Journal of Educational Foundations [Special Edition], 2025 - Volume 14, Issue 2:48-59
https://jef.unn.edu.ng/

TEACHER READINESS AND CHALLENGES IN IMPLEMENTING DIGITAL ASSISTIVE TECHNOLOGIES (DATS) FOR INCLUSIVE ENGLISH LANGUAGE EDUCATION IN FEDERAL UNIVERSITIES IN SOUTH EAST, NIGERIA

Uloh-Bethels, Annah Chinyeaka & Okonji, Ngozi Nkechi
Department of Arts Education, Faculty of Education,, University of Nigeria, Nsukka

ABSTRACT

The integration of Digital Assistive Technologies (DATs) in English language education is essential for fostering inclusivity, particularly for students with disabilities. This study investigated teacher readiness and the challenges associated with implementing DATs for inclusive English language education in Federal Universities in South East, Nigeria. Three research questions and two hypotheses guided the study. Descriptive survey research design was adopted for the study. The participants of the study were 120 lecturers of English language and Literary Studies and Education/English drawn from three purposively selected federal universities in South-East, Nigeria. Data were collected using a 16-item researcher-developed Readiness and Challenges in Implementing Digital Assistive Technologies Questionnaire (RCIDATQ). The questionnaire, which was subjected to face validation by three experts, assessed three key areas: teacher readiness, challenges in implementing DATs and strategies for integrating DATs in English language education. RCIDATQ's internal consistency was determined using Cronbach's Alpha Method and it yielded a reliability index of 0.81. Data collected was analyzed using mean and standard deviation to answer the research questions while ANCOVA was used to test the hypotheses at 0.05 level of significance. Findings indicate a low level of teacher readiness due to insufficient training, lack of confidence and competence, inadequate accessibility to necessary DAT tools and unwillingness to adopt DAT in teaching. Key challenges identified include poor digital infrastructure, inadequate institutional support, and limited access to DAT tools and software. Recommendations included the implementation of targeted professional development training programmes, increased government and institutional funding for DAT infrastructure, and policy reforms that mandate DAT integration in teaching. These measures will enhance teacher preparedness and facilitate effective adoption of DATs for inclusive English language education.

Keywords: Teacher readiness, digital assistive technologies, inclusive education, English language education

Introduction

Digital Assistive Technologies (DATs) have revolutionized many fields of human activities such as banking, commerce, civic engagement and participation, career development, healthcare, transport and mobility, communication and social interaction. The education sector is not left out of this revolution as digital assistive technologies such as e-learning platforms, virtual classrooms and accessibility tools have made education more encompassing and more engaging. Interestingly, DATs have also made education more inclusive by providing crucial support for students with disabilities thereby enhancing accessibility and learning engagement. Digital Assistive Technologies allude to electronic devices, gadgets, softwares, application and (automated) systems designed to assist and support individuals with diverse disabilities, impairments or limitations to facilitate communication, interaction, and collaboration with people within their immediate environment as well as with those around the globe. Rao, Torres and Smith

(2021) refer to Digital Assistive Technologies (DATs) as electronic devices that encompass a wide range of tools designed to support students with disabilities in their learning processes. These technologies include screen readers, text-to-speech applications, voice recognition software, braille displays, and adaptive learning platforms. Viner at al (2020) and Prabhu et al (2023) assert that the goal of DATs is to bridge the learning gaps and to ensure that students with physical, sensory, or cognitive impairments can effectively engage with educational content. The above assertion is an indication that DATS create room for equal opportunities for people with disability by fostering more encompassing education, offering learner independence, providing easier and faster accessibility to education resources thereby giving the disabled a sense of acceptance and belonging.

The effectiveness of DATs in inclusive language education has been widely documented with studies indicating improvements in comprehension, engagement, and independent learning. Studies such as Beukelman and Mirenda (2020), Katz (2020) and Lazar and Hochheiser (2020) indicate that the integration of DATs in language education has fostered inclusivity and transformed instructional delivery for teachers and learning experience for individuals with disabilities. For instance, apart from supporting teachers in creating more inclusive and accessible learning environments Lazar and Hochheiser (2020), teachers can use DATs to create personalized learning plans, provide real-time feedback, and facilitate communication with learners who have disabilities (Katz, 2020). For individuals with disabilities, DATs can enhance the effectiveness of inclusive language education by providing personalized support, promote autonomy, accessibility and engagement (Katz, 2020). For instance, text-to-speech software can assist individuals with dyslexia or visual impairments to read and comprehend written texts Lazar and Hochheiser (2020). Similarly, Beukelman and Mirenda (2020) explain that DATS such as speech recognition software can facilitate language learning for individuals with speech or hearing impairments; mobile apps like Duolingo and Babbel can provide interactive and immersive language learning experiences that can be tailored to individual needs and abilities while virtual learning environments like Blackboard and Moodle offer a range of accessibility features, including closed captions, audio descriptions, and keyboard-only navigation. Accessibility to all these DATS and the benefits that stem from them has the potential to promote more inclusive, accessible, and effective learning experiences for all learners depending on teachers' readiness to integrate them into the teaching and learning process for inclusive English language education.

Teaching is the mother of all professions as well as a professional art. Virtually everything in education is largely dependent on the teacher's art. A teacher is like a potter who delicately forms students' sensitive minds and moulds them into vessels that dictate the students' perceptions and future ambitions so, teachers must be continuous learners, sharpened through persistent practice and developed through constant reflection (Ogunseemi, Idowu & Olumilua, 2022). Consequently, as a continuous learner and practitioner, the disposition of the teacher must be such that adapts to changes and readiness to impart knowledge that accrue from such change and adaptation in view of the prevailing technological advancement and practices in the education system. This is because if students must be equipped to face the challenges of tomorrow, teachers cannot continue to teach them the way they were taught yesterday. In other words, teachers should be ready to embrace and adapt to pedagogical and technological changes by integrating digital assistive technologies in the classroom so as to *satisfactorily* serve the tech-savvy students who are digital and technology-driven natives. Teacher readiness is a

critical factor in the successful implementation of DATs in inclusive education. Teacher readiness theory explores the preparedness of educators (teachers) to effectively implement teaching practices and adapt to evolving contexts, encompassing knowledge, skills and motivation (Ogunseemi, Idowu & Olumilua, 2022). In the context of this study, teacher readiness or teacher preparedness refers to the extent to which a teacher is prepared and willing to impart knowledge while possessing adequate physical, social and psychological competence and aptitude to carry out instructional delivery using digital assistive technologies. Aditya (2021) explains that teacher readiness involves a combination of digital literacy, pedagogical adaptability, and positive attitudes toward technology adoption. Digital literacy refers to a teacher's ability to effectively use technology in instructional delivery, while pedagogical adaptability signifies the ability to modify teaching strategies to accommodate diverse learners (Orakova, et al 2024). Although Digital Assistive Technologies (DATs) has numerous benefits, several challenges hinder their adoption in higher education.

One of the major challenges that is yet to be addressed is teacher readiness to accept and maximize the potentials of DATS and change the pedagogy in order to foster inclusivity in English language education. Adoption of DATS for inclusive English language education by educators seem to be low especially in developing countries such as Nigeria, where it appears that many educators lack the requisite skills and institutional support to effectively integrate these technologies. Studies such as Aditya (2021) and Sharma, Tripathi, Madan and Khatri (2024) suggest that many educators in developing countries lack the willingness, competence and digital literacy to integrate digital assistive technologies into the classroom. This is due to lack of adequate training in using assistive technologies, which hinders their effective utilization and implementation. The study by Sharma, Tripathi, Madan and Khatri (2024) find that limited teacher training poses a significant barrier, as professional development opportunities in assistive technologies remain inadequate, leaving educators with low confidence in their ability to integrate these tools into their teaching. Another obstacle is infrastructural deficiencies, as many universities lack the necessary digital infrastructure, including reliable internet access and assistive devices to effectively support DATS implementation. According to Turrohmah and Suryanto (2023), iinstitutional barriers further complicate adoption, with the absence of clear policies and support structures leading to inconsistent implementation across institutions. Moreover, attitudinal resistance remains a challenge, as some educators remain sceptical about the effectiveness of DATs due to limited exposure and a lack of institutional encouragement (Li, Gaza, Keicher & Popov, 2018). Additionally, infrastructural deficiencies, limited awareness, and attitudinal barriers further complicate implementation. This study seeks to investigate the extent of teacher's readiness and the challenges impeding the successful deployment of DATs in English language education, thereby contributing to the discourse on inclusive education in Nigeria. Overcoming these barriers is essential for the successful integration of DATs in higher education.

Many developing regions, including Nigeria, still struggle with effective deployment of these tools. Akram, Abdelrady, Al-Adwan and Ramzan (2022) and Morelle and Matshidiso (2024) found that limited resources, inadequate teacher training, and lack of institutional policies are some of the critical factors affecting implementation of DATs. To create an inclusive learning environment, educators must possess not only technical skills but also a willingness to adapt their teaching methodologies to accommodate the diverse needs of students. This is what inclusive education entails. Inclusive education aims to accommodate all students, regardless of their abilities or disabilities, within

mainstream learning environments (Srivastava, Agarwal, & Ganapathy, 2022). In the context of English language education, DATs play a crucial role in facilitating equitable access to learning resources. The findings of Alkhawaldeh and Khasawneh (2021) and Wang (2024) revealed that adaptive learning software, captioning tools, and text conversion applications have proven effective in improving language acquisition and literacy skills among students with disabilities. It has reiterated that the success of inclusive education largely depends on the willingness and preparedness of educators to embrace and integrate these technologies into their teaching methodologies. However, apart from the willingness and preparedness of educators, another factor that could play a role is gender.

Gender plays a crucial role in determining teacher readiness for the successful implementation of Digital Assistive Technologies (DATs) in inclusive English language education. Research suggests that male and female educators may exhibit varying levels of digital literacy, adaptability, and attitudes towards technology adoption. These differences are often influenced by factors such as access to professional development opportunities, prior experience with technology, and institutional support. For instance, studies by Al-Abdullatif (2019), Tao (2019) and Mercader and Duran-Bellonch (2021) indicate that female educators often face more significant challenges due to limited exposure to assistive technologies and sociocultural constraints. Conversely, male teachers may demonstrate higher confidence in using digital tools due to greater access to technical training. However, these differences are not uniform and can vary across institutions and regions as studies by Guillén-Gámez and Rodríguez-Fernández (2021) and Wigati, Faisal and Astuti (2022) show that male teachers exhibited lower digital literacy skills and less positive compared to their female counterparts. On the other hnd, Abdulai and Akaadom's (2023) study indicate that there is no significant difference between male and female pre-service teachers in their computer literacy or their attitude toward utilizing computers for teaching and learning. Therefore, understanding the gender dynamics in teacher readiness is essential for addressing disparities in professional development and ensuring equitable access to DATs for all educators. This study explored these differences and assess whether gender significantly impacts teachers' readiness to implement DATs in inclusive English language education within Federal Universities in South East, Nigeria. This study is significant as it provides empirical data on the state of DATS adoption for inclusive English language education. The findings will be beneficial to educators, policymakers, and institutional administrators in designing effective strategies for training and infrastructure development. Additionally, it will contribute to the broader discourse on digital inclusion in higher education, advocating for policy reforms that enhance accessibility for students with disabilities. Understanding the challenges and opportunities of implementing DATs will enable institutions to formulate effective policies that will promote inclusive education. To guide this study, the following research questions were posed:

Research Questions

The following research questions guided the study

1. What is the extent of teachers' readiness in adopting and implementing DATs for inclusive English language education in federal universities in South East, Nigeria?
2. What are the perceptions of lecturers in adopting and implementing DATs for inclusive English language education in federal universities in South East, Nigeria?

3. What are the challenges faced by lecturers in adopting and implementing DATs for inclusive English language education in federal universities in South East, Nigeria?

Research Hypotheses

The study tested the following hypotheses at 0.05 level of significance:

$H0_1$: There is no significant difference between male and female lecturers' perceptions on their extent of readiness in adopting and implementing DATs for inclusive English language education.

$H0_2$: There is no significant difference between male and female lecturers' perceptions of adopting and implementing DATs for inclusive English language education

Methodology

The study employed a descriptive survey design. A descriptive survey design, according to Nworgu (2015), involves collecting and describing data in a systematic manner pointing out the characteristics, features or facts about a given population. Okwo (2021) adds that a descriptive survey design allows for the behaviours, perceptions and state of affairs to be described as they currently exist. The study was carried out in federal universities in South-East, Nigeria. South-East is made up of five states namely Abia, Anambra, Ebonyi, Enugu and Imo State. The population of the study was the 276 English language and Education/English lecturers from three out of the five federal universities in South East, Nigeria, which are Michael Okpara University of Agriculture, Umudike (Abia State), Nnamdi Azikiwe University, Awka (Anambra State), Alex Ekwueme University, Ndufu-Alike (Ebonyi State), University of Nigeria, Nsukka (Enugu State) and Federal University of Technology, Owerri (Imo State). The sample of the study was 120 (52 males and 68 females) lecturers from the Faculty of Arts and Faculty of Education of the purposively selected three federal universities in South East: University of Nigeria, Nsukka, Nnamdi Azikiwe University, Awka and Alex Ekwueme University, Ndufu-Alike. The reason for the purposive selection was because out of the five federal universities in the zone, only these three offer English language and Education/English courses both at the undergraduate and postgraduate levels. The other two do English language for only first year students as a general studies course. For the sample distribution, 40 lecturers (20 from the Department of English Language and Literary Studies and 20 from the Department of Arts Education) were drawn from each of the three selected universities using simple random sampling technique thereby making a total of (40 x 3 =) 120 participants. Data was collected using a 16-item structured questionnaire titled Teacher Readiness and Challenges in Adopting and Implementing Digital Assistive Technologies (TRCAIDAT). The TRCAIDAT items were structured on a modified four-point Likert scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) with assigned weightings of 4, 3, 2 and 1 respectively. The TRCAIDAT was subjected to face validation by three experts from the Departments of Science Education and Arts Education of the Faculty of Education, University of Nigeria, Nsukka. Suggestions and corrections noted by the experts were effected before the instrument was used for data collection. To determine the reliability of the instrument, a trial test was conducted using 30 lecturers from the General Studies, English language Unit (15 lecturers) at Enugu State University of Technology (ESUT), Enugu, Enugu State. The trial test, though conducted in South East, was carried out using a state university. However, the testees have the same characteristics as those in the population of this study. The internal consistency of the instrument was estimated using Cronbach's Alpha method. The instrument was considered reliable having yielded a reliability index of 0.83. The instrument was administered by the

researchers in addition to three research assistants who were already tutored on the content of the questionnaire and how to administer the instrument. This gave them opportunity to explain and answer any question posed by any respondent and to collect the instruments immediately after filling them. This ensured a 100% return rate. Data collected were analyzed using mean and standard deviation to answer the research questions while the hypotheses were tested at 0.05 level of significance using t-test. The real limits for the mean scores used for decision making was 4.00-3.50 = SA; 3.49-2.50 =A; 2.49-1.50 = D and 1.49-0.50 = SD. The criterion mean score for accepting or rejecting any item was 2.50. This means that items with mean scores of 2.50 and above were accepted while 2.49 and below were rejected.

Results

Table 1: Extent of Teachers' Readiness in Adopting and Implementing DATs for Inclusive English Language Education

S/N	Items	$\bar{x}$	SD	Dec.
1	I have received formal training on the use of Digital Assistive Technologies (DATs) for teaching.	2.47	1.13	Reject
2	I incorporate DATs in my English language teaching	2.37	1.10	Reject
3	I feel confident in integrating DATs into my English language instruction	2.46	1.05	Reject
4	I am willing to learn and adopt new DATs to enhance inclusive education	2.37	1.10	Reject
5	I have access to the necessary technological tools and resources to implement DATs effectively	2.39	1.16	Reject
	Cluster Mean			
		2.41	.49	Reject

Key: $\bar{x}$ = Mean, SD = Standard Deviation; Dec = Decision

Results in Table 1 show that all the items have mean scores below 2.50, which was set as a criterion for decision-making. This indicates that teachers' readiness to adopt and implement DATs for inclusive English language education is low.

Table 2: Perception of Lecturers in Adopting and Implementing DATS for Inclusive English Language Education

S/N	Items	$\bar{x}$	SD	Dec
6	Providing regular training sessions will enhance teacher readiness	2.57	1.08	Accept
7	Institutional policies should mandate the integration of DATs	2.54	1.12	Accept
8	Government support is essential for scaling up DAT implementation	2.78	1.03	Accept
9	More funding should be allocated to acquiring DAT resources	2.61	1.22	Accept
10	Collaboration with colleagues who are knowledgeable in the use of DATS	2.87	1.09	Accept
	Cluster Mean	2.56	.49	Accept

Key: $\bar{x}$ = Mean, SD = Standard Deviation; Dec = Decision

Results in Table 2 reveal that all the items have mean scores above 2.50, which is set as a criterion mean for accepting any item. This indicates that the respondents perceived all the items as necessary for enhancing teachers' readiness for adopting and implementing DATs for inclusive English language education.

Table 3: Challenges faced by Teachers in Adopting and Implementing DATS for Inclusive English Language Education

S/N	Items	$\bar{x}$	SD	Dec.
11	Lack of training is a major barrier to DAT implementation	2.59	1.14	Accept
12	There is inadequate institutional support for the use of DATs	2.77	1.09	Accept
13	Poor digital infrastructure hinders the use of DATs in my institution	2.54	1.12	Accept
14	Educators are resistant to the adoption of DATs	2.52	1.10	Accept
15	Institutional policies do not prioritize the integration of DATs	2.59	1.14	Accept
16	There is limited access to necessary DAT tools and software	2.68	1.18	Accept
	Cluster Mean	2.58	.42	Accept

Key: $\bar{x}$ = Mean, SD = Standard Deviation; Dec = Decision

Data presented in Table 3 indicate that all the items have mean scores between 2.50 and 2.77. This indicates that the respondents agree that lack of training, inadequate institutional support for the use of DATs, poor digital infrastructure, resistant to the adoption of DATs, not prioritizing the integration of DATS by institutional policies and limited access to necessary DAT tools and software are challenges faced by educators in adopting and implementing DATs for inclusive education.

$H0_1$: There is no significant difference between male and female lecturers' perception on the extent of their readiness in adopting and implementing DATs for inclusive English language education.

Table 4: T-test Analysis of Male and Female Lecturers' Extent of Readiness in Adopting and Implementing DATs for Inclusive English Language Education

S/N	Items	Gender	$\bar{x}$	SD	t-stat	P.val	Dec.
1	I have received formal training on the use of DATs for teaching	Male Female	2.45 2.31	1.13 1.01	- 0.74	0.460	**NS**
2	I incorporate DATs in my English language teaching	Male Female	2.65 2.50	1.18 1.06	- 0.78	0.439	**NS**
3	I feel confident in integrating DATs into my English language instruction	Male Female	2.69 2.47	1.03 0.91	1.07	0.321	**NS**
4	I am willing to learn and adopt new DATs to enhance inclusive education	Male Female	2.36 2.30	1.12 1.02	- 0.33	0.744	**NS**
5	I have access to the necessary technological tools and resources to implement DATs effectively	Male Female	2.70 2.68	1.30 0.19	- 0.02	0.984	**NS**
	Cluster Mean	Male Female	2.51 2.55	0.49 0.49	0.16	0.590	**NS**

Key: x̄ = Mean, SD = Standard Deviation; P-val = Probability value; NS = Not Significant, Dec = Decision

The cluster mean for the male lecturers is 2.51 with a standard deviation of 0.49. The cluster mean for the female lecturers is 2.55, with a standard deviation of 0.49. The significance level for the comparison between male and female lecturers is 0.59, indicating no statistically significant difference between male and female lecturers in the level of male and female lecturers' readiness to implement Digital Assistive Technologies (DATs) for inclusive English language education.

$H0_2$: There is no significant difference between male and female lecturers' perceptions of adopting and implementing DATs for inclusive English language education.

Table 5: T-test Analysis of Male and Female Lecturers' Perceptions of Adopting and Implementing DATs for Inclusive English Language Education

S/N	Items	Gender	x̄	SD	t-stat	P-val	Dec.
6	Lack of training is a major barrier to DATs implementation	Male Female	2.47 2.34	1.10 1.00	-0.75	0.457	**NS**
7	There is inadequate institutional support for the use of DATs	Male Female	2.75 2.71	1.22 1.10	-0.75	0.457	**NS**
8	Poor digital infrastructure hinders the use of DATs in my institution	Male Female	2.42 2.40	1.22 1.10	-0.12	0.908	**NS**
9	Educators are resistant to the adoption of DATs	Male Female	2.40 2.22	1.11 1.00	-1.10	0.273	**NS**
10	Institutional policies do not prioritize the integration of DATs	Male Female	2.63 2.49	1.12 1.00	0.87	0.386	**NS**
11	There is limited access to necessary DAT tools and software	Male Female	2.70 2.54	1.26 1.16	0.87	0.388	**NS**
	Cluster Mean	Male Female	2.51 2.58	0.42 0.43	-0.12	0.48	**NS**

Key: x̄ = Mean, SD = Standard Deviation; P-val = Probability value; NS = Not Significant, Dec = Decision

The cluster mean for the male lectures is 2.51 with a standard deviation of 0.42. The cluster mean for the female lecturers is 2.58, with a standard deviation of 0.43. The significance level for the comparison between male and female lecturers is 0.48, indicating no statistically significant difference in the challenges faced by male and female English language educators in adopting DATs.

Discussion

The findings of this study highlight critical gaps in teacher readiness, significant barriers to the adoption of Digital Assistive Technologies (DATs), and perceptions that could improve their integration for inclusive English language education. These results align

with existing literature on the challenges and opportunities surrounding inclusive education through technological interventions. Findings on the extent of teachers' readiness in adopting and implementing DATs indicated a low level of teacher readiness for adopting and implementing DATs for inclusive English language instruction. These findings reinforce previous studies that have emphasized lack of formal training as a major impediment to DAT adoption among educators such as Aditya (2021). Teacher readiness is essential for the successful adoption and implementation of assistive technologies, as educators play a pivotal role in facilitating accessibility and inclusion in the classroom (Orakova et al., 2024). However, without adequate training and access to the necessary tools, lecturers may struggle to integrate DATs effectively into their instructional practices. Furthermore, the unwillingness or inability to incorporate DATs into teaching may stem from a broader issue of digital literacy gaps, which have been identified in prior research as a barrier to the adoption of educational technologies in developing countries. This is in line with the study by Prabhu, Sujathamalini and Ravichandran, (2023). These results suggest an urgent need for targeted professional development programmes to equip lecturers with the skills required for integrating assistive technologies in inclusive education.

On the perceptions of lecturers in adopting and implementing DATs for inclusive English language education, the study found that providing regular training sessions, securing government support, and increasing funding were considered effective for improving teacher readiness and institutional support for DATs integration. These findings reinforce calls for more investment in teacher professional development and infrastructure to enhance the sustainability of assistive technology programmes in education as suggested by Viner, Singh and Shaughnessy (2020). Interestingly, respondents supported the idea of mandating DATs integration through institutional policies and collaborating with colleagues who are knowledgeable in the use of DATS. This suggests that while educators acknowledge the need for improved support structures, they are not sceptical of policy-driven enforcement and external partnerships. However, rigid policies may hamper instead of enhancing the adoption and implementation of DATs. Similar concerns have been raised in previous research, such as Morelle and Matshidiso (2024) where overly rigid policy mandates have been found to be ineffective without adequate teacher involvement and institutional buy-in.

The study identified challenges hindering the effective adoption of DATs in English language education. Lack of training, inadequate institutional support, poor digital infrastructure, and limited access to DAT tools were highlighted as significant obstacles. These findings align with the work of Sharma et al. (2024), who identified insufficient training and infrastructural deficiencies as major barriers to technology integration in education. In contrast, respondents did not view educators' resistance to DATs and the absence of institutional policies as major challenges. This contradicts some previous studies that have suggested attitudinal resistance as a significant barrier to technology adoption such as Li, Garza, Keicher and Popov (2018). However, it is possible that lecturers in this study are willing to use DATs but are constrained by external factors such as resource limitations and institutional barriers. The role of policy frameworks in technology adoption remains contested as Turrohmah and Suryanto (2023) argue that while policies are crucial, their effectiveness depends on the level of enforcement and institutional commitment. The findings of this study indicated no statistically significant difference between male and female lecturers' perception on the extent of readiness to adopt and implement DATs for inclusive English language education. This aligns with the

study by Abdulai and Akaadom (2023), which found no significant difference between male and female pre-service teachers in terms of computer literacy and attitudes toward using computers for teaching and learning. However, this result contrasts with the findings of Guillén-Gámez and Rodríguez-Fernández (2021) and Wigati, Faisal and Astuti (2022), who reported that male teachers exhibited lower digital literacy skills and less positive attitudes toward digital tools compared to their female counterparts. Similarly, studies by Al-Abdullatif (2019), Tao (2019) and Mercader and Duran-Bellonch (2021) suggest that female educators often face more challenges due to limited exposure to assistive technologies and sociocultural constraints. These findings underscore the complexity of gender dynamics in technology adoption and emphasize the need for equitable access to professional development opportunities to enhance teacher readiness for effective DATs integration for inclusive English language education.

The findings of this study also revealed that there is no statistically significant difference between male and female lecturers' perceptions of adopting and implementing DATs for inclusive English language education. This aligns with the work of Abdulai and Akaadom (2023), who found that gender does not significantly influence computer literacy or attitudes toward technology use among pre-service teachers. Similarly, Mercader and Duran-Bellonch (2021) emphasized that institutional support and access to professional development play a more crucial role in successful technology integration than gender. However, this finding contrasts with studies by Guillén-Gámez and Rodríguez-Fernández (2021) and Wigati, Faisal and Astuti (2022), which reported that female educators often encounter more significant barriers due to limited exposure to technology. The lack of gender-based disparity in this study suggests that both male and female lecturers faced similar infrastructural and training-related challenges in implementing DATs for inclusive English language education. This underscores the need for targeted support systems that address the collective needs of educators, regardless of gender, to enhance their readiness for effective DATs adoption and implementation.

Conclusion

This study highlights significant challenges in the adoption of Digital Assistive Technologies (DATs) for inclusive English language education in Nigeria, particularly the low level of teacher readiness. Without targeted interventions, students with disabilities may continue to face barriers in accessing quality education. Addressing key challenges such as inadequate infrastructure, limited training opportunities, and weak institutional support is crucial to ensuring that DATs can effectively enhance learning for diverse students. The findings also emphasize the importance of a multi-stakeholder approach in promoting DATs adoption. While government funding and institutional policies play a role, a more sustainable strategy involves empowering educators through professional development and fostering a culture of innovation in schools. Effective technology integration requires a combination of technical training, systemic support, and active educator engagement. Additionally, the study revealed that gender differences do not significantly impact lecturers' readiness or the challenges they face, further highlighting the need for inclusive and equitable capacity-building initiatives for both male and female lecturers. To achieve meaningful progress, a concerted effort from policymakers, educational institutions, and stakeholders is necessary. By prioritizing teacher readiness, strengthening institutional support, and investing in digital infrastructure, universities can create more inclusive learning environments that ensure equitable access to education for all students.

Recommendations

The following recommendations were made based on the findings of this study:

1. Educational institutions should integrate DATs training into teacher education programmes and provide continuous professional development opportunities.
2. The government and educational institutions should invest in upgrading digital infrastructure in order to ensure availability of assistive technologies, internet connectivity, and reliable power supply in schools.
3. Universities and regulatory bodies should develop clear policies that promote integration of DATs into the curriculum and provide educators with necessary institutional support.
4. Collaboration between government agencies, educational institutions, non-governmental organizations (NGOs), and technology developers is essential to ensure sustainable DATs adoption.
5. Schools should encourage educators to experiment with different DATs tools and share best practices through peer learning communities and professional networks.
6. Targeted support programmes should be implemented to address potential gender-related disparities in digital literacy and confidence thereby ensuring both male and female educators are equally prepared to adopt and implement DATs effectively.

REFERENCES

Abdulai, I., & Akaadom, B. (2023). Pre-service teachers' computer literacy and attitude: Gender perspective of freshers in the colleges of education. *Journal of Technology and Science Education., 1*(5), 1109-1118.

Aditya, D. (2021). Embarking digital learning due to COVID-19: Are teachers ready? *Journal of Technology and Science Education, 11*(1), 104-116.

Akram, H.; Abdelrady, A; Al-Adwan, A. & Ramzan, M. (2022). Teachers' perceptions of technology integration in teaching-learning practices: A systematic review. *Frontiers in Psychology, 13*, 1-9

Al-Abdullatif, A. (2019). Auditing the TPACK confidence of pre-service teachers: The case of Saudi Arabia. *Education and Information Technologies, 24*, 3393 - 3413.

Alkhawaldeh, M., & Khasawneh, M. (2021). The impact of adaptive media technology on the achievement of students with learning disabilities in English language. *International Journal of Scientific and Research Publications, 11*(11), 355-362.

Guillén-Gámez, F., & Rodríguez-Fernández, R. (2021). Meta-Analysis on the attitudes of active teachers about the use of educational technology according to gender. *Contemporary Educational Technology, 14*(1), 1-18.

Li, Y., Garza, V., Keicher, A., & Popov, V. (2018). Predicting high school teacher use of technology: Pedagogical beliefs, technological beliefs and attitudes, and teacher training. *Technology, Knowledge and Learning, 24*, 501 - 518.

Mercader, C., & Duran-Bellonch, M. (2021). Female higher education teachers use digital technologies more and better than they think. *Digital Education Review, 40*, 172-184.

Morelle, M., & Matshidiso, T. (2024). Challenges in implementing assistive devices in teaching learners who are visually impaired in full service classrooms. *International Journal of Innovative Science and Research Technology (IJISRT), 9*(3), 2509-2511.

Ogunseemi O. E, Idowu E. K & Olumilua,O. (2022). Teachers' readiness, responsibility

and reflection for sustainable teaching profession. *European Journal of Research and Reflection in Educational Sciences,* 10(2), 65-70. Retrieved from www.idpublications.org

Orakova, A., Nametkulova, F., Issayeva, G., Mukhambetzhanova, S., Galimzhanova, M., & Rezuanova, G. (2024). The relationships between pedagogical and technological competence and digital literacy level of teachers. *Journal of Curriculum Studies Research, 6*(1), 1-21.

Prabhu, P., Sujathamalini, J., & Ravichandran, G. (2023, February 2). Assistive and digital technology for the education of students with visual disabilities. *International Journal of Research and Review, 10*(2), 714-719.

Rao, K., Torres, C., & Smith, S. (2021). Digital tools and UDL-based instructional strategies to support students with disabilities online. *Journal of Special Education Technology,, 36,* 105 - 112.

Sharma, G., Tripathi, D., Madan, V., & Khatri, E. (2024). A study of teachers' adaptability towards digital education system: An empirical study in higher education perspective. *Journal of Informatics Education and Research., 4*(2), 644-651.

Srivastava, A., Agarwal, S., & Ganapathy, M. (2022). Editorial: Inclusive higher education in cross-cultural settings. *International Journal of Educational Management, 36*(4), 357-363.

Tao, S. (2019). Female teachers in Tanzania: An analysis of gender, poverty and constrained capabilities. *Gender and Education, 31*(7), 903 - 919.

Turrohmah, H., & Suryanto, S. (2023). Teacher readiness for digital transformation. *Jurnal EDUCATIO: Jurnal Pendidikan Indonesia, 9*(2), 942-951

Viner, M., Singh, A., & Shaughnessy, M. (2020). Assistive technology to help students with disabilities. In M. V. Singh, & C. Yeh, *Special Education Design and Development Tools for School Rehabilitation Professionals* (pp. 240-267). Hershey, PA:: IGI Global Scientific Publishing.

Wang, H. (2024). Integration of computer-assisted teaching technology in English online education platforms. *Applied Mathematics and Nonlinear Sciences, 9*(1), 1-6.

Wigati, I., Faisal, F., & Astuti, R. (2022). Determining digital literacy among teacher from gender perspective through the Rasch model. *Journal of Education and Learning*