TEACHERS' READINESS AND UTILIZATION OF ASSISTIVE TECHNOLOGY TOOLS FOR JOB EFFECTIVENESS IN PUBLIC SECONDARY SCHOOLS, IJEBU ODE LOCAL GOVERNMENT, OGUN STATE, NIGERIA

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Abstract
The study assessed teachers' readiness for utilization of assistive technology tools for job effectiveness. Four research questions guided the study. A descriptive research design of survey type was used. The population for this study comprised all public secondary school teachers in Ijebu Ode local government, Ogun State. A total of 140 teachers were selected as sample using stratified sampling technique. An instrument titled Teachers' Readiness for Utilization of Assistive Technology and Job Effectiveness Questionnaire (TRUATJEQ) was adopted for the study. The instrument was validated by experts, a reliability coefficient of 0.94 was obtained. Frequency counts and percentage were used for presenting and analysing demographic characteristics of the respondents. Mean and standard deviation were used for analyzing research questions 1, 2 and 3 while research question 4 were answered using Pearson Product Moment Correlation (PPMC). The findings of the study indicated that provision of adequate assistive technology tools, effective training, improved teachers attitude towards usage of technology, provision of conducive classroom for teachers and exposing teachers to various benefits of using assistive technology for teaching disable students were among the ways to make teachers ready for utilization of assistive technology for teaching. Magnifiers, talk devices such as a talking thermostat, braille displays, screen reading software, text-to-speech systems using optical character recognition were among assistive technology tools used by teachers for teaching disable students for job effectiveness. Assistive technology helps to increase functional capabilities of disable students, fosters inclusive teaching, promotes empathy, promotes the understanding and mutual respect among disable students and recognize and appreciate the diversity of learning needs of disable students were among the roles of assistive technology in improving disability students for teachers' job effectiveness. There was positive relationship between assistive technology and teachers' job effectiveness among disable students ($r = 0.257$, $p < .05$). Special Education teachers should be encouraged to deploy assistive technology for learning irrespective of their gender. Government, NGOs, parents, immediate community, rehabilitation centres and the school should partner with key stakeholders in education and make available assistive technology devices for improved teaching and learning of students with learning disabilities.

Keywords: Teachers' Readiness, Utilization, Assistive Technology, Job Effectiveness, Ijebu Ode, Ogun State

Introduction

The achievement of secondary school education seems to depend on teachers' effectiveness because teacher is the driver of a good curriculum to be implemented. Teachers' are the employees who take responsibility of teaching and implementing curriculum in such a way that school goals are achieved. Teacher job effectiveness

refers to the impact of high-quality teaching on student, measured in terms of achievement. Teachers' job effectiveness can be seen as the teachers' ability to improve students' learning as measured by students' gains on standardized achievement tests. Thus, an effective teacher is supposed to be in the category of teachers having perquisites training and skills to handle different types of students either stable or disable students towards educational success. Teachers' job effectiveness in this study involves teaching process that encompasses all students interest and engagement in the classroom, that is, the teaching process should not be one that negates against disable students. Effective teachers have a positive impact on their students and use their expertise to improve learning.

Teachers' job effectiveness cultivates excellent working relationships with their students within safe and respectful environments (Silman, Yaratan & Karanfiller, 2023). Teachers' job effectiveness brings about inclusive effective teaching whereby no students will be left out during instructional delivery. Effective teachers nurture effective learners who are actively involved in their own learning and personal development. They can manage a classroom to remove or reduce instances of behaviour that challenges, introduce new information in an engaging and accessible way, and provoke curiosity in the subject matter to promote higher-order thinking.

Effective teachers also love their subject and use their experiences and pedagogical knowledge to create high-quality learning. Effective teaching is constantly recognised as one of the key drivers in school improvement. As the popular saying goes, a school is only ever as good as its teachers.

Teachers' job effectiveness helps students of various types including disable students to achieve their goals – both personal and academic. Amal and Neama (2022) reiterated that improving teachers' job effectiveness might be driving force the usefulness of the disable students; while Olugu (2023) opined that the usage of Assistive Technology (AT) maybe be of help for teachers who teach disable students and this could help in achieving job effectiveness.

Assistive technology and its importance has been a controversial aspect associated with special education because of people's attitude towards the use of assistive technology. People may look at assistive technology as a tool that leads students with disabilities to succeed, while others believe assistive technology makes them dependent and students with disabilities will not be able to do the tasks on their own (Edyburn, 2019). A great deal of research has been conducted to measure the significance of using assistive technology in the classroom towards enhancing teacher job effectiveness and how it can be integrated into the general curriculum and used for assessment. Individuals with disabilities sometimes have difficulty with tasks, leading to others making decisions for them (Edyburn, 2019). The complexity of tasks may interfere with their daily lives and education as well. Students with disabilities have the right to practice their life in the way they choose; however, if they are incapable of this and are prevented from accessing assistive technology, it can lead to dependency on others. In the case of students with disabilities in the classroom, assistive technology has the potential to enhance and increase their learning and academic performance.

Currently, many students with disabilities are included in the classroom. Students may have difficulties in different areas like reading, listening, organizing information, or writing. An inclusive classroom may help them to overcome some of their challenges, yet it may also create other problems if they are unable to access the general education curriculum (Silman, *et al.,* 2023). Some professionals support using assistive technology in the classroom while others have different perspectives of using assistive technology. Assistive technology is a broad concept that includes a range of services and devices. Assistive technology devices are identified in the individuals with disable characters. Assistive technology is any item, piece of equipment or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of students with disabilities. As defined by Isiaku and Nweke (2022), assistive technology service is any service that directly assists a child with a disability in the selection, acquisition, and use of an assistive technology device.

Assistive technology devices can be divided into two categories; high technology and low technology. High-technology devices are more complicated and cost more. They also require training or guidance from the user, such as adaptive equipment, voice recognition software, or word prediction software. In contrast, low-technology is a low-priced equipment, as it costs less than high-tech, it is simply designed, and requires limited training. Examples of low-technology devices include but are not limited to talking watches, pencil grips, highlighting marker tape, eyeglasses, and ear plugs to reduce distraction. Assistive technology is intended to help and assist people who have challenges or disabilities. As a special educator, the researcher is concerned with the well-being of students, especially those who have disabilities. Students with disabilities need to have an accessible educational environment allowing them to participate in the classroom. The Least Restrictive Environment (LRE) is one of the significant elements that should be provided for individuals with special needs (Isiaku & Nweke, 2022) LRE is a principle that states that students with disabilities should be educated with their peers without disabilities to the greatest extent possible.

In order to promote the classroom acceptance of students with disabilities for teacher job effectiveness, there are many techniques that have to be considered, one of which is assistive technology. The classroom is one place that children with disabilities, regardless of the nature of the disabilities, spend most of their time; thus, it should prepare them academically by providing them with content knowledge and social interaction with their peers. Assistive technology can help create the accessible environment that children with disabilities, parents, and special educators are looking for. Students with disabilities can be as successful as their peers when the educational system provides the necessary accommodations. For example, if schools adapt the general curriculum using assistive technology, whether it is hardware or software, students with disabilities are given the opportunity to participate in the general education curriculum.

Statement of the Problem

It has been observed that a lot of qualified teachers, special educators and other related professionals are not adapted to the advent of high-technology devices like computers and low-tech, manually operated devices that can deliver and facilitate learning beyond drill and practice and as such resulted to a high rate of difficulties experience by students with learning disabilities in schools. Likewise, it also appears that they are not usually adapted to the use of the teaching aids which has the capacities of creating a psychological and conducive environment that accommodates learning, and also enhances equitable learning for special need learner. This study assessed teachers' readiness for utilization of assistive technology tools for job effectiveness in Ijebu-Ode local government, Ogun State.

Purpose of the Study

The study assessed teachers' readiness for utilization of assistive technology tools for job effectiveness. Specifically, the study:

i. ascertain ways to make teachers ready for utilization of assistive technology for teaching;
ii. find out the extent of teachers' utilization of assistive technology tools for job effectiveness;
iii. examine the role of assistive technology in improving teachers' job effectiveness among disable students;
iv. determine the relationship between assistive technology and teachers' job effectiveness.

Research Questions

The following research questions guided this study:

i. What are the ways to ascertain teachers readiness for the utilization of assistive technology for teaching?
ii. To what extent do teachers utilize assistive technology tools for job effectiveness?
iii. What are the roles of assistive technology in improving students with disability for teachers' job effectiveness?
iv. Is there any relationship between assistive technology and teachers' job effectiveness among disable students?

Teacher Job Effectiveness

Teaching is an art and the quality of teaching depends on the love, dedication and devotion of the teacher towards the knowledge of the subject. The most single critical element in the education process is the teacher who plans, organizes, designs, directs, motivates and inspires others to learn using standard teaching techniques to impart knowledge (Okolocha & Onyeneke, 2017). Teaching is a purposeful profession engaged in human resource development for individual and economic growth (Oyekan, 2016). It is done systematically by professionals who have acquired some skills and knowledge either by training or experience or both. To make desirable impact, teaching must aim at total development of the individual, that is, to enhance intellectual capabilities, developmental and cognitive intellectuality, foster psycho-social skills, and draw out neuro-physical aptitude of the learners (Akinmusire, 2017). All education institutions emphasized that teaching is important and it gives high priority to developing effective teaching and solving teaching challenges.

Effective teaching may include high level of creativity in analyzing, synthesizing and presenting knowledge

in new and effective ways. It should inculcate in the learners the ability to be analytical, intellectually curious, culturally aware, employable and capable of leadership (Okolie, 2018). According to Omoifo and Urevbu (2015), effective teaching implies the use of clearly formulated objectives by the teacher, illustrated instruction that will enable students to acquire desired knowledge content, apply the knowledge to classroom and other related problem, think and take independent decision and the use of effective evaluation technique by the teacher. Akomolafe (2014) identified the characteristics of effective teaching to include: attention on students achievement, quality teaching responsive to students learning processes, effective and efficient learning opportunities, pedagogical practices that create cohesive learning communities, effective links between school and cultural context of the school, multiple tasks to support learning cycles, aligned curriculum goal effectively, pedagogy scaffolds feedback on students' task engagement among others.

The objectives of effective teaching as stated by Adegbile (2018) would include assisting learners to: conceptualize ideas, process thoughts and develop their potentials; contribute to thinking and creativity in the subject; nurture and sustain students' interest; suit the circumstance of teaching and learning; and suit the individual teacher ability and interest. The quality of any teaching programme cannot rise above the quality of her teachers, teaching is a highly individualized activity, and the student-teacher interaction is an intense human relationship that encompasses a broad range of personalities and behaviours (Okolie, 2018). Adegbile (2018) described an effective teacher as efficient, reliable and courteously equipped with professionalism, creative in imagination, bustling ingenuity and depth of experience necessary for optimal performance and the achievement of goals. The teacher as a good manager of instruction should be able to utilize appropriate techniques to gain and maintain the attention of students. An effective teacher should be able to display requisite pedagogical insight and professional qualities and utilize same to guide the teaching/learning process to the point of achieving stated educational objectives (Okolie, 2018).

Assistive Technology (AT)

The term assistive technology, according to Alkahtani (2018), refers to any item, piece of equipment, or product system, whether acquired commercially off-the-shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of individuals with disabilities. Isiaku and Nweke (2022) defined assistive technology as technology designed or adapted to improve the performance and quality of life for individuals with disabilities. Low-technology devices are usually non-electronic and easy to use which involve little or no training. Low-technology devices are widely available with low cost and with little maintenance (e.g., pencil grips, highlighter tape or pens, and adapted furniture). Mid-technology devices are easy to operate electronically with minimal training and require basic maintenance. Mid-technology devices are commercially available and generally moderately priced (e.g., adapted keyboards, electronic dictionaries, and tape or digital recorders). High-technology devices involve complex electronics and usually contain microcomputer

components for storage and retrieval of information. They are expensive and require ongoing maintenance and extensive training (e.g., word prediction software, talking calculators, and hearing aid and or assistive listening device). Silman, Yaratan and Karanfiller (2023) stated that yesterday's high technology is tomorrow's low tech and also acknowledged that "as the field advances, there would be new considerations that would further stretch our concepts and force new ways of categorizing and describing assistive technology (AT)

According to Areej (2023) assistive technology in the classroom is one of the most important accommodation that educational agencies have to provide; moreover, teachers should be aware of their students' needs. Isiaka and Nweke (2022) said the following are other ways in which AT can help students with reading. A student who has difficulty in reading can look at a series of pictures in sequence from a view finder/computer and be able to write a story based on what the pictures portray. If the student cannot write the story, then he/she will be able to produce the story orally. A student can learn to read the sounds of the letters in the alphabet by listening to a listening device. A student with dyslexia, with the help of AT can read aloud in the classroom. A student can attempt more challenging reading materials with assistance from an AT device that can facilitate reading. A student who may have difficulty reading on a flat surface may use a slant board. A student who has difficulty with reading comprehension can get the reading material tape recorded. It can also be presented using graphic organizers/story mapping (Isiaka & Nweke, 2022)).

AT has the potential to increase developmental skills and also provide solutions to challenges, such as behaviour, attention, and communication, faced by students identified with disability (Parette & Stoner, 2018). AT support student's access to academic instruction, AT is used to create visual supports and positive behaviour support systems for students (Parish, 2017). Similarly, Chiang and Liu (2019) in their studies posited on benefits of assistive reading software noted that children with reading impairment could benefit from AT for their reading development process and increase their chances of not falling behind their peers. Furthermore, AT in the form of smart-phones and tablets might assist students with reading impairment to have equal chances for learning in school as their peers without reading difficulties.

Furthermore, AT devices increase motivation and interest to learn in reading activities. Interestingly, Chiang and Liu (2019) noted that AT had wider effects on its users due to reducing stigmatization, in situations, when students with learning disability leave the normal classroom for special education one was avoided and positive effects on family life were noted. Chiang and Liu (2019) further indicated that facilitation of independence was among the most frequently cited benefit by parents and teachers. Furthermore, the authors added among other benefits to enhance social interactions among peers, increased motivation, and reported high self-esteem. Another area that AT benefits students with learning disabilities as noted by Copley and Ziviani (2020) is the improvement of academic skills, such as hand writing, motor skills, reading acquisition and comprehension, visual attention,

perception and mathematic skills. Above all, AT improved the overall working habits and productivity of students with disability (Chiang & Liu, 2019).

The adoption and use of AT for the students with disability therefore becomes imperative and requires attention of families and professionals as a result of its potential for improving the reading ability of children with learning disability(ies). Right from the global embrace of computers, communication tools to environmental controls; the use of technology present many students with disabilities the necessary tools to be more successful in school and achieving independence in daily living. Without doubt, opportunities now abound nowadays to some students with disabilities with the support of emerging technology, raising new hopes, which were in the past unavailable (Adebisi, Liman & Longpoe, 2015). As exceptionally significance of AT to the students at all levels in universities has been the use of computer and other technologies, as extended to students with learning disabilities, have enhanced lives and given many students with learning disabilities alternatives of superseding in their diverse educational problems, with available resources to assist both lecturers and students to prevail over classroom teaching challenges. Nkwoagba (2022) opined that assistive technology (AT) can open doors and break down barriers for students, youth, students with visual impairment and learning disabilities in the classroom or place of work.

According to Bakare, Rafiu and Oyesiji (2024), Assistive Technology (AT) encompasses a range of products, equipment, systems, and devices that support and enhance an individual's functional capabilities and independence. Assistive technology (AT) includes both low-technology and high-technology solutions such as hearing aids, communication devices, wheelchairs, and specialized software applications all designed to improve the quality of life for individuals with disabilities and promote their social inclusion. In educational contexts, AT has proven to be an invaluable tool for enhancing the learning experiences of students with disabilities, facilitating greater academic achievement and social integration (Ahmed, 2018). Studies have demonstrated the effectiveness of assistive technology (AT) in improving both academic performance and social inclusion for students with disabilities (Bakare *et al.,* 2024).

Teacher Readiness

Teacher readiness means that a new teacher has the skills and knowledge required for effective teaching, sufficient knowledge of the subject matter including personal characteristics and competencies that allow them to engage in the profession through effective relationship building (Okolie, 2018). Okolocha and Onyeneke (2017) made a clear statement that being 'teacher readiness' encompasses: Teaching demands readiness because education is constantly changing and the teacher plays the vital role of modeling a student's life. The teaching profession requires professional growth plans and development to be abreast with changing technology and practices in the profession.

Teaching requires a kind of disposition and skill sets that can be made possible by a network of groundwork. Teaching is an art that is easier said than done, and so those who will teach must be a continuous learner, sharpened through persistent practice and developed through constant

reflection (Omoifo & Urevbu, 2015). Similarly, teachers have always been respected in societies and should be noted that the parent lets the child to live while the teacher enables the child to live well. Omoifo and Urevbu (2015) further submitted that there are true parent-teacher who gives life and as well teaches a child to live abundantly. Today's societies have shifted the responsibility of training the child to live well from the parent to the teacher.

The teacher is to prepare the student for a world that is yet to exist and more so, that today's child needs more than knowledge but the capacity to effect change in the society. Teaching profession needs a rethink for sustainability in line with the submission of Okolie (2018) who among other salient points suggested that introducing an internship experience into the teaching profession would have a major impact on the culture of the profession and the quality of teaching and learning in schools. Okolie (2018) noted that beyond both pre-service training and in-service induction for beginners, professions typically require continuous professional and technical development as well as growth throughout the teaching career. This is in line with the assumption that achieving mastery of knowledge, teaching skills, and attitudes that can inform teacher identity seems to be a prolonged and continuous process. Moreover, it takes continuous practice to update knowledge just as education advances in the society, and it requires a teacher to belong to associations and organizations that, among other things, should provide mentorship and coaching, also mechanisms, such as seminars, periodic conferences, publications, and workshops, for knowledge distribution and skill acquisition.

Empirical Review

A study carried out by Bakare, Rafiu and Oyesiji (2024) investigated the Impact of Assistive Technologies on Academic and Social Outcomes of Deaf-Blind Students in Nigeria. The study also highlighted that several challenges, including inadequate teacher training, insufficient funding, and lack of technical support, hindered the optimal utilization of these tools. Additionally, the findings underscored the positive impact of assistive technologies on academic performance and social integration, emphasizing their role in fostering greater independence and inclusion for deaf-blind students. A study conducted by Surajudeen, Ibironke and Aladesusi (2023) determined the Special Education Teachers' Readiness and Self-Efficacy in Utilization of Assistive Technologies for Instruction in Secondary School, Oyo State. The findings indicated that special education teachers are ready to use assistive technology for instruction and the teachers have high self-efficacy in the use of assistive technology for instruction. In a related study, Silman, Yaratan and Karanfiller (2023) examined how technology used in the Cyprus Turkish Blind Association assisted the teaching-learning and administrative processes for the visually impaired. Qualitative research techniques were used for data collection and analysis. The study also found that with the assistance of technology the participants of the study were quite motivated and could easily communicate with each other and also with people outside their organization. Olugu (2023) assessed the availability and utilization of assistive technology devices for improved teaching and learning among students with learning disabilities in Ohafia, Abia state. The

study revealed that a good number of assistive technology devices were not available for student with learning disabilities in Ohafia in Abia State. Khalil and Hantira (2022) investigated the effectiveness of an educational intervention on improving teachers' knowledge and attitudes toward the use of assistive technology devices. A highly significant difference was reported between pre and post-test among studied teachers according to their total knowledge in pre-assessment (66.1 ± 11.4) compared with (72.9 ± 12.0) in post-test and attitude in pre (77.9 ± 11.2) compared with post total score (86.4 ± 11.2) at p-value < .05. Enitan and Ibiyinka (2022) examined the efficacy of assistive technology (AT) for improved teaching and learning in computer science (a case study of an inclusive educational system). The results of this study revealed that assistive technology (AT) is capable of improving the teaching and learning of computer science for Students with special needs in an inclusive education if assistive technology (AT) is allowed to play its role. It was also discovered that both the teacher and students with special needs were exposed to very little assistive technology (AT) and there was no periodical training programme for both the teachers and the students with special needs on the use of assistive technology (AT) which has affected their teaching and learning ability. Isiaku and Nweke (2022) investigated the influence of assistive technology on effective teaching of students with learning disability in universities in North West region of Nigeria. The findings of the study revealed the need to select useful technology devices on effective teaching of students with learning disabilities, to enable them achieve the target goals, and instructional guides for special education teachers in the classroom, that would help students with learning disabilities benefit maximally from the use of assistive technology devices, whether in the classroom or at home.

Methodology

The study used a descriptive research design of survey type. The population for this study comprised public secondary school teachers in Ijebu Ode local government, Ogun State. However, a total of 13 public secondary schools were in Ijebu-Ode local government areas. Out of 13 public secondary schools in Ijebu-ode local government area, a simple random sampling technique was used in selecting 3 representing 23%. This technique used to give equal chance for ~~the~~ all the 13 schools to be included in the sample size. Those schools selected are Adeola Odutola College, Ijebu-Muslim College and Anglican Girls Grammar school. 58 teachers were selected from Adeola Odutola College, 47 teachers were selected and only 35 teachers were selected from Anglican Girls Grammar school using stratified sampling technique. Sample size was there 140 teachers. The study used researcher developed questionnaire; titled: Teachers' Readiness for Utilization of Assistive Technology and Job Effectiveness Questionnaire (TRUATJEQ). The questionnaire (TRUATJEQ) requested responses on a four (4) – point scale format. The responses rating scales are as follows: Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The questionnaire was divided into two, sections A and B. Section A focus on demographic characteristics of the respondents, while section B focused on the related items on ways to make teachers ready for utilization of assistive

technology for teaching; extent of teachers' utilization of assistive technology tools for job effectiveness and role of assistive technology in improving the performance students for teachers' job effectiveness. The initial draft of the instrument was subjected to face and contents validity by three experts. To ensure the reliability of the instrument, a test-retest reliability of the instrument was carried out. The copies of the instrument were administered to a sample of 10 teachers in a separate school outside the geographical scope of the study to determine the reliability of the instruments through Pearson Product Moment Correlation (PPMC). 94 was obtained as the reliability coefficient of the instrument. Mean and standard deviation were used for analyzing research questions 1, 2 and 3 while research question 4 were answered using Pearson Product Moment Correlation (PPMC).

Results and Discussion

Research Question 1: What are the ways to ascertain teacher's readiness for the utilization of assistive technology for teaching?

Table 1: Descriptive statistics on the ways to make teachers ready for utilization of assistive technology for teaching

Items raised	Mean	Standard Deviation
Provision of adequate assistive technology in the school.	2.96	.887
Effective training of teachers on the ways to used assistive technology in teaching disable students.	3.01	.742
Improved teachers attitude towards usage of assistive technology for teaching.	2.69	.999
Provision of conducive classroom for teachers for using assistive technology.	2.87	.963
Exposing teachers to various benefits of using assistive technology for teaching disable students.	2.95	.789
Cluster Mean	2.90	

Source: Field Survey, 2025

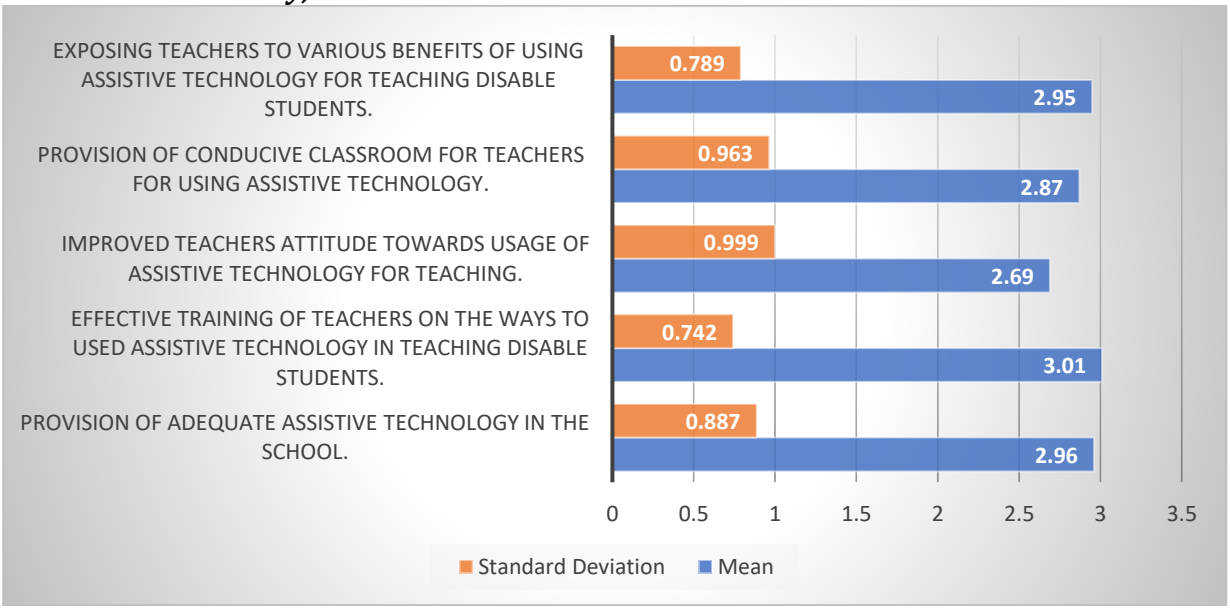

Figure 1: Bar-chart showing ways to make teachers ready for utilization of assistive technology for teaching

Table 1 indicated that cluster mean was 2.90 which found to be greater than the bench mark mean value 2.50. i.e 2.90 > 2.50. The implications of these results were that provision of adequate assistive technology tools, effective training, improved teachers attitude towards usage of technology, provision of conducive classroom for teachers and exposing teachers to various benefits of using assistive technology for teaching disable students were among the ways to make teachers ready for utilization of assistive technology for teaching.

Research Question 2: To what extent do teachers utilize assistive technology tools for job effectiveness?

Table 2: Descriptive statistics on the extent teachers utilize assistive technology tools for job effectiveness

Items raised	Mean	Standard Deviation
I always used magnifiers for teaching.	2.57	,902
Most time, I used work devices such as a talking thermostat for instruction delivery.	2.59	.914
Braille displays help me as a teacher to effective teaches disable students.	2.56	.908
Screen reading software is the most frequently assistive technology I used for teaching.	2.51	.934
I used text-to-speech systems using Optical Character Recognition (OCR) in teaching disable students.	2.63	.957
Cluster Mean	2.57	

Source: Field Survey, 2025

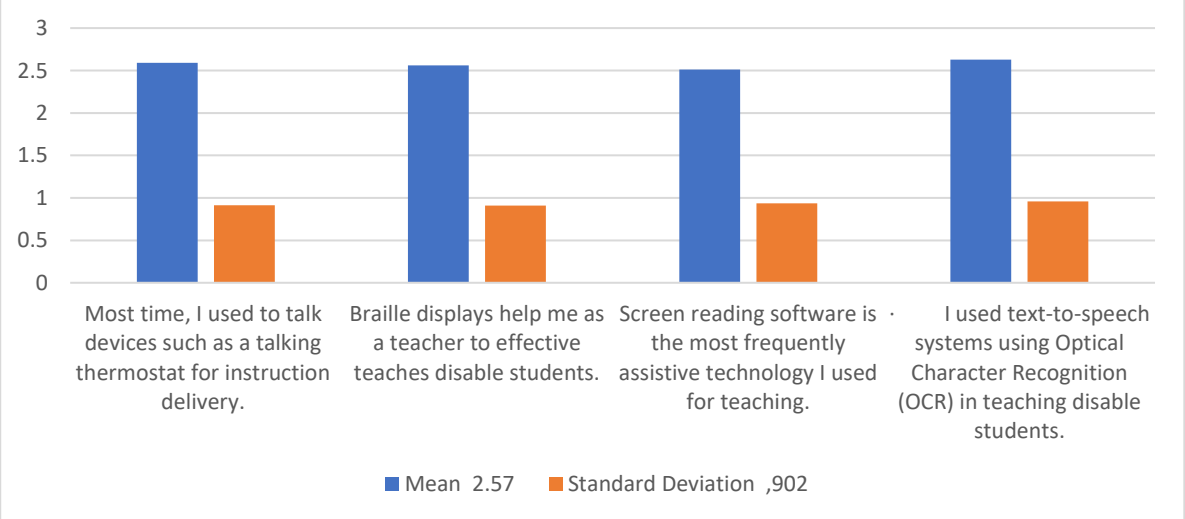

Figure 2: Bar-chart showing extent teachers utilize assistive technology tools for job effectiveness

Table 2 revealed that cluster mean value was 2.57 which greater than the bench mark mean value 2.50. i.e 2.57 > 2.50. This further implied that

magnifiers, talk devices such as a talking thermostat, braille displays, screen reading software, text-to-speech systems using optical character recognition were among assistive technology tools used by teachers for teaching disable students for job effectiveness.

Research Question 3: What are the roles of assistive technology in improving students with disability for teachers' job effectiveness?

Table 3: Descriptive statistics on the roles of assistive technology in improving students with disabilities for teachers' job effectiveness

Items raised	Mean	Standard Deviation
Assistive technology helps me to increase functional capabilities of disable students.	3.08	.698
It fosters inclusive teaching.	3.23	.784
It promotes empathy.	2.52	.922
Assistive technology promotes the understanding and mutual respect among disable students.	2.88	.900
It helps teachers to recognize and appreciate the diversity of learning needs of disable students.	2.91	.994
Cluster Mean	2.92	

Source: Field Survey, 2025

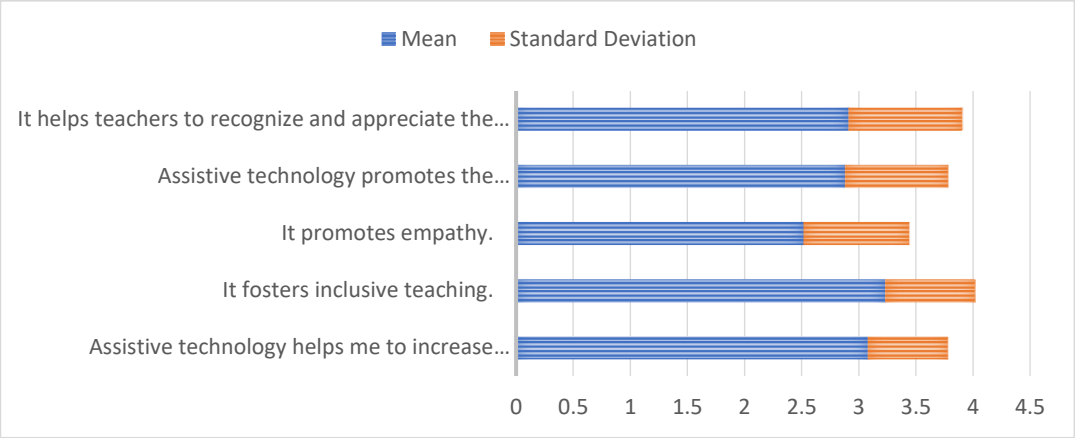

Figure 3: Bar-chart showing the roles of assistive technology in improving disability students for teachers' job effectiveness

Table 3 indicated that cluster mean was 2.92 which greater than the bench mark of 2.50. i.e 2.92 > 2.50. The implications of these results were that assistive technology helps to increase functional capabilities of disable students, fosters inclusive teaching, promotes empathy, promotes the understanding and mutual respect among disable students and recognize and appreciate the diversity of learning needs of disable students were among the roles of assistive technology in improving disability students for teachers' job effectiveness.

Research Question 4: Is there any relationship between assistive technology and teachers' job effectiveness among disable students?

Table 4: Relationship between assistive technology and teachers' job effectiveness among disable students

Variables	Mean	SD	r-value	df	p-value	Remark
Teachers' job effectiveness	19.0086	1.90732	.257	129	.0000	Significant
Assistive technology	19.7425	2.64620				

Source: Field Survey, 2025

Table 4 showed Mean, Standard Deviation and zero order correlation between the variables. It was observed that there was relationship between the independent variable and the dependent variable in the order of ($r = 0.257$, $p < .05$). This implied that there was positive relationship between assistive technology and teachers' job effectiveness among disable students.

Discussion of Findings

The findings of the study indicated that provision of adequate assistive technology tools, effective training, improved teachers attitude towards usage of technology, provision of conducive classroom for teachers and exposing teachers to various benefits of using assistive technology for teaching disable students were among the ways to make teachers ready for utilization of assistive technology for teaching. These findings supports the study of Bakare, Rafiu and Oyesiji (2024) who revealed that adequate provision of adequate assistive technology software, while basic assistive technologies like braille and screen readers were widely available and utilized, advanced tools such as speech-to-text software and video captioning devices were less accessible and infrequently used. Additionally, the findings underscored the positive impact of assistive technologies on academic performance and social integration, emphasizing their role in fostering greater independence and inclusion for deaf-blind students. Surajudeen, Ibironke and Aladesusi (2023) indicated that special education teachers are ready to use assistive technology for instruction and the teachers have high self-efficacy in the use of assistive technology for instruction. The study concluded that assistive technology can be used to facilitate teaching and stimulation if appropriately deployed.

The study revealed that magnifiers, talk devices such as a talking thermostat, braille displays, screen reading software, text-to-speech systems using optical character recognition were among assistive technology tools used by teachers for teaching disable students for job effectiveness. These findings corroborate the findings of Silman, Yaratan and Karanfiller (2023) who reiterated that with the assistance of technology the participants of the study were quite motivated and could easily communicate with each other and also with people outside their organization. Yet, there was lack of technological devices such as automatic high-speed book scanner and imported books printed in Braille that could have improved the quality of life of the association members. Olugu (2023) revealed that a good number of assistive technology devices were not available for student with learning disabilities in Ohafia in Abia State. It was revealed that there was a significant relationship between teachers' competence and utilization of assistive technology devices for improved teaching and learning of students with learning

disabilities in Ohafia in Abia State. It was then concluded that there was unavailability and poor utilization of assistive technology devices for students with learning disabilities in Ohafia. Khalil and Hantira (2022) in their study further showed that assistive technology helps to increase functional capabilities of disable students, fosters inclusive teaching, promotes empathy, promotes the understanding and mutual respect among disable students and recognize and appreciate the diversity of learning needs of disable students were among the roles of assistive technology in improving disability students for teachers' job effectiveness. These findings were in tandem with Enitan and Ibiyinka (2022) who revealed that assistive technology (AT) is capable of improving the teaching and learning of computer science for Students with special needs in an inclusive education if assistive technology (AT) is allowed to play its role. It was also discovered that both the teacher and students with special needs were exposed to very little assistive technology (AT) and there was no periodical training programme for both the teachers and the students with special needs on the use of assistive technology (AT) which has affected their teaching and learning ability. Isiaku and Nweke (2022) revealed the need to select useful technology devices on effective teaching of students with learning disabilities, to enable them achieve the target goals, and instructional guides for special education teachers in the classroom, that would help students with learning disabilities benefit maximally from the use of assistive technology devices, whether in the classroom or at home. The findings of the study also revealed challenges faced by universities in the North West Region of Nigeria in using assistive technology on effective teaching of students with learning disabilities.

Finally, the study also revealed that there was positive relationship between assistive technology and teachers' job effectiveness among disable students. These findings were in consonant with Sunday and Assami (2021) findings showed that, assistive-technology device and teachers' attitude have impact on the school adjustment of students with visual impairment. Teachers' attitude and assistive-technology device have a significant positive effect on the school adjustment of students with visual impairment and the use of assistive-technology devices and teachers' attitude were important predictors of school adjustment among students with visual impairment. Areej (2018) there is a significant positive relationship between teacher use of assistive tools and disability students' performance. Onivehu, Ohawuiro and Oyeniran (2017) revealed that teachers have a positive attitude towards the use of assistive technologies. However, teachers were not competent in the use of assistive technologies. Gender and teaching experience did not influence teachers' attitude and competence in the use of assistive technologies.

Conclusion

Having assessed teachers' readiness for utilization of assistive technology tools for job effectiveness, the following conclusions were drawn based on the findings of the study that; Provision of adequate assistive technology tools, effective training, improved teachers attitude towards usage of technology, provision of conducive classroom for teachers and exposing teachers to various benefits of using assistive technology for teaching

disable students were among the ways to make teachers ready for utilization of assistive technology for teaching. Magnifiers, talk devices such as a talking thermostat, braille displays, screen reading software, text-to-speech systems using optical character recognition were among assistive technology tools used by teachers for teaching disable students for job effectiveness. Assistive technology helps to increase functional capabilities of disable students, fosters inclusive teaching, promotes empathy, promotes the understanding and mutual respect among disable students and recognize and appreciate the diversity of learning needs of disable students were among the roles of assistive technology in improving disability students for teachers' job effectiveness. There was positive relationship between assistive technology and teachers' job effectiveness among disable students.

Recommendations

Based on the findings of the study, the following recommendations are provided; Special Education teachers should be encouraged to deploy assistive technology for learning irrespective of their gender. Government, NGOs, parents, immediate community, rehabilitation centres and the school should partner with key stakeholders in education and make available assistive technology devices for improved teaching and learning of students with learning disabilities. A periodical training programme on the use of assistive technology (AT) be organized by all the stakeholders in inclusive education for both the students with special needs and all the teachers teaching them. Training students with learning disabilities properly using assistive technology devices will help them increase their educational gains and eliminate learning difficulties. Modern and sophisticated assistive-technology devices should be provided to schools so as to create an enabling environment for the school adjustment of student, with visual impairment. Teachers should be trained and re-trained on the use of assistive technology for students with speech disorders, visual impairments, hearing impairments, physical impairments and emotional and behavioural disorders.

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