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EFFECTIVE USE OF INDIVIDUALIZED EDUCATION PROGRAMME INSTRUCTIONAL APPROACHES AND METHODS TO STUDENTS WITH VISUAL IMPAIRMENT IN INCLUSIVE EDUCATION

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ABSTRACT

The research examined the effective use of IEP approaches and methods with students with visual impairment in Shinyanga inclusive secondary school in Kishapu District in Tanzania. It used a convergent parallel design that engaged both qualitative and quantitative research at the same time. The total sample population comprised 32 participants: 27 regular classroom teachers, and 5 participants including one nurse, one administrator, one special education teacher, and two students with visual impairment. The instruments used to gather data included the questionnaire, focus group discussion, and non-participant observations in the classroom. Descriptive statistical analysis was used on quantitative data through Statistical Package for Social Science (SPSS) version 25 for data analysis, and for qualitative data, thematic analysis was used. The findings of the study show a moderate implementation of IEP instructional approaches and methods for students with visual impairment in the school. This was because there were insufficient assistive devices and pedagogical procedures used to identify learning needs of students with visual impairment. From these findings, the study suggested some improvements in approaches to solve problems faced by students with VI, such as the provision of accessible required resources and knowledge updates to the inclusive community. The approaches will help improve to the existing approaches level to meet students' educational goals and the intent of inclusive education.

KEYWORDS: Inclusive education, Individualized education programme, Instructional approaches and methods, regular teacher, and visual impairment.

1. INTRODUCTION

Inclusive learning emphasizes the right of all students, regardless of their academic challenges, to study in the same environment as their peers (UNESCO, 2022). This perspective aligns well with the underlying philosophies of the Education for All (EFA) campaign commenced in the 1990 Jomtien Conference focused on children from disadvantaged backgrounds (UNESCO, 2020). The Salamanca World Conference on Special Needs Education further reaffirmed that inclusive education was one of the strategies toward the fight against segregation and the quest for an integrated society (Ainscow, 2020). Consequently, successful learning for students with visual impairment (SVI) in an inclusive set-up is developed upon specific processes and strategies documented in their individualized education programme (IEP) (Kasebusha & Banda, 2023).

Several legislative measures have been put in place to promote inclusive education achievements in schools. The Individuals with Disabilities Education Act of 1997 highlighted Individualized Education Programme as one of the prominent pinnacles towards achieving inclusive success (Chitiyo & Dzenga, 2015). Followed by the IDEA improvement of 2004, which insisted on the essentiality of parental support in the individualized education programme (IEP) as part of the multidisciplinary team with rich information regarding the individual strengths and weaknesses in their learning (Hammond & Ingalls, 2017). Furthermore, the 2006 UN Convention on the Rights of Persons with Disabilities, emphasized the need for access to individual learning support for a student with a disability in an inclusive setting (Lyner-cleophas & Dalton, 2019). An inclusive setting also brought about the enactment of this, which makes the IEPs of great significance for children with disabilities, including students with visual impairments.

The effective learning process of students with visual impairment (SVI) hinges on the development and implementation of effective IEP approaches (Yazçayır & Gürgür, 2021). Also, the Individualized Education programme (IEP) was expected to serve as a roadmap for supporting students with learning challenges to effectively learn within the general education curriculum. In producing a successful IEP for learners with visual impairment, the collaboration of stakeholders remains significant. Parents stand as precursors in this process; other team members include general education teachers, the students themselves, special education teachers, and even past team members or district representatives (Montoya *et al.*, 2022). All who play a part in the student's educational journey should be fully performing the required responsibilities (Yell *et al.*, 2016).

The most valuable IEP approaches are developed through multidisciplinary collaboration to remove learning barriers. This process includes evaluating their requirements working together on Individualized Education Programme (IEP) development, creating tailored strategies, and providing services constructed to reduce their learning challenges (Akçin, 2022). Effectively teaching SVI involves the use of assistive technological devices such as audio recorders and braille machines. Teachers are required to adopt flexible and multisensory approaches and strategies (Parween & Dheesha, 2021; Pancer Center, 2014). Collaboration approaches in teaching students with disabilities in inclusive education require methods related to group functioning, such as project and tactile methods

(Possi & Milinga, 2017). While, the Blind Citizen of Australia (2015) addresses that, for accommodating the learning needs of students with VI, teachers are required to embrace willingness.

In addition, the teacher should also be quick to notice with provision of supportive devices and shift from the usual means of teaching, for example, from the chalkboard to more dynamic verbal presentations and activities (Mboshi, 2018). This means that the learning of SVI in inclusive setting calls for an effective teaching approach from well-trained teachers who will be able to deliver IEP services with integrity to serve all students effectively (Saleem *et al.*, 2019). For instance, research conducted by Tungaraza (2014) ascertained that Tanzania revealed inadequate number of trained teachers who are willing and prepared to deliver school education inclusively, especially while handling children with disabilities. Closely related to this inadequacy of in-service teachers' professional development became an issue about inclusive education. Hence, the need for professional development for in-service teachers to cover the educational needs in their respective schools (UNESCO, 2020b). The IEP instructional approaches for exceptional students are often considered as supplemental support. Although there are various approaches and methods, the most effective are those developed and executed collaboratively and utilizing assistive tools (O'hara *et al.*, 2016; Yell *et al.*, 2016)

The government of Tanzania initiated equal rights to education in the 1974 Musoma resolution that promoted access for all children including those with disabilities. The Persons with Disabilities Act 2010, insisted on equipping of students with visual impairment using technological tools, and communicating using tactile, and fostering the access of each student in integration schools (URT, 2010). Like other countries, Tanzania ratified the international agreements on providing access to students with disabilities such as the EFA of 1990 and the Salamanca framework of 1994, all of these foster inclusive practices in education (MoEST, 2017). Also, the first inclusive practice in primary school, as the case study in 1998 in Temeke, significantly reveals the effort to reach the potential practices of inclusive education (PO-RALG 2023; Revelian & Tibategeza, 2022). Other internal measures of provision of the national strategy for inclusive education has been another initiative to promote inclusive education such as the strategy of 2008-2017, 2018-2021, and 2021-2026 highlights the IEP for students with disabilities in enabling learning like other peers (URT, 2021). Despite of all these efforts, there is limited research information specifically on the effective use of individualized education programme (IEP) instructional approaches and methods for students with visual impairment in inclusive education. This highlights a gap in information based on contemporary practices of IEP approaches for student with visual impairment in inclusive secondary settings.

Theoretical framework

The theoretical framework of the study was grounded in Vygotsky's Social Constructivism Theory, which focused on the Zone of Proximal Development (ZPD). The theory emphasizes how culture and social interactions influence human intellectual development. This theory provides a framework for the Individualized Education Programme (IEP), which provide supportive instructional approaches

and methods for learners with visual impairments in inclusive education. The theory further emphasizes the using ZPD to solve individual difficulties among learners (Topçiu & Myftiu, 2015). The application of Vygotsky's Social Constructivism theory points out the critical understanding of IEP development and implantation in supporting learners with visual impairments by recognizing the specific learning needs via ZPD (Kadlimatti, 2020). An analysis using Vygotsky's framework focused on whether instructional approaches and methods aligned with scaffolding within Zonal Proximal Development. Such approaches seek not only to validate or invalidate IEP but also to stimulate inclusive education for SVI while enlightening stakeholders on how these methods can best be adjusted towards quality educational goals and achievements.

2. TOOLS AND METHODOLOGIES

The study applied a mixed case study approach, and a convergent parallel design was employed in the study area. The design allowed the researcher to gather data in the two methods and put it together to clearly understanding of the research problem (Creswell & Creswell, 2023). The design involved the collection of data from both qualitative and quantitative at the same time. This study was conducted at Shinyanga Secondary School, which is an inclusive secondary school located in Kishapu District in the Shinyanga region of Tanzania. The selected school enrolls exceptional students, including those with visual and physical impairments and albinism.

The sample size was selected from the population of IEP practitioners in a chosen school as representatives. The study involved regular teachers and participants for focus group discussion. A total of 32 sample size, including 27 regular teachers, were selected through simple random sampling techniques from the population of 29. Also, five participants of the focused group, including 1 nurse, 1 administrator, 1 special education teacher, and 2 students with visual impairment, were considered to be purposive samplings relevant to the implementation of IEPs approaches.

The data from the two methods were gathered through questionnaires for collecting quantitative data and focus group discussion and non-participant observation for collecting qualitative data. The questionnaires were designed based on a sufficient literature review, and research question and administered to all 27 selected respondents.

Focused group discussion was also employed to generate knowledge, explore uncovered issues, and provide validity with multiple data sources about the study from human-knowledgeable perspectives about the topic (Nyumba *et al.*, 2018). A focus group discussion involved a school nurse, two learners with visual impairment, an administrator, and a special education teacher for students with visual impairment (SVI). The FGDs was conducted in one session which lasted for about 55 minutes, and the data facilitator captured through both a digital device and a notebook.

In addition, the actual non-participant observations were conducted the direct classrooms' teaching and learning approaches and methods used by teachers within the lessons purposefully for supporting students with visual impairments. The opted-for method allowed the researcher first-hand information

from the study area (Creswell & Creswell, 2023). The observation process took place only in classroom sessions in six different subjects and lessons, where from one, two, three, four, five, and one remedial class periods were observed following the observation of the checklist.

The quantitative data were analysed through a descriptive statistics model with the help of the Statistical Package for Social Sciences (SPSS) version 25. The model was used for describing and summarizing mainly frequencies and percentages and was presented using tables, figures, and charts. The qualitative data were analysed following the Braun and Clarke (2019) thematic analysis stages (Lochmiller, 2021). The findings were integrated into the interpretation and discussion, which led to the drawing of conclusion and recommendations.

3. RESULTS AND DISCUSSION

The study collected information from school stakeholders about the IEP approaches and methods used in supporting students with visual impairments in inclusive education. It was guided by the research question: How effectively are the IEP instructional approaches and methods utilized? The quantitative data was analysed in descriptive statistics with the Statistical Package for Social Science (SPSS) to describe the percentages and frequencies. Furthermore, the qualitative data analysis was done through thematic analysis and presented in verbatim mode. In verbatim presentation participants quotes from the focused group discussions presented with the symbol F1 to F5, and V to present the number of verbatim depending on the quotes used for a particular participant. The findings from the three methods were integrated into the discussion of the findings in alignment with the study objective.

3.1 Demographic information

The demographic data is crucial for providing insights into the qualification and experience of regular teachers, which in itself bears direct relevance to the effectiveness of IEP instructional approaches and methods for students with VI, thereby helping to address the research questions. Analysing all reasonable qualities like qualification of teachers and teaching experiences, the current research explored the current state of teachers' readiness in meeting the learning needs of students with VI as well as teachers' demographic characteristics' influence on their practices. Hence, knowledge of the demographic details comes in associating the practiced and effective use of IEP approaches to enhance the understanding of the difficulties and the possibilities of the inclusive education context.

3.1.1 Demographic information of regular teachers

The demographic information employed in in this study falls under two categories of education level and experience as shown in Table 1

Table 1: Demographic information of regular teachers

Main Category	Sub-Category	Frequency	Percentage (%)
Level of Education	Masters	2	7.41
	First Degree	21	77.78
	Diploma	4	14.81
Experience	Less than 1 year	1	3.70
	1 – 3 years	12	44.44
	4 – 6 years	6	22.22
	Above 6 years	8	29.63

Source: *Field data 2024*

3.1.1 Level of education for regular teachers

The study regards teachers' education qualifications as important demographic information since they are major key factor in the teaching and learning process. The study's expectation was whether the education qualification had any influence in IEP instructional approaches and methods to VI students in inclusive education. Table 1 indicates that 7.4% of regular teachers have masters, 77.78% regular teachers own a first degree, and 14.8% regular teaches own a diploma. This means that large number of 77.78% regular teachers at inclusive school possesses first degree and the lower number has masters and diploma. According to Tyurina *et al.*, (2022), the more teachers increase their education level, the more equipped with pedagogical excellence. This means that, the most teachers had moderate ability to use IEP instructional approaches and methods to SVI in inclusive education.

3.1.2 Teachers' experience in inclusive education

The study also had a question on the working experience. The study needs to find out whether working experience had an impact on the effective use of IEP instructional approaches and methods to SVI in inclusive education. The prior expectation of the researcher was that the teacher had stayed long time in teaching profession in inclusive education and had high experience and better strategies for teaching leaners with visual impairment compared to teachers with short time in working. The table 1 above indicates that 3.7% of regular teachers have experience of less than a year in the school, 44.4% have an experience of teaching in the inclusive school for 1-3 years, 22.2% teachers have experience in teaching inclusive school for 4-6 years, and 29.6% are teacher with experiences of teaching in inclusive school for above six years. This means that, there could be an effectiveness use of IEP instructional approaches and methods to students with VI in inclusive education due to many experienced teachers 1 to 6 years and above. The findings had similar interpretation to Stronge's (2013) who emphasized

that teachers with 1 to 3 years of working experience to have positive effects in teaching compared to teachers worked in a less than a year.

3.1.3 Focused group discussion participants

To make the data more valid on the effectiveness of IEP on the instructional approaches or methods, various participants were involved as shown in Figure 1.

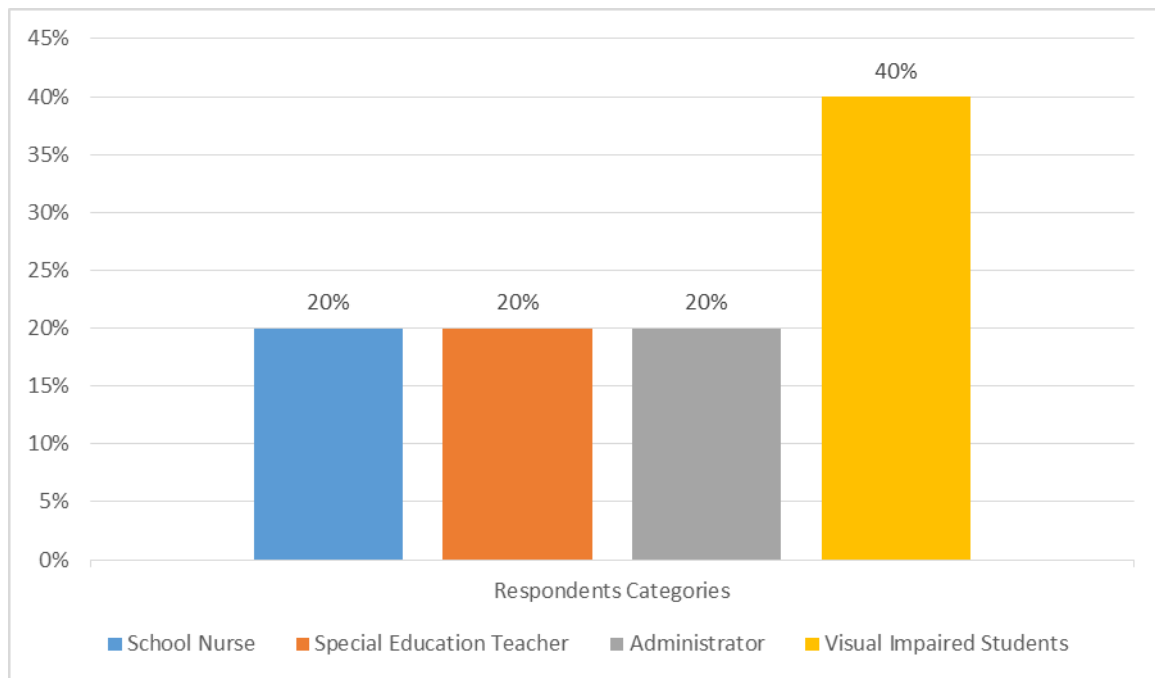


Figure1: FGDs participants' categories

Source: Field data 2024

Figure 1 shows that, the school nurse involved were 20%, special education teachers were 20%, administrators were 20% and students with visual impairment were 40%. The students with visual impairment were highly involved in the study because they are the ones who were targeted to be positively affected by the use of IEP instructional approaches and methods.

3.2 Approaches used by teachers in IEP implementation

The main goal of approaches to SVI is to help them develop their independent living skills. Bailey and Weingarten (2022) suggest the schools have IEP team members including medical specialist, families and teachers, responsible for setting the school's plan for supporting student with visual impairment. Based on the collected data, the study had revealed several approaches under two categories;

3.2.1 Classroom based approaches

The academic based approaches involve all activities concerning with teaching and learning process, such as provision of braille notes, question and answers and establishment of remedial classes as shown in Figure 2.

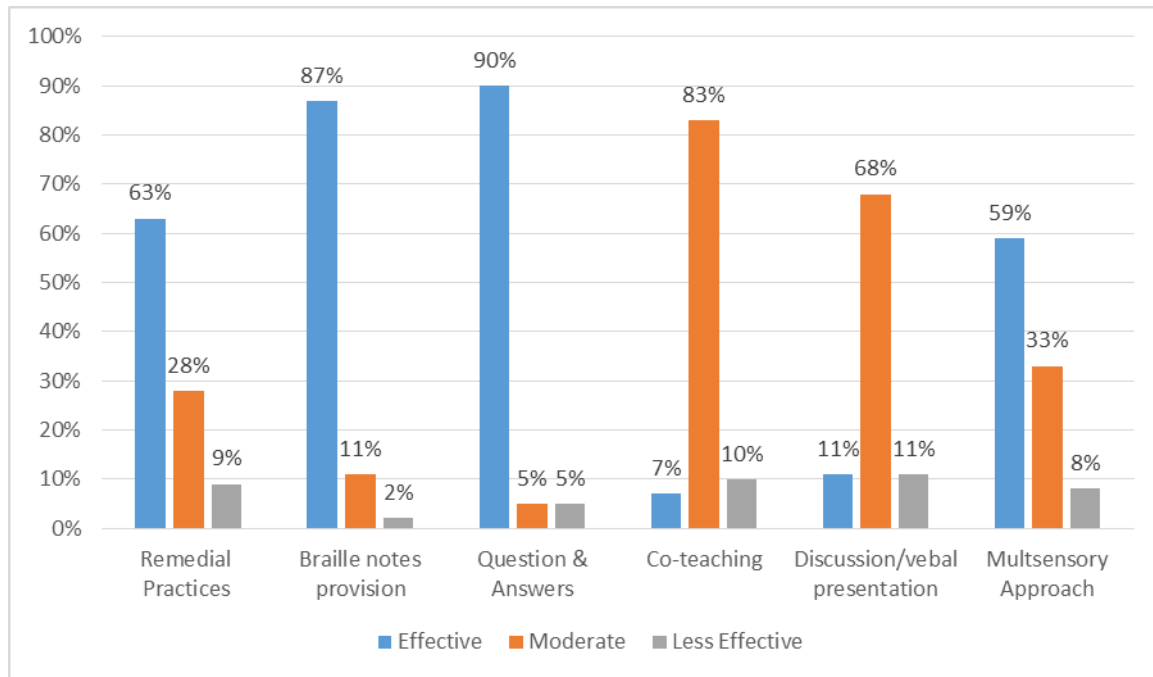


Figure 2: Classroom based approach

Source: Field data 2024

3.2.1.1. Remedial practices

Figure 2 shows that most respondents demonstrate the use of remedial practices among the teaching strategies for students with visual impairments. The practice was revealed to be more effective by 63%. The practice was taken as an alternative learning method to reduce the learning challenges for students with VI. The approach was purposely used to solve individual differences in learning among students with VI. The discussion provided the idea that the more time allocated to the approach, the more supportive learning among learners with visual impairment. However, the resources also controlled the effectiveness; if the resources were adequate, moderate, or less available, the approaches would be more effective, moderately effective, or ineffective, respectively. One of the participants shared:

“The remedial approach was commonly employed for some classes, especially the candidate classes like Form 2, Form 4, and Form 6, who are waiting for the national examination. Students with difficulties in learning were engaged in the approach.” (F1, V1, March, 2024)

Another participant added:

“This approach is done to students with difficulties in learning that has helped match their academic performance. However, due to time limits and costs, it has not been done to other classes.” (F2, V1, March, 2024)

The quotes indicate a general view of the remedial benefits, although they raise concern about time and resources. In addition, during the observation during the remedial classes in the evening, students with disabilities who showed low achievements in normal periods were engaged. The programme was conducted for Forms two and four, with low performances in their annual exams of Forms one and three. It was also observed that only teachers were assigned to provide individual support, relying on national examination questions and format in art subjects only. Students with visual impairments were also seen in classes. The programme involved discussing questions in art subjects, Kiswahili, English, History, and Civics (April 2024). Though the approach helps students with VI meet their learning goals, the classes might only be practical for some students with visual impairments at school since the programme remains solely arranged for national examination classes and exam-oriented. Therefore, the school should find additional measures for running remedial classes extending beyond examination purposes and design a continuous approach for all classes.

3.2.1.2. Braille notes and large fonts

The braille notes and extensive fonts approach was revealed to be used in inclusive classes to help students’ access subject information and express themselves with less assistance. The approach had additional value in note-taking, examination-taking, exercises, and self-study summaries. The data from Figure 2 above shows that 87% of the respondents agreed that the approach effectively implemented in supporting students’ learning. The high response for the approach to be practical was due to different reasons, as supported by participants from the focus group discussions as highlighted its usefulness. For example, the participant shared:

“We are normally provided with braille notes and large font printings that help us during learning. We use the notes to make our own summaries, preparing for exams and classroom exercises.” (F3, V1, March, 2024)

The quote shows a strong consensus among the participants that the approach was effective because it equips students with the subject knowledge and skills required, as well as the ability to perform different learning activities individually.

The researcher observed that students learn well when they possess assistive instructional materials. For example, during the English and Civics lessons in Forms three and four, in April 2024, the students who possessed braille lesson notices or machines were actively taking summary, and those with large font print passed through the lesson by looking at the texts provided, and when asked a question, they tried to answer. However, two students in Form four possessed a braille machine that had challenges

in some keys that made it difficult to summarize the lessons. Also, one student in form three, who had low vision, possessed no binoculars or large font printings, making it hard to see on the blackboard.

The observation highlights the mixed active participation of students in the approach, signifying that while it was beneficial for the students, access to assistive devices posed a challenge. This paves the way for the need for government and private organizations to provide adequate assistance for learners with visual impairments. According to focus group discussions, the mastery of braille leads students with VI to participate actively in different academic activities inside and outside their schools. The participants shared:

“The programme was somehow practiced due to insufficient resources and facilities within the school, though the problem decreased across years. Some of them underwent repairs.” (F1, V2, March, 2024)

“Other assistive devices are in short supply while others are entirely absent, including audio recorders, which are crucial for recording and revisiting what is taught through recorded sound. Also, some teachers still prepare notes in hardcopies, making it difficult to produce large fonts and braille notices through software.” (F5, V1, March, 2024)

The above discussion excerpts show that, though the situation was gradually improving, the problem was still affecting the learning process among students with visual impairments. In the case of the improvement of braille machines, the researcher observed the scarcity of essential devices to support the learning of students with visual impairments within the three and four class sessions. In observed classes, most possessed supportive instructional materials, but some suffered with the scarcity of assistive devices (April, 2024). Therefore, teachers had to increase their efforts in repairing the broken tools while waiting for a new one from the government or private sponsorship. This ongoing process, observed first-hand, stresses the school's proactive approaches to managing the challenge of limited resources to enhance educational achievements for learners with visual impairments.

3.2.1.3. Question and answers

The use of questions and answers in teaching and learning was another approach employed by teachers in IEP implementation. Figure 2 shows 90% of respondents acknowledged that the method was effective. The participants of the focus group discussion added that the method was effective in arts subjects like Kiswahili, English, civics, and history. For instance, one participant shared that:

“Since I reported at this school, I have observed teachers in art subjects; they mostly involve questions when teaching to make us understand the lessons.” (F4, V1, March, 2024)

Another participant added that art subjects were suitable for students with VI since they had fewer drawings and complicated calculations. The participant noted that:

“Arts subjects were suitable for students with visual impairments because they had fewer diagrams and complicated calculations compared to science and mathematics subjects. Therefore, teachers merely use their time within the class to ask students if they remember what was taught in the lesson.” (F2, V2, March, 2024)

The quotations above show a clear discussion consensus that most learners with visual impairments were directed to study arts subjects that are good for oral responses. This might be due to the fact that science subjects and mathematics were more visual due to the presence of diagrams, complex formulas, and not good on depending most oral presentation compared to arts subjects, which could be memorized through hearing. The participant added that:

“Subjects like chemistry and physics are not studied by students with VI in forms three, four, and advanced studies. The subjects need more visual ability due to the presence of diagrams and practical works. They also studied simple arithmetic involving four operations (plus, minus, divide, and multiplication).” (F4, V2, March, 2024)

The discussion excerpt reflects the agreed discussion among the participants that questions and answers were helpful not for science subjects but only for art subjects. In addition, the observational findings supported these insights; it was noted that teachers predominantly utilize the verbal question-and-answer method in Kiswahili and history in teaching form three and form five students. Through non-participant observation in the classroom, noted that teachers engaged students with visual impairments primarily in verbal questions that fostered their understanding throughout the lessons (April, 2024). The effectiveness of the approach was due to the fact that the students with visual impairments said to use auditory sense (hearing sound) to recall easily compared to reading. However, question and answer was moderately effective due to the fact that some questions, like easy ones, could not be memorized easily and needs much time. Also, the use of the English language in most of the subjects may affect their ability to respond orally or cause misconceptions of questions sometimes.

3.2.1.4 Co-teaching in inclusive classes

Among the classroom approaches in inclusive classes was the use of co-teaching, whereby some regular teachers invite special education teachers into their classrooms so as to improve learning effectiveness among students with visual impairments. Based on Figure 2, the approach was moderately practiced 83% due to the teachers’ responses. This implies that regular teachers were not fully supported in the lessons, which in other ways affected their teaching performances, specifically for students with visual impairments. In addition, most of the participants in the focus group discussion agreed that was good for enhancing students’ engagements but in reality co-teaching happened rarely. For example, one participant noted:

“We sometimes invited in both preparation and teaching inclusive classes with our fellow teachers who didn’t take special education. The school timetable and being occupied with many duties affects its application” (F2, V3, March, 2024)

Another participant added:

“Students seem to be more active when taught by co-teachers consecutively compared to a single teacher because most were not special education teachers.” (F1, V3, March, 2024)

These quotations show the agreement that collaboration of special education training and regular teachers contributes to an active learning environment for students with VI but it’s application was affected by the time limit and the number of available special education teachers. In addition to this discourse, the classroom observation maintained this view; noting two lessons (Kiswahili and history), a special education teacher participated in supporting the students with visual impairments. For example, it was observed in one class that when the student with a visual impairment reported that the braille machine was not functioning, the special teacher helped to replace it and remained to see its functionality in a short time. In another instance, in history lesson in form one, the special education teacher was involved in preparing the lesson braille notices and large fonts at the beginning and attended the lesson for about ten minutes to help the students with visual impairments.

The observed findings show teachers were not fluently involved in co-teaching since they were overloaded with other duties and teaching in their normal lessons. Hence, the co-teaching was to make them collaborate and share teaching experiences that could enhance active learning among students with visual impairments. Special teachers were sometimes involved from the beginning (preparation stage) so as to have an actual time/stage where they could be involved during the lesson. They also had a chance to propose for resources to be employed during the lesson. This portrays the need for improvement of the co-teaching approach, and it can be actively practiced when special education teachers improve their passions and have reviewed their workloads.

3.2.1.5 Group discussion and verbal presentation

The findings in Figure 2 show group discussion and verbal presentation to be among the teaching approaches employed by teachers in inclusive classes. The approach revealed to be helpful for students with VI: using discussion allows them to share their knowledge, and verbal is more required since students depend much on auditory sense in gaining knowledge (Kasebusha & Banda, 2023). The responses from the teachers highlighted the method being practiced at a moderate level at 68% due to various factors, including limited resources and a large class size. This was also highlighted in the focus group discussion, where the participants noted the usefulness of the method in classes. For example, one participant clarified that:

“Our teacher asked us to share our ideas in pairs, and sometimes we used to discuss the questions in groups and present them verbally before the whole class.” (F4, V3, March, 2024)

Another participant noted that:

“Our class had a permanent group of 7–9 students... Each group had a mixture of students with visual impairments and normal students. We all speak and share ideas equally. We also used to read aloud all questions provided by our teacher for group work to enable our fellow students who are blind to hear and share what is needed.” (F5, V2, March, 2024)

The quotations above reveal similar that group discussion approaches and verbal presentation increase students’ active interactions and engagement. However, using permanent group discussion might affect their learning due to different levels of understanding and if there are misunderstandings among the group members. Group discussion was observed to be supportive since students with visual impairments were paired with peer students, which made them share equally under the teacher’s guidance. Students seem to build knowledge and positive relationships as they hear and share ideas with their fellows. In the history lesson in form five the teacher observed dividing students into four groups of five students each; among them, two groups involved students with VI. The lesson was active since they were seen sharing ideas with their fellow students and presented before their peers. However, the challenge they faced was having large groups that were permanent and could be less effective. Therefore, teachers should create integrated and impermanent groups that are reasonable in number to encourage every student to participate.

3.2.1.6 Use of multi-sensory approach

The use of a multi-sensory approach, where students with visual impairments use more than one sense in learning. Using different approaches that allow hearing, tactile, large fonts, and magnifiers assures active learning for students with VI (UNESCO, 2020a) The findings in Figure 2 indicate that the respondent at 59% agreed that the multi-sensory approach was practical. During data collection, the researcher observed that students with visual impairments learn by listening to their teachers and peer students (auditory) while touching braille notes. Also, the researcher observed normal students reading an English story book while others listened. Another observation was that students with visual impairments were placed in front that allowed the teacher to observe their performances. They also use large font print to enable students with low visual skills to learn quickly. Likewise, participants in focus group discussion shared similar ideas that a multi-sensory approach was used and helped students with VI in their learning. For example, one participant shared:

“The diagrams drawn by teachers on manila sheets are more visual compared to the ones from the books. Sometimes they use video and audio for instance in geography in form five” (F4, V4, March, 2024)

Another participant added:

“I understand when one is reading compared to when I read myself because I cannot see well the writing from the books; they are not clearly visible to my sight. Therefore, teachers approaches like oral presentation rather than blackboard writing, using tactile feature models. This helped us much in learning and it could be better if it is fluently used in lessons” (F5, V3, March, 2024)

The quotes show that multi-sensory approaches like auditory, tactile, and visual are more effective in teaching students with visual impairments and were used and highlighted to be helpful. Hence, teachers should improve all the approaches so as to enable effective and tailored learning in inclusive classes.

These findings show various classroom approaches on the way teachers use in IEP implementation, as revealed from the respondents, observation, and focus group discussion. Based on the findings, every approach was critical in helping students with VI learn and meet their needs. Nastiti and Azizah (2019) and Alkahtani and Kheirallah (2016) put forward that IEP development should be planned using different procedures that derive from the needs identification, creation of the IEP document, implementation, and review. The findings agree with the study done in Zambia by Kasebusha and Banda (2023) that revealed 26.7% of respondents agreed teachers use scaffolding strategies that help learners according to their personal needs. This implies that applying students' supportive strategies in their classes and reaching their requirements calls for effective meeting of individual goals and academic objectives. However, applying differentiated approaches grounded in the students' abilities and needs increases individual learning and mastery. The findings reveal the usefulness of multi-sensory approaches; however, they need to be improved by supporting regular teachers and ensuring the availability of assistive devices.

3.2.2. Non-classroom approaches

The non-classroom approaches and methods were employed by the school teachers outside the classrooms effected individualized education programmes for student with visual impairment learning in an inclusive school. The collected data shows that approaches employed outside the classrooms from the selected schools were as follows:

3.2.2.1. Establishing needs identification of students with visual impairment

The study revealed the existence of Individual Education Programme for identifying students with visual impairment based on their learning needs. The programme aimed to assess the strengths and weaknesses of students with visual impairment in learning. The needs identification was done through the following ways:

Table 2: Learning needs identification of VI students

Ways to Identify student's needs	Freq.	Percent
Filling intervention checklist form with student and stakeholders	5	18.5
Using information brought from the former school	6	22.2
Talking to student only	4	14.8
The use of multi-procedures	12	44.4
Total	27	100

Source: *Field data 2024*

The findings in Table 2 show that teachers use to identify learners with visual impairments through the completion of intervention checklist forms involving students and stakeholders at 18.5%. In this method, teachers or the department of special needs prepared a form with all required items to be filled by students with the help of their parents or guardians. This was also mostly raised in the focus group discussion by the participants. One participant shared:

“Our joining instruction had a special part where we could fill in information concerning disabilities and health difficulties.” (F5, V4, March, 2024)

The above quotation reflects the consensus that the method was good because students had a chance of explaining their level of impairments under the mentioned items.

Another method employed in identifying students with visual impairment learning needs was to use the information brought from the former schools (22.2%) as shown in Table 2. The technique was suitable for newly enrolled students from primary to form one or from form four to form five selection and others who were transferred to the respective school. One of the challenges for this technique was that some schools did not fill in the required information for students with visual impairments. Also, there was no hardcopy form showing such particulars during the transfer. Hence, there was a need to recollect information from an individual student or guardian. However, the lack of comprehensive records and records in schools shows complications in getting the required data from learning needs students with VI. The most comments from the focus group discussion focused on the needs of information from parents or guardians. For instance, one participant shared that:

“The information we get from their previous school is useful, but parents or guardians should provide the exact information in collaboration with the teachers.” (F3, V2, March, 2024)

Another participant added:

“In my former school, I have no clear information about whether identification was done to me. Depending on data from my former school, it can bring the needs that have been dealt with or additional challenges that are different from the previous.” (F4, V5, March, 2024)

These comments demonstrate the shared view that information brought from their former school is useful but not sufficient and may be outdated. This suggests that the parents and stakeholders conduct the needs identification process at school rather than waiting for information from their past schools.

Furthermore, 14.8% responded by engaging directly with the student method used by the school during the learning needs identification of students with visual impairment as shown in Table 2.2. Special education teachers or the selected department members use to prepare an interview paper for every individual student once they join the school. One of the participants explained:

“We had been alerted for the specific day when we meet with our teachers several days after reporting.” (F4, V6, March, 2024)

The quotation above reflects an agreement that teachers used to arrange a time to speak with learners with visual impairment so as to know the education and medical history or ongoing treatment to prevent further eye damage. The presence of using several non-formal procedures was a sign of having inconsistency approaches to identifying students' challenges and strengths in learning.

The data in Table 2, further shows that the majority, 44.4%, highlights the use of multi-procedures in needs identification for students with VI. The method provides detailed information required from the student about the learning strengths and weaknesses. The FGD agreed for the importance of using multi-procedures but highlighted the need for a systematic and multifaceted approach for achieving comprehensive required information and providing services via learning needs. One participant shared:

“Although we perform learning that needs identification for students with visual impairments, it requires more systematic procedures to bring rich information. This will help them to achieve their learning goals and to support their individual learning needs.” (F2, V4, March, 2024)

The agreement emphasizes the need for having systematic procedures to help identify individual students' learning needs. The plan should include the best identification method, including individuals' ability to perform and participate in different classroom activities that reveal their level of understanding. Again, the FGD highlighted the awareness of the significance of conducting needs assessments for revealing the needs and weaknesses while insisting on multi-procedures involving a multidisciplinary team in the process. For instance, one of the participants shared:

“We use to identify their strengths and weaknesses in learning. We get information directly from students; we also use screening during the school enrolment process. This is more important for

our students, although it requires the involvement of all required specialists in the process, such as psychologists, medical personnel, parents, students, and teachers.” (F3, V3, March, 2024)

The quotation above shows that FGD participants were aware of their responsibilities and accountability in using their efforts and time to identify learners with visual impairment needs and point out the crucial role of IEP team participation. However, the findings imply the need for collaborations in needs identification for their insufficient alerts, making it difficult to attain comprehensive information about students. These findings correlate to the study of Adeleke and Ohaja (2022), who found difficulties in learning among students with visual impairments due to improper approaches. However, teachers are crucial in designing and enhancing the process and strategies required for student learning needs before making plans (Msoka *et al.*, 2022). Additionally, the study conducted in Khartoum by Salih and Kakizawa (2020) reveals the significance of the learner feedback in elucidating various dimensions of the student's needs in the learning process. It is crucial for conducting needs identification since students with visual impairment approaches need to go beyond the standard strategies for meeting their personal needs.

3.2.2.2. Involving parents in IEP approach

Parents’ support in IEP for their children involves both material and moral support. According to Aldousari and Dunn (2022) most schools experienced poor support from parents for their children’s education. Therefore, the current study posed the question on whether parents are involves at school while preparing developing and executing IEP. The results presented in Table 3:

Table 3: Parents involvement in IEP

Cooperation from Parents in IEP	Freq.	Percent
Very good	8	29.6
Moderate	16	59.3
Not good	3	11.1
Total	27	100.00

Source: *Field data 2024*

Table 3 shows that parents’ involvement was rated as very good at 29.6%, moderate at 59.3%, and not good at 11.1%. The highest percentage, 59.3%, illustrates that teachers in inclusive schools receive some levels of cooperation from parents in creating and implementing individualized education programmes for students with visual impairment.

On the other hand, participants of the focus group discussion agreement addressed the moderate involvement of parents when needed to cooperate in developing IEP for students with visual impairment. For instance, most of the participants raised the average involvement of parents with the concern that is the role for the government. One participant shared the views that:

“Parental involvement is average, as observed when they come to school...they only bought uniforms, exercise books, and basic necessities and ignored other contributions under the assumption that children with special needs are the government's responsibility to assist... and what is happening to school has to be handled by the teachers employed for.” (F3, V4, March, 2024)

The findings illustrate the general agreement that parents’ involvement was moderate to their children’s IEP in an inclusive setting. The result of moderate involvement of parents in IEP as portrayed with the challenge of insufficient knowledge towards their roles. This reflects the same study by Yell *et al.* (2016), who found that one of the challenges that affects the performances of teachers in IEP is poor parental involvement in school. The study by Shao *et al.* (2022) highlighted the low involvement of parents at 14.29% in the implementation of individualized education programmes. Also, İlik and Konuk (2019) revealed that about 50% of teachers did not receive support in IEP from parents. This means that the parents’ support for students with VI was inadequate; hence, the school alone performed the IEP, which affected the student’s learning. This level also hardships to teachers and students in their teaching and learning journey and they could have affected the education morally. Thus, knowledge about IEP for parents is required to effectively serve the learning of the students with VI in inclusive education.

3.3 Required methods of improving the IEP implementation for students with VI at school

Teachers’ opinions concerning the question “How can we improve the implementation for the Individualized Education Programmes for students with VI?”

Table 4: Opinions of teachers

Teacher’s opinions on IEPs implementation	Freq.	Percent
Provision of advanced assistive devices for visually impaired students	10	37.04
Educating the inclusive community on IEP approaches	14	51.85
Rehabilitation of physical environments	1	3.70
Staffing enough special education teachers	2	7.41
Total	27	100.00

Source: Field data 2024

The findings in Table 4 display the frequency distribution of teachers' opinions on improving the implementation of IEP for students with visual impairment. Among responses, 37% emphasized the provision of advanced assistive devices, 51.8% advocated for educating the inclusive community on IEP approaches, 3.7% highlighted the need for physical environment rehabilitation, and 7.4% identified the need for staffing enough special education teachers. Notably, educating the inclusive community received the highest percentage at 51.8%, representing the significance demand for comprehensive training on individualized education programme practices for students with visual impairment.

During the focus group discussions, most participants' consensus highlighted inadequate knowledge regarding IEPs as significance effecting the implementation for students with visual impairment while insisting knowledge updates for the practitioners. For instance, one participant shared that:

“I think there should be opportunities to bring together IEP practitioners for students with visual impairments for updates and to inspire a passion for helping the students. For instance, the school have more than 35 teachers but most of them are regular teachers who have no enough skills about helping this student with VI, this affects much the practices.” (F1, V4, March, 2024)

Another participant added to the discussion that the government shows less responses in arranging enough programmes that could keep inclusive education practitioners updated:

“In my opinion, what is lacking in the individualized education programmes is that the government has less to arrange training programmes for the inclusive community on the IEP, which is more needed.” (F2, V5, March, 2024)

Both excerpts reflect the strong agreement among the FGD participants on the critical need for a multidisciplinary update geared towards the IEP, including teachers, parents, other specialists, and non-teaching staff. This aligns with the study by Kawai (2020) in Bangladesh, who found that inadequate training in inclusive approaches impedes teachers' ability to support students with special needs. Similarly, Maurya (2021) and Roy (2023) found the impacts of inadequate training to inclusive approaches while highlighting the value of ongoing training for IEP teams and professional development for teachers in IEP implementation.

Certainly, professional development was the most prominent factor in IEP improvement, the need for advanced assistive devices also garnered significant attention at 37%. Teachers, along with focus group discussions, agreed on the crucial role of assistive technology in supporting IEP goals. However, concerns were raised about limited access to resources. One participant in the discussion cited that:

“Although some measures has to be taken into consideration, the issue of assistive devices for students with VI is still challenging...mostly were inadequate, and the school used to borrow some from the town primary school as an alternative.” (F4, V7, March, 2024)

The quotation above reveals the presence of inadequacy of devices and the efforts employed to save the students' with VI learning process. The data detailed the challenge of inadequacy to be tense even after borrowing some devices from the nearby (township) primary school. The finding aligned with Akçin (2022) and Pancer Center (2014), who revealed challenges caused by insufficient instructional material in meeting students' needs, such as academic performance and loss of sense of belonging. Leaving the persistence of the challenge really affects reaching to the individual learning needs specifically to students with VI. Therefore, the school had to find an alternative of having more VI facilities as a permanent solution for saving the available learners with visual impairment while involving the government and other stakeholders.

4.2 Recommendation

4.2.1 Recommendation for education stakeholders

This study concludes the moderate use of IEP instruction approaches and methods for students with visual impairment. This moderately revealed in the level of teachers education holding a first degree influenced the use of approaches and methods. Meanwhile, the classroom approaches lacked comprehensive collaboration of all IEP team members in their creation, implementation, and review. Also, the inadequate knowledge update and resources predominantly affect the full practices of IEP for students with VI in classrooms, while the remedial class application is a sign that classroom activity alone fails to meet the students' needs. The approaches outside the classroom in learning need identification, and parental collaboration is affected by a low level of collaboration and limited knowledge of the IEP. This indicates that the IEP team collaboration, knowledge update, and adequate provision of resources necessitate the effective use of IEP approaches and methods.

4.2.2 Recommendation for further studies

From the findings, the study recommends that the government and school should collaborate on the compelling need for knowledge updates to all-inclusive communities on IEPs and provide adequate assistive devices to improve the existing approaches to meet students' educational goals. Also, the government, via school administrators, should ensure the presence of required resources and facilities for learners with visual impairments, including accessible assistive technologies and enough special education teachers. The school should employ several teaching strategies suitable for learners with visual impairments, such as, using storytelling, audio records, and project-based tactile materials and ensuring flexibility in approaches. For effective practices of IEP implementation, collaboration among the IEP members remains significant in supporting students with visual impairments. Also, school administrators had to ensure special education teachers had a reasonable workload that could give them adequate time to attend students with VI in both regular and remedial classes.

Further studies can employ different designs that would allow generalizability of the findings study.

REFERENCES

- Adeleke, A. A., & Ohaja, E. (2022). Inclusive education : Identifying and addressing the challenges of studying mass communication with visual impairment at the University of Nigeria , Nsukka. *Journal of Communication and Media Research*, 14(2), 121–134. <https://www.researchgate.net/publication/364358222>
- Ainscow, M. (2020). Promoting inclusion and equity in education : Lessons from international experiences. *Nordic Journal of Studies in Educational Policy*, 6(1), 7–16. <https://doi.org/10.1080/20020317.2020.1729587>
- Akçin, F. N. (2022). Identification of the processes of preparing individualized education programs (IEP) by special education teachers , and of problems encountered therein. *Academic Journals*, 17(1), 31–45. <https://doi.org/10.5897/ERR2021.4217>
- Aldousari, A. L., & Dunn, M. (2022). Special education for students with learning disabilities in Saudi Arabia : Reality and Challenges. *Learning Disabilities: A Contemporary Journal*, 20(2), 175–197.
- Alkahtani, M. A., & Kheirallah, S. A. (2016). Background of individual education plans (IEPs) Policy in Some Countries : A Review (**). *Journal of Education and Practice*, 7(24), 15–26.
- Bailey, T. R., & Weingarten, Z. (2022). Strategies for setting high-quality academic individualized education program goals. *America Institute For Research*, 2(2). <https://shorturl.at/azIJP>
- Chitiyo, A., & Dzenga, C. G. (2015). Special and inclusive education in Southern Africa. *Journal of Special Education Preparation*, 1(1), 55–66. <https://doi.org/10.33043/JOSEP.1.1.55-66>
- Creswell, J. W., & Creswell, D. J. (2023). *Research design: Qualitative,, quantitative, and mixed methods approaches* (6th ed.). SAGE Publications, Inc. <https://lcn.loc.gov/2022032270>
- Hammond, H., & Ingalls, L. (2017). Let's et parents ready for their initial IEP meeting. *JAASEP FALL*, 31–43.
- İlik, Ş., & Konuk, R. (2019). Evaluating parent participation in individualized education programs by opinions of oarents and teachers. *Journal of Education and Training Studies*, 7(2), 76–83. <https://doi.org/10.11114/jets.v7i2.3936>
- Kadlimatti, R. I. (2020). A study of constructivism and meta cognition in teaching learning process. *International Journal for Innovative Research in Multidisciplinary Field*, 6(6), 145–148.
- Kasebusha, N., & Banda, M. (2023). Teaching strategies for learners with visual impairment : A case of Mporokoso and Munali secondary schools. *Zambia Interdisciplinary Journal of Education*, 2(1). <https://www.researchgate.net/publication/373049395>
- Lochmiller, C. R. (2021). Conducting thematic analysis with qualitative data. *Qualitative Report*, 26(6), 2029–2044. <https://doi.org/10.46743/2160-3715/2021.5008>

- Lyner-cleophas, M., & Dalton, E. (2019). Inclusion , universal design and universal design for learning in higher education : South Africa and the United States. *African Journal of Disability*, 8(1), 1–7. <https://doi.org/https://doi.org/10.4102/ajod.v8i0.519> Read
- Maurya, H. K. (2021). Strategies for teaching students with visual impairment. *ResearchGate*. <https://www.researchgate.net/publication/353013224>
- Mboshi, N. (2018). Teaching learners with visual impairment in an inclusive. *International Journal of Educational and Research*, 6(2), 109–118. <https://shorturl.at/gwBT4>
- MoEST. (2017). The National Strategy for Inclusive Education 2018-2021. In *Ministry of Education, Science and Technology*. The United Republic of Tanzania. <https://shorturl.at/egBJR>
- Montoya, C., Gilson, C., & Yllades, V. (2022). Experiences of latinx immigrant parents of children with developmental disabilities in the IEP process. *Education and Training in Autism and Developmental Disabilities*, 57(4), 404–416.
- Msoka, P., Possi, M. A. K., & Rushahu, B. G. (2022). Assessment of teaching approaches employed by teachers in teaching students with visual impairment in Tanzania inclusive secondary schools. *Huria Journal*, 29(2), 166–185.
- Nastiti, A. T., & Azizah, N. (2019). A review on individualized educational program in some countries. *International Conference on Special and Inclusive Education*, 296, 40–46. <https://shorturl.at/frGKO>
- Nyumba, T., Derrick, C., & Mukherjee, N. (2018). The use of focus group discussion methodology : Insights from two decades of application in conservation. *ResearchGate*, 20–32. <https://doi.org/10.1111/2041-210X.12860>
- O'hara, N., Munk, T. E., Agord, C. D., & Kristin, R. (2016). Equity, inclusion, and opportunity: Adressing success gaps white paper. In *IDEA Data Center* (Vol. 3). <https://files.eric.ed.gov/fulltext/ED609723.pdf>
- Pancer. (2014). *A Guide to the Individualized education Program (IEP) for Minnesota Parents*. <https://www.pacer.org/parent/php/PHP-a12.pdf%0AParent's>
- Parween, S., & Dheesha, J. B. (2021). Curriculum for students with visual impairment in inclusive Setup. *ResearchGate*. <https://www.researchgate.net/publication/357340504%0A>
- PO-RALG. (2023). *Pre-Primary, Primary, Secondary, Adult and Non-Formal Education Statistics*. [https://www.tamisemi.go.tz/storage/app/BEST/REGIONAL BEST 2023 .pdf](https://www.tamisemi.go.tz/storage/app/BEST/REGIONAL%20BEST%202023.pdf)
- 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. <https://doi.org/10.22521/edupij.2017.64.4>

- Revelian, S., & Tibategeza, E. R. (2022). Effective implementation of inclusive education in enhancing quality education in public primary schools in Tanzania : The role of school culture. *Journal of Humanities and Education Development (JHED)*, 1, 190–199. <https://doi.org/https://dx.doi.org/10.22161/jhed.4.1.191>
- Roy, S. (2023). Individualized education plan , process of IEP with special reference to its development and implementation. *Research Gate*, 1(1). <https://www.researchgate.net/publication/374660928%0AIndividualized>
- Saleem, S., Sajjad, S., & Rauf, M. Bin. (2019). Training facilities provided by special education schools to students with visual impairment and teachers to use assistive technology. *Journal of Economics and Sustainable Development*, 10(1), 91–100. <https://doi.org/10.7176/JESD>
- Salih, H. E. B., & Kakizawa, T. (2020). Evaluating the learning Setting and identifying the study needs for students with visual impairment at the university of Khartoum in Sudan. *Journal of Special Education Research*, 4(2), 29–37. <https://doi.org/10.6033/specialeducation.4.29>
- Shao, L., Zhou, X., Huang, X., & Deng, J. (2022). Investigation and research on the current situation of IEP formulation and implementation in Guangxi special education schools. *Clausius Scientific Press, Canada*, 4(2), 114–126. <https://doi.org/10.23977/aduhe.2022.040214>
- Siddik, A. B., & Kawai, N. (2020). Government primary school teacher training needs for inclusive education in Bangladesh. *Internal Journal of Whole Schooling*, 16(2), 35–69. <https://shorturl.at/Y3hYU>
- Stronge, J. . (2013). *Effective teachers = Student achievement: What the research says*. <https://doi.org/10.4324/9781315854977>
- The Blind Citizens of Australia. (2015). *Blind Citizens Australia submission to the 2015 review of the disability standards for education*.
- Topçiu, M., & Myftiu, J. (2015). Vygotsky theory on Ssocial interaction and its influence on the development of pre-School. *European Journal of Social Sciences Education and Research*, 2(3), 103–110.
- Tungaraza, F. D. (2014). Training teachers in special needs education in Tanzania: A long and challenging ordeal to inclusion. *Huria: Journal of the Open University of Tanzania*, 16, 49–60. <https://shorturl.at/8k6Xj>
- Tyurina, V., Hadiak, I., Naida, R., Hlazunova, I., & Olkhovska, A. (2022). Improvement of pedagogical skills of teachers of the Institution of Higher Education. *Journal of Curriculum and Teaching*, 11(9). <https://doi.org/10.5430/jct.v11n9p49>
- UNESCO. (2020a). *Education of children with visual impairments in sub-Saharan Africa: Challenges and opprtunities*. <https://unesdoc.unesco.org/ark:/48223/pf0000373773>



- UNESCO. (2020b). *Global education monitoring report 2020: Inclusion and education: All means all*. <http://www.unesco.org/open-access/terms-use-ccbysa-en>
- UNESCO. (2022). *Inclusion in the United Republic of Tanzania*. <https://shorturl.at/rAIO1>
- URT. (2010). *The persons with disabilities act, 2010*. <https://shorturl.at/ztbn1>
- URT. (2021). *National Strategy for Inclusive Education 2021/22-25/2026, Ministry Of Education, Science and Technology*.
- Yazçayır, G., & Gürgür, H. (2021). Examination of inclusive education and resource room service in a pre-school. *International Journal of Curriculum and Instruction (IJCI)*, 13(1), 870–892. <http://creativecommons.org/licenses/by-nc-nd/4.0/>
- Yell, M., Conroy, T., Katsiyannis, A., & Conroy, T. (2016). Individualized education programs (IEPS) and special education programming for students with disabilities in urban schools. *Fordham Urban Law Journal*, 41(2), 669–714. <https://doi.org/ir.lawnet.fordham.edu/ulj>