Artificial Intelligence' Receptiveness for Inclusive Education at Obafemi Awolowo University, Nigeria

Oteyola Adetokunbo Temitope[1], Oyeniran Oyetola[2], Babatunde Folorunso Makinde[3]

[1, 2] Department of Educational Technology and Library Studies, Obafemi Awolowo University, Nigeria
[3] Department of Educational Technology, University of Ilesa, Ilesa, Nigeria

Article Info	ABSTRACT
	The challenges of teaching students with disabilities in Nigeria include inadequate teachers, a deficiency in the integration of technology into classroom instruction, and poor information technology infrastructure, among others. Special schools, which are dedicated to special needs students, also cannot adequately cater for them. Inclusive education provides the desired opportunities to navigate some of these challenges and prevent underserved discrimination against this group of students. The use of AI-mediated platforms has been found effective in teachers' preparation for inclusive education in some other climes. This study investigated preservice teachers' receptiveness and the influence of sex on the usability of AI for inclusive education. The study adopted a post-test-only experimental design. Forty-five students that participated in the training organized for the integration of the AI-mediated platform for teaching practice at Obafemi Awolowo University, Ile Ife, Nigeria, were sampled for the study. The simSchool Survey Questionnaire (SSSQ) was used for data gathering. Analysis of data showed that preservice teachers were highly receptive to the usability of the platform in teachers' preparation for inclusive education (mean score image = 22.46). Analysis of data also showed that sex has no significant influence on the preservice teachers' receptiveness (F $(1,43) = 0.73$; $p > 0.05$).

Corresponding Author:

Oyeniran Oyetola,
Department of Educational Technology and Library Studies, Obafemi Awolowo Univeristy, Nigeria
Email: ooyeniran@oauife.edu.ng

1. INTRODUCTION

Nigeria has low higher education enrollment of special needs students (Adigun, 2018; Jibrin et al., 2024). In 2019, the Federal Ministry of Education (FME) of Nigeria reported the percentage of special needs students enrolled in public universities in southwestern Nigeria. Federal University of Technology, Akure (0.80%); Adekunle Ajasin University, Akungba–Akoko (0.08); Federal University of Agriculture, Abeokuta (2.00); Olabisi Onabanjo University, Ago Iwoye (1.00); Federal University,

Oye Ekiti (1.00); Ekiti State University, Ado Ekiti (0.50); University of Ibadan (no record). This demonstrated that southern Nigerian universities enroll few special needs pupils. The same applies nationwide (FME, 2019).

These children' limited elementary and secondary school access may explain their low enrollment. Southwest Nigeria has one famous federal special needs school. Three from Lagos, one from Ogun, and one from Oyo State. The state capital has all these schools. The lack of government-owned special needs primary and secondary schools in Nigeria is one of the main reasons special needs students are underrepresented in higher education (Chinedu-Eze et al., 2024). Southwestern Nigeria has only one college of education that trains teachers to teach special needs pupils. These pupils struggle to prepare for higher education because traditional primary and secondary institutions don't cater to them. Teaching instructors' inclusive education in colleges or at the faculty of education may assist in addressing these issues (Adesokan & Bojuwoye, 2023; Adigun, 2018; Ijadunola et al., 2022).

Special Needs Education educates children and adults with learning disabilities like blindness, partial sightedness, deafness, hardness of hearing, mental retardation, social maladjustment, physical handicap, etc. due to birth, inheritance, social position, or mental or physical health (Hornby, 2021; McKenzie, 2021). Students with learning challenges, physical limitations, and mental health disorders are classified as special education (SEN) students (Woolfson, 2025). According to FME (2015), special needs education is based on the 1946 Universal Declaration of Human Rights and the 2014 Nigerian National Policy on Education, which states that "every Nigerian child shall have a right to equal educational opportunities, irrespective of any real or imagined disabilities." The policy also stated that Nigeria's education philosophy is based on the development of the individual into a sound and effective citizen, full community integration, and equal access to educational opportunities for all citizens at all levels both inside and outside the formal school system. Because of this, all levels of government should be involved in improving special education. Some southern Nigerian states have special needs schools; however, many are no longer open. FME (2015) added that "although Nigeria is involved in special needs education, the present practices are not fully consistent with existing global best practices." Thus, worldwide best practices should be examined to address special needs of student discrimination.

In FME (2015), special needs education aims to provide entire service delivery for Nigerian children's physical, mental, and emotional problems in school, home, and hospital. (ii) providing quality education for all PWD in all national development efforts. (iii) Help the nation's socioeconomic and technological growth by ensuring all people with special needs develop to their potential. Thus, teachers of these student groups must be well-prepared to attain these goals. Especially for aim (ii), since education quality depends on teachers. Special needs pupils in Nigeria were previously enrolled in special schools. These schools are named for the training teachers need to teach these pupils. Southwest Nigeria has few government-owned special schools. Special education teachers are trained in "special" colleges. Few universities include special teachers in their programs.

Inclusive education may help special education in the country. Inclusive education avoids segregation for special needs kids (Oluwamayomikun, 2024; Umeh, 2024). Diversity is welcome in inclusive education classrooms. All disabled pupils learn in the same classroom as able-bodied students. Inclusive education reduces disability discrimination (Sagun-Ongtangco et al., 2021). Inclusive education holds that since these children live in the same community with fully competent bodies; there is no moral need to isolate them from other students because they will eventually integrate into society. Molina Roldán et al. (2021) stated that special education benefits all students' special needs or not. Preservice and in-service teachers should be encouraged to develop inclusive education abilities. Inclusivity in education will eliminate the necessity for special education schools (Crispel & Kasperski, 2021). All teachers in training should learn inclusive education basics to achieve this (Shutaleva et al., 2023). This should improve special needs for pupils' mental health.

Gottschalk and Weise (2023) found that OECD nations had diverse inclusive education policies. This can also help the Federal Government of Nigeria ensure that "no child irrespective of his/her status is left behind," as stated in the 1975 US Education for All Handicapped Policy. Varsik (2022) added that inclusive education reduces the significant differences in enrollment, graduation, and employment outcomes between special needs children and their peers in OECD nations. Florian (2019) suggested that inclusive education has moved from special schools to regular schools. This strategy can also eliminate waste in Nigeria's education system due to labor and expense issues. Nilholm (2021) listed the lack of understanding about how to build truly inclusive classrooms, the continuation of segregated educational methods, and the various viewpoints of teachers and parents about its appropriateness as inclusive education problems. Ainscow (2020) suggested analyzing circumstances to increase education system inclusion and equity. According to FME (2015), special needs classrooms and labs are not yet technology driven. AI-mediated platforms can help Nigerian special needs classrooms become technology-driven labs.

According to Moberg et al. (2020), teachers' views of inclusive education affect its adoption and efficacy. Moberg et al. (2020) found that Finnish teachers were more concerned about their efficacy when implementing inclusion, especially when teaching students with intellectual disabilities or emotional and behavioral issues, while Japanese teachers were more optimistic about the benefits of inclusion for disabled and non-disabled students. They said Finnish schools prioritize special education's effectiveness. The study indicated that Finnish teachers were more critical than Japanese instructors of the efficacy narrative justifying inclusive education. The findings suggest that future research should examine how inclusive education advancements are implemented in different cultural and historical contexts to increase global understanding.

SimSchool is an AI-generated computer-simulated software that works in several industrialized countries (Lee & Youn Ahn, 2021). It prepares in-service and pre-service teachers for effective teaching. SimSchool can help solve educational challenges, including inclusion (Deale & Pastore, 2014). Computer simulation simplifies teaching practice goals. The simSchool lets pre-service teachers practice simulation before

entering the classroom (Ledger et al., 2025). Simulation is seen as a laboratory where preservice instructors can teach before entering the classroom (Rayner & Fluck, 2014). Students can develop and practice teaching any classroom learning profile in simSchool. Cowin et al. (2023) claimed simSchool can create 10 trillion diverse student profiles upon request. Additionally, gender, class size, ethnicity, and learning needs are changeable. Users can build over 10 trillion teaching tasks for sim classes and analyze different student performance. The platform-using teacher controls task design, sequencing, pacing, and conversational mediations. Classroom situations and student requirements are limitless. People can show sim classes, refine systems, and evaluate results as often as they want. Each reproduction of education reveals and examines viability (Ledger et al., 2025).

Aderemi (2021) states that using simSchool in preservice teachers' training increases confidence in teaching, innovation, self-viability, maintenance in education courses, instructional procedures, classroom executive methods, student adapting needs, and separation of guidance. SimSchool ensures excellent online and offline experiences for educators and students (Azukas & Gibson, 2025). The simSchool library and online tool allow users to sign in and create their own self-guided experience, but a guided methodology that carefully considers course and institutional objectives, challenges, population socioeconomics, and concerns when teachers feel the simulations are true has yielded the best results. We expect Simschools to engage students more effectively. SimSchool has the potential to yield more significant results. SimSchool can be used in teaching and learning and to help student-teachers with their training (Collum et al., 2019; Spray et al., 2024). Due to its attributes, simSchool may be used to prepare Nigerian preservice teachers for inclusive education. SimNigeria, a SimSchool adaptation, matches Nigerian education culture. This can aid in tailored lesson planning. Additionally, it prepares students to teach and actively assess pupils.

This study examined preservice teachers' reactions to artificial intelligence-driven platforms for inclusive education preparation to ensure that all students, regardless of status, have equal access to primary to tertiary education, enrollment, graduation, and employment outcomes. Raes and Depaepe (2020) argued that students' adoption of technologies is crucial to improving learning and teaching, regardless of educational reform and organizational procedures. Preservice teachers' acceptance of the AI-mediated platform for inclusive education instruction is crucial.

There are many views on how sex affects technology adoption. Female subscribers to Text4Hope, an Alberta community health service, reported higher satisfaction and improved coping after receiving text messages for 6 weeks, according to Shalaby et al. (2021). Elshaer et al. (2024) examined how sex affects ChatGPT, an AI-generated platform, adoption. The results showed that performance anticipation and social influence had a greater impact on ChatGPT usage in male students than females. The preservice teachers' receptivity to the AI-mediated platform for inclusive education may also depend on gender.

The study was designed to assess the receptiveness of preservice teachers to usability of the application of Artificial Intelligence (AI) mediated platform in teachers'

preparation for inclusive education at Obafemi Awolowo University, Ile Ife, Nigeria. The specific objectives of the study are: (i) determine students' receptiveness to usability of the application of the AI mediated platform for inclusive education. (ii) determined the influence of sex on the students' receptiveness to usability of the application of the AI mediated platform for inclusive education

2. METHOD

The experiment was post-test only. The study included all 649 Faculty of Education students who registered for Introduction to Educational Technology and Communication at Obafemi Awolowo University, Ile Ife, Nigeria, in 2022/2023. The study included 45 students who registered for the six-week AI-mediated platform for teaching practice training. Data was collected using the simSchool Survey Questionnaire (SSSQ). SSSQ was adapted from Oteyola et al. (2020). It has two parts: A and B. Portion A of the SSSQ collected student demographics, while portion B collected platform usability for inclusive education. SSSQ has closed- and open-ended questions. At Obafemi Awolowo University in Ile-Ife, Nigeria, academics in the Department of Educational Technology and Library Studies assessed the instruments' face, content, and construct validity. The instructors reviewed the questionnaire items and determined their adequacy. SSSQ was administered to 20 pre-service teachers at Obafemi Awolowo University, Ile-Ife, Nigeria, to investigate convergence between the adapted SSSQ and the Collum Simulation Based Learning Questionnaire (SBLQ). Pearson Product Moment Correlation yielded r = 0.94. The instrument was reliable and legitimate.

Table 1. Survey Questionnaire (SSSQ)

S/N	Item SSQ	Nausea (Mual)	Oculomotor (Okulomotor)	Disorientation (Disorientasi)
1.	General discomfort	O	O	
2.	Fatigue		O	
3.	Headache		O	
4.	Eyestrain		O	
5.	Difficulty focusing		O	O
6.	Increased salivation	O		
7.	Sweating	O		
8.	Nausea	O		O
9.	Difficulty concentrating	O	O	
10.	Fullness of head			O
11.	Blurred vision		O	O
12.	Dizzy (eyes open)			O
13.	Dizzy (eyes closed)			O
14.	Vertigo			O
15.	Stomach awareness	O		
16.	Burping	O		
	Total	-1	-2	-3

The study employed simNigeria, a customized version of simSchool. United States-based simSchool created simNigeria for Nigeria's education system. SimNigeria symbolized Nigerian education and classrooms. SimNigeria is a web-based classroom with "simStudents." Artificial emotional intelligence in simStudents. They smile, cry, get upset, raise their hands, demand attention, and display stress. Their responses to assignments, tone of voice, and classroom management tactics vary. SimNigeria offers authentic experiences based on cognition, emotion, social behavior, and more, evaluated by a decade of study, field testing, and therapeutic practice. Learning is real, but characters are virtual. The advanced SimNigeria artificial intelligence engine models human behavior, cognition, and emotion, making it perfect for educational research and training. Students were given consent forms and shown how to use the program. The software was used for six weeks. SSSQ was given to the sample following practical teaching. Oteyola et al. (2020) listed activities designed for pupils' stimulus material exposure.

Session 1: In the first week of the study, preservice teachers familiarized themselves with the AI-mediated platform (login and navigation), tried different collaboration options with students, and discussed the impact of these collaborations on individual students using report information. The lecturer showed how to log in to SimNigeria using a PC and projector. The lecturer walked students through account creation. Demo1–demo45 were logged into by the teacher using the customized username and password. The teacher gave platform background via simSchool overview. After letting preservice teachers create their SimClass profiles, the facilitator showed them how to use the SimNigeria gateway, design a simulation, and send it. After illustrating how to access students' profiles, communicate with them, and understand student reactions in the simulation, preservice instructors could work in pairs to create, send, and test their demos.

Session 2: Preservice instructors relaunched their demos. Guided interaction with module 1 on learning modalities. Students learned different learning styles using platform resources. Preservice instructors were shown the tasks and permitted to investigate the demos with the instructor. Preservice teachers engaged in the class. They learned to read students' body language. Class 1 was taught by preservice teachers. They had to watch the instructions. Preservice teachers used the projector to try Class 1 with a lesson plan. The exercise was followed by discussion. Evaluations of learning occurred. Note the challenges. How to engage real-life pupils for optimal learning was also highlighted.

In session 3, the instructor revisited session 1. Preservice instructors started their demos. The instructor helped students browse their profiles, assign tasks, and perform critical AI-mediated platform functions. Preservice instructors tried classes 2, 3, and 4. The teacher let pupils explore classes. Students explored classes at their own pace. Notable challenges were encountered. The exercise was followed by discussion. Questions arose. Program feedback samples were discussed. Preservice instructors were open to suggestions for improving their instruction. Preservice teachers were assigned.

Session 4: The instructor reviewed the previous week's events. While doing demos, preservice instructors shared their experiences. Preservice teachers demonstrated. The lecturers led students through student profiles. The lecture was the preservice teachers' class 1 assignment. Entire classes were given tasks. Preservice teachers saw kids learning and not learning. As they went through the Bloom taxonomy of remembering, comprehending, and applying, students' faces were observed. Students' learning temperatures and classroom management were their responsibility. Quiz-based formative evaluation was planned. Preservice teachers might freely interact with class 2. Their views and challenges were noteworthy. Learning classroom management strategies was also required. General discussion followed the session. Questions arose. Student learning preferences were discussed. Preservice teachers could make generic comments.

Session 5: The instructor discussed prior exercises with students. Student interactions with class 2, class 3, and class 4 were individual. The instructional plan was theirs. Preservice teachers were encouraged to give tasks to groups or individuals to personalize training. They watched pupils' reactions. They tested class management even when provoked. The instructor guided preservice teachers as needed. The exercise was followed by discussion. Questions and general remarks were made.

Session 6: The instructor administered SSSQ on the preservice teachers.

3. RESULTS AND DISCUSSION

Results

Research Question: What is the students' receptiveness to usability of the application of the AI mediated platform for inclusive education?

This study topic seeks to examine students' receptivity to the AI-mediated platform's usability in preservice instructors' preparation for diverse learners. Six elements assessed whether the AI-mediated platform prepared students for inclusive education. Students' receptivity to the inclusive education framework was tested using norms. Score 4 climbed substantially, score 3 increased, score 2 decreased, and score 1 decreased greatly. Unanswered items were scored 0. Each item had a maximum score of 4. The maximum score was 24 because there were 6 items. The score averaged 2.5 (3 to the nearest whole number) from $4 + 3 + 2 + 1$. Thus, interval score = $24 / 3 = 8$. Table 2 showed the students' item mean and standard deviation. Table 3 shows students' intervals of receptivity to the AI-mediated platform for inclusive education.

Table 2. Mean and standard deviation of preservice teachers' receptiveness to suitability of the AI mediated platform for inclusive education

S/N	Receptiveness of AI mediated platform to inclusive education	Mean	Std. Deviation
1.	Skills in dealing with diverse learners	3.53	0.35
2.	Knowledge about diverse learners	3.02	0.16
3.	Confidence in dealing with diverse learners	3.34	0.22
4.	Understanding of diverse learners	3.34	0.26

5.	Providing techniques when dealing with diverse learners	3.64	0.16
6.	Providing techniques when dealing with diverse learners	3.50	0.21
	Inclusive Education	21.71	2.95

Table 3. Interval table for the preservice teachers' receptiveness to the suitability of the AI mediated platform for inclusive education

Interval Scores	Overall Mean Score Image	Remark
0-8		Low
9-17		Moderate
18-26	21.71*	High

As shown in Table 2, the scale between 0-8 showed that the level of the preservice teachers' receptiveness on the suitability of the AI mediated platform for inclusive education on the overall mean image score inclusion is low, 9–17 showed that the level is moderate and the scale between 18- 26 indicated that the level of inclusion of the platform is high. The overall mean for inclusion as shown in the responses of the participants in Table 2 is 21.71. This value falls within 18–26 as shown in Table 3. It can therefore be inferred that the students' receptiveness to the suitability of the platform for inclusive education after exposure to six weeks training was high.

Hypothesis: Sex has no significant influence on the students' receptiveness to usability of the application of the AI mediated platform for inclusive education

Table 4. t-test analysis of effect of sex of the students' receptiveness to usability of the AI mediated platform for inclusive education

Sex	N	Mean	Std. Deviation	t	Df	p
Male	22	22.18	2.28	1.04	43	0.30
Female	23	21.26	3.47			

Table 4 showed that 22 males and 23 females participated in the study. The mean and standard deviation of the male participants were 22.18 and 2.28 respectively while those of the female participants were 21.26 and 3.47 respectively. t-test analysis indicated that there is no significant difference with $t_{43}=1.04$ and $p = 0.30$. Since $p > 0.05$, the hypothesis which states that sex has no significant influence on the students' receptiveness to usability of the application of the AI mediated platform for inclusive education is not rejected.

Discussion

Based on data analysis, this study indicates that student teachers exhibit a very high level of receptivity to the use of AI-mediated platforms for inclusive education. This is evidenced by an overall mean score of 21.71, which is in the highest range (18–26) on

the assessment scale. This finding indicates that the six-week training intervention was effective in building positive student perceptions. Reviewing the specific indicators in Table 1, several points stand out: (1) Students felt the platform was very helpful in providing specific techniques for dealing with diverse learners (mean: 3.64). (2) There were strong scores for the skills development aspect (3.53) and understanding of learner diversity (3.34). These high scores indicate that AI technology is viewed not merely as a technical aid but as a strategic instrument capable of increasing student teachers' confidence in navigating the complexities of inclusive classrooms.

This study also examined whether there were differences in perceptions between male and female students through a null hypothesis test. The t-test analysis results showed a p-value of 0.30, which is greater than the 0.05 significance level (p > 0.05). Thus, the null hypothesis is accepted: gender has no significant influence on how students accept or use the AI platform. This finding is important because it indicates equality of access and acceptance of technology (gender neutrality) among prospective teachers. Both males (Mean: 22.18) and females (Mean: 21.26) showed high levels of acceptance without statistically significant differences.

Building upon the findings from objective one, it is recommended that an AI-mediated platform be integrated into the training of preservice teachers for inclusive education. Through this, many of the challenges associated with the training of special needs students can be ameliorated. Other challenges encountered during teaching practice can also be reduced. These challenges include inadequate periods for teaching practice exercises, inadequate spaces for student teachers, and poor technology integration skills in classroom instruction (Ekundayo et al., 2014; Ainscow, 2020; Moberg et al., 2020; Nilholm, 2021). The use of AI-mediated platforms as envisioned by Chun et al. (2025) will provide an innovative way of students' engagement for better productivity in preservice teachers' training, such as it is done in military training, pilots in flight, and medical doctors in diagnosis through AI-generated simulations. The platform can be engaged to help preservice teachers to master different teaching strategies without placing their students at risk. The receptiveness of the students to the platform suitability can also be traced to the fact that Gen Z are digital natives. They enjoy interacting with smart equipment such as phones, televisions, and equipment. They are highly inquisitive and learn better when instructions are information technology driven (Masnawati & Kurniawan, 2023; Oteyola et al., 2023). Their attitude towards the integration of information technology-driven platforms is usually positive. This platform provides another opportunity for them to learn while having fun. The platform is another way of gamifying learning. The students that volunteered to participate in the study have high computer skills. Students with poor computer skills might not be positive about the acceptance of the platform.

The finding of hypotheses is not in agreement with Shalaby et al. (2021) and Elshaer et al. (2024). This will be a positive development for the integration of the AI-mediated platform for training the preservice teachers in inclusive education. Both males and females are highly receptive to its suitability. This could be traceable to the quality of participants in the study. Probably, the preservice teachers that participated in the study

are highly inquisitive and not only that, but they are not technophobic. Conducting the study with students who are technophobic or who are not technology savvy might produce a different result. The class also is manageable. The researcher, who is also the trainer, can provide necessary assistance to the preservice teachers when beckoned to. This may not be possible in a class of 649 students. The fact that only those that volunteered participated in the study may account for why there is no significant difference in the receptiveness of the male and female participants to the usability of the application of the platform for preparation for inclusive education.

The results of this study reinforce the urgency of integrating artificial intelligence into teacher preparation curricula. Because students demonstrated a high level of openness, educational institutions can be more confident in implementing AI tools as training tools for inclusive teaching simulations. This platform has proven to facilitate understanding of inclusive education norms and provide practical solutions for addressing student diversity in future schools.

4. CONCLUSION

The conclusions of this study indicate that pre-service teachers at Obafemi Awolowo University have a very high level of acceptance of AI-based platforms (such as simSchool) to support teaching preparation in inclusive education. Gender did not significantly influence how pre-service teachers accepted or used AI technology. Both males and females demonstrated equal readiness to adopt this technology. Furthermore, the use of AI platforms is considered an effective solution to overcome traditional barriers in Nigeria, such as the shortage of skilled teachers, poor IT infrastructure, and the limitations of special schools in handling students with disabilities.

As a recommendation, given the high enrollment of pre-service teachers, universities and teacher training institutions are advised to integrate formal AI-based training into their teaching preparation curricula. The government and other interested parties need to make improving information technology infrastructure a top priority so that AI-mediated platforms can be used in more schools, not just at the university level. In-service teachers need workshops or ongoing intensive training to make sure they are as good at using AI for inclusive education as pre-service teachers are. It is recommended to conduct further research on the direct effectiveness of using AI for the learning outcomes of students with disabilities in real inclusive classrooms (not just simulations).

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