness of specific TPD interventions for disability inclusion. However, some studies highlighted the importance of teacher readiness and capability in achieving successful IE.

Methodology

This study employed a mixed-methods approach, combining both qualitative and quantitative methods, to provide a comprehensive understanding of teachers' knowledge, attitudes, beliefs and challenges regarding IE in Tanzania. The mixed-methods approach was selected to capture both quantitative and qualitative data, to provide a more comprehensive understanding of the research objectives. The research design used in this study was a cross-sectional design. The cross-sectional design allowed for data collection at a specific point in time, capturing the current knowledge, attitudes, beliefs and challenges faced by teachers. The study took place in Chamwino district and Dodoma city within the Dodoma region of Tanzania. This specific location was purposively selected due to its implementation of an IE project. From the 20 inclusive project schools in the area, a random sampling technique was used to select 10 schools, ensuring each school had an equal chance of inclusion in the study. All the teachers available at the sampled schools on the designated research day participated in the study. Data were collected through the survey tool consisting of 39 open-ended and closed items. The survey tool was initially developed in English and then translated into Kiswahili to ensure participants' understanding. Back-translation was conducted by language experts from the Department of

Kiswahili and the Department of Foreign Languages at the University of Dodoma to ensure translation accuracy. The survey method was chosen as it allowed for the efficient collection of data from a relatively large sample size. Closed-ended questions were employed to collect quantitative data on teachers' knowledge, attitudes, and beliefs regarding disability-inclusive classrooms. Open-ended questions were used to gather qualitative data, providing insights into the challenges faced by teachers and their day-to-day practices, allowing understanding of their experiences.

Before actual data collection, the survey tool was pretested at Mbalawala Primary School in the Dodoma district, and it was found that teachers were more comfortable answering the questionnaire in Kiswahili, but both languages were maintained for clarity. Quantitative data collected through closed-ended questions were analyzed using descriptive statistics such as frequency and percentages. Qualitative data from the open-ended questions were analyzed thematically. The study adhered to ethical guidelines and obtained research clearance permits from the Tanzania Cheshire Foundation and Leonard Cheshire - UK, who were involved in the intervention activities. Informed consent forms were obtained from all participants, ensuring their voluntary participation and the option to choose whether or not to respond to the survey questions. Confidentiality of participant information was maintained throughout the study.

The Findings

The main objective of the study was to assess the effectiveness of in-service teachers' training on IE in ensuring equity and inclusivity in education for CwDs in Chamwino district and Dodoma City in Tanzania. The findings were presented step by step based on specific objectives in the following subsections.

Changes in Teachers' Knowledge, Attitudes and Beliefs towards Equity and Inclusion

The first objective of the study assessed changes in teachers' knowledge, attitudes, and beliefs while striving to ensure equity and inclusion of CwDs in mainstream classrooms as an outcome of the in-service training given. The findings of the study revealed that the majority of the respondents 110 out of 112 (98.2%), were already teaching in inclusive classes before the commencement of the study. This indicates that teachers had prior experience with inclusive classrooms. However, it was discovered that nearly half of the teachers, 47 out of 112 (42%), who participated in the programme, admitted that their teacher training before entering the profession did not adequately prepare them to work with CwDs. Specifically, their training did not include any content related to disabilities. Furthermore, 33 out of 112 (29.5%) teachers mentioned that their courses also failed to cover topics related to diversity, equity, and IE for CwDs.

Due to the lack of training, 77 (68.8%) teachers reported seeking additional training courses outside formal education. Following LC/TCF training, qualitative data revealed that as teachers became more aware of inclusion, they also became more aware of the gaps and the need for specific resources and requirements to ensure diversity, equity, and inclusion of CwDs in education. It was suggested that classroom assistants such as fellow teachers or community

volunteers would be essential in creating an inclusive classroom taught by a teacher who is not an expert in IE (special education) as individual needs of CwDs, particularly those related to speech and language, hearing, or mobility difficulties, could be addressed.

Following the project's in-service teacher training (introducing a revised model of interactive teacher training), there was an increase in knowledge and an improvement in teachers' attitudes towards IE. The survey highlighted that the Tanzania Education and Training Policy (ETP) of 2014 sets the minimum qualification for teaching pre- or primary education to be a certificate in teacher education. However, the survey suggests that teacher education does not equip teachers to teach CwDs. This is corroborated by the fact that nearly half of the teachers 47 (42%) who participated in the programme expressed the view that their pre-service teacher training did not prepare them for working with CwDs. Their training did not include any content on disability. This indicates that a large proportion of teachers in the project schools were not trained on disability content during their time in teacher education. This result is noteworthy as it emphasizes that pre-service teacher training did not equip teachers to work with CwDs. The in-service teacher training was crucial to the teachers as they missed the IE content in pre-service teacher education to obtain and develop the necessary skills adequately. The in-service teachers' professional development training by TCF/LC was implemented using the Training of Trainers (ToT) approach. This enabled a group of headteachers, a small number of classroom teachers, education officials, and staff from teacher training institutes to participate in intensive IE training led by an international consultant. In turn, this provided teachers with the opportunity to train fellow teachers in their respective schools following a cascade approach. Teachers learned how to strengthen their teaching skills and build their knowledge to benefit learners. What emerges from the information about the training is a readiness to implement a more inclusive setting for CwDs, to ensure that teachers are provided with the necessary training, so that children are properly assessed, and the need to build the capacity of teachers through in-service training is achieved.

Similarly, the majority of respondents revealed positive attitudes and beliefs and disagreed with the statement "I believe that students with disability should be taught in special education schools," while agreeing that "inclusion facilitates socially appropriate behaviour among students." Many teachers had positive attitudes and beliefs about IE and the ability to assist students to progress in primary education. Also, teacher responses indicated that they were willing to adapt all the learned methodologies to teach and assess CwDs as well as assist them in the classroom and the wider school environment. Despite teachers feeling that they had the knowledge and skills required to teach CwDs, there were concerns regarding the inclusion of CwDs before in-service training. One such concern was the potential lack of available para-professional staff to support the inclusion of students, such as speech therapists, physiotherapists, occupational therapists, and others. Teachers also emphasized the negative impact resulting from highly populated classes and the long lesson timetables on their teaching. Consequently, teachers were unable to assist CwDs and provide them with the necessary support during class time. Poor infrastructure left teachers feeling

overworked and in need of assistance in the classroom. Yet, teachers expressed difficulty in finding support and resources to support inclusion.

Challenges Facing Teachers in Implementing Inclusive Education for Children with Disabilities

The second objective of the study was to investigate the challenges facing teachers in the implementation of IE practices for CwDs following the in-service professional development programme. The findings of the study showed that teaching learners with visual, hearing, speech and language, and learning difficulties was a difficult task. Other challenges were associated with the lack of a supportive environment (including teaching and learning materials, sanitary services, and mobility of the pupils), as well as the lack of support from parents, all of which affected pupils' attendance and equal participation in learning. More specifically, the prominent barriers hindering pupils with disabilities from attending school, participating, and achieving learning have been summarized in Table 1.

Table 1:

Challenges Faced by Teachers in Implementing IE for Children with Disability

Response	Frequency	Per cent
Negative beliefs	42	37.5
Low support from the parents	53	47.3
Lack of material support	17	15.2
Total	112	100.0

Source: Field Data (2021)

Based on the findings in Table 1, the majority of the teachers 53 (47.3%) expressed concern about low support from parents for their CwDs. Negative beliefs and a lack of teaching and learning materials were reported as other barriers preventing teachers from supporting CwDs from accessing primary education. However, following the training they received, the teachers tried to adapt to the needs of CwDs. Some teachers shared that they positioned pupils with visual and hearing impairments in front of the class to accommodate their learning needs, but the majority still found teaching difficult. It is important to note that there were no children with severe disabilities in the group. Teachers reported that the size of classes (number of children) proved to be detrimental to the quality of their teaching and the time they could spend with CwDs. When asked about the barriers that CwDs face, respondents identified obstacles such as the distance to and from school, lack of transportation, and poor access to sanitation arrangements once in school. Teachers highlighted other areas of concern, such that the parents were unable to support their child with disabilities with school requirements due to poverty, and some are less motivated to send their child to school if he/she has a disability.

The survey revealed that parents feel that CwDs do not need to attend school, so they do not feel obliged to provide them with school materials and shy away from sending them to school. Some parents go to the extent of hiding their CwDs in the house to avoid stigmatization from the community or peers in school. Teachers also underscored

infrastructural barriers to CwDs that hinder their learning, such as a lack of teaching and learning materials, assistive devices, and sign language experts. The survey indeed revealed that CwDs experience events of stigmatization from their peers, which teachers also perceive as a barrier.

Teachers were also asked to reflect on their daily practices and the extent to which they can carry out their duties successfully. The findings showed that teachers were positive about IE, for instance, building rapport with parents to improve CwDs' learning at home, adapting assessment procedures to the needs of specific children, involving CwDs in classroom activities, and developing teaching materials, including lesson plans. Before the training provided by TCF/LC, teachers were implementing ineffective teaching methods for CwDs. Following the training provided by TCF/LC, a teacher reported changing their methods to consider CwDs. They set time aside to prepare tactile aids, including maps for visually impaired children, used the correct terminology, taught through song and role play, and provided extended time for lesson content. As a result of TCF/LC training, another teacher reported using a participatory approach without considering students' abilities and using positive motivation.

Discussion

Equity in education requires assurance of children's rights for inclusion, which calls for education practitioners to ensure the diversity of needs of all children in the classroom, including CwDs (UNGEI, 2010). The concern here was whether school management and classroom teachers could ensure equity and inclusion of CwDs in mainstream schools and classrooms. While Miškolci, Magnússon, and Nilholm, (2021) reported that training on IE and/or special education in Sweden was present in all teacher preparation programmes that enabled them to manage IE in mainstream classrooms, findings in this study revealed that the pre-service teacher education of a large number of teachers who were teaching in the project schools did not include content on disability inclusion. However, the Headteachers and teachers in the project schools reported that the professional development and training they received through the project helped to ensure that all children in classrooms are treated with respect and not discriminated against based on their differences. It has been argued that teacher education should be at the core of IE reform, with pre-service teacher training as a vital start (Mukelabai et al., 2020).

It is crucial to highlight the significance of providing training to Headteachers, classroom teachers, education officials, and staff who are involved in implementing IE. This training is necessary to ensure their active participation in fostering diversity and equity within the educational setting. According to Warren (2018, as cited in Bukko & Liu, 2021), the key areas of training should focus on pedagogy, instructional skills, and cultivating equitable teaching dispositions. The feedback received from teachers and headteachers confirms the immense benefits of such training, particularly in promoting equity and access. One area that proved highly beneficial in the training was the development of Knowledge, Attitude, and Practice (KAP) in IE. This enabled participants to engage in learner-centred inclusive teaching and learning, utilizing participatory activities that encouraged critical thinking and reflection. The training facilitated active

dialogue between participants and facilitators, further enhancing their understanding and application of inclusive practices.

The survey responses revealed that many teachers, through the rollout training, were able to acquire the necessary KAP that enabled them to support CwDs in IE, which was the target objective towards enabling them to bring the expected changes in inclusive schools. It implies that a cascade model of offering training becomes effective if it is followed by school-based training. This success was observed to be a result of well-prepared guides for in-school professional development that were prepared by the trainers. The survey findings showed that the new training programme and manual that was used during the in-service training led teachers beyond knowledge and attitudes and influenced teacher practice when supporting CwDs in IE in mainstream classrooms.

The accessibility of education as a universal human right to everyone without any kind of discrimination is confirmed by the International Document on Human Rights (Zendeli, 2017). Therefore, it is important to ensure that teachers who graduate and are employed are well prepared to teach IE, as many schools are enrolling CwDs in mainstream classrooms. The teacher education curriculum should be reviewed to ensure that IE courses are part of the curriculum, adopting an IE system for all pre-service education and continuous professional development. For effective IE in mainstream schools and classrooms, strong policy statements about equity and inclusion are required. Ainscow (2020) clarifies that inclusion and equity require a policy that addresses new thinking, which focuses attention on the barriers experienced by some children that lead them to become marginalized as a result of contextual factors. The author further clarifies that education that is effective for all children is among the strategies for overcoming such barriers.

The challenges reported by the teachers to hinder access and equity in IE were limited resources and an unsupportive school environment that did not encourage parents to enrol CwDs in IE. They suggested reducing class size and improving school infrastructure, including accessible toilets, ramps, and classrooms. They also suggested increasing assistive devices to motivate CwDs to attend school and participate in learning. They thought that assistants in the classroom could have been considered a help to teachers while ensuring access and equity in the classroom. They also believed that the management of a class that includes children with more than one disability, training on sign language, and management of teaching children with speech, visual and hearing disabilities in inclusive classrooms would have been achieved if more PD in the same areas were strengthened. This suggests that teachers had limited diversity in knowledge and competencies when implementing IE guidelines that require day-to-day updates through professional development programmes (Triviño-Amigo et al., 2023). That is why the European Agency for Development in Special Needs Education ([EAFDSNE], 2012) recommends the improvement of school-based professional development and the existence of a coherent policy framework directed towards impacting teacher education for IE. Hollenweger, Pantic, and Florian (2015) confirm that teacher professionalism is the key factor in promoting participation

and learning in all students. This is achieved through the presence of well-qualified, motivated, and strong teachers who ensure the achievement of high-quality IE.

In summary, ensuring access and equity in IE for CwDs in mainstream schools and classrooms requires the commitment of education practitioners, strong policy statements, and effective training programmes. The teacher education curriculum should be reviewed to ensure that IE courses are part of the curriculum, adopting an IE system for all pre-service education and continuous professional development. The success of the rollout training model becomes effective if it is followed by school-based training that goes beyond knowledge and attitudes and influences teacher practice when supporting CwDs in IE in mainstream classrooms. Finally, the improvement of school-based professional development and the existence of a coherent policy framework directed towards impacting teacher education for IE is necessary to achieve high-quality IE.

Conclusion and Recommendations

Based on the analysis of the current status and challenges of implementing IE as a precursor for equity and inclusion of CwDs in education, this section offers recommendations and suggestions for advancing IE in Tanzania. The study concludes that TPDP improved diversity in knowledge, attitudes, and practices of teachers as an attempt to ensure, equity and inclusion of CwDs in inclusive classrooms. In particular, they gained knowledge and skills to create teaching and learning environments and teaching aids within the local environment while promoting the protection of CwDs when accessing education with their counterparts without disabilities. They were optimistic about using the principles of IE to ensure that teaching and learning inside and outside the classrooms adhere to diversity, equity, and inclusion of CwDs effectively.

The study recommends policy improvement to adequately enhance equity and inclusion of CwDs in education and all spheres of life in the country. Similarly, the government and other educational stakeholders to increase investment of resources in IE to enhance in-service teachers' training in special and IE as part of their continuous professional development for immediate measures to enhance accessibility and sustainability of IE in primary schools in Tanzania, while widening pre-service teacher training in this field of education. Also, community sensitization and engagement programmes should be promoted to widen support and care for CwDs' equitable access to education while widening early assessment and identification and assessment of CwDs in the country.

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