THE USE OF ARTIFICIAL INTELLIGENCE AMONG SOCIAL STUDIES LECTURERS IN GOVERNMENT OWNED COLLEGES OF EDUCATION IN OSUN STATE

[1]OYEDIRAN Babatunde Abideen; [2]LAWAL Fatima and [3]ADELOWO Moses Adeleke

[1]Faculty of Education, Department of Arts and Social Sciences Education, University of Ilesa.

[2]Faculty of Education, Department of Arts and Social Sciences Education, Al-Hikmah University, Ilorin.

[3]School of Arts and Social Sciences, Hamzainab College of Education, Osogbo, Osun State.

Abstract

This study investigated the use of Artificial Intelligence (AI) among Social Studies lecturers in government-owned Colleges of Education in Osun State. Adopting a descriptive survey design, the study's population included all lecturers in these institutions, while the sample for the study was all the 55 Social Studies lecturers in the two Colleges who were purposively selected for the study using purposive simple random sampling techniques. A structured questionnaire, validated by four experts and pilot-tested with a reliability coefficient of 0.79, was used for data collection. Findings indicated that AI usage among Social Studies lecturers is minimal, with a grand mean score of 1.81. An independent samples t-test revealed no significant difference in AI usage between male and female lecturers (t = 1.719, p > 0.083). The study recommend that management should always organize regular training, seminar, workshop and symposium for the lecturers to promote AI adoption and it usage for effective teaching and learning.

Keywords: Artificial Intelligence, Usage, Lecturers, Colleges of Education

Introduction

Artificial Intelligence (AI) stands as an advanced technological frontier, simulating human intelligence through machine learning algorithms, neural networks and natural language processing (NLP). Its transformative impact extends across diverse industries, encompassing healthcare, finance and manufacturing. In recent years, AI has emerged as a potent force in educational management, revolutionizing the learning landscape. It contributes to enhancing the learning process, elevating student outcomes and streamlining administrative tasks. Positioned at the forefront of the fourth educational revolution, AI represents a key driver of technological progress, reshaping societies and economies globally. The study of intelligent machines and software capable of reasoning, learning, knowledge acquisition, communication, manipulation and perception defines the realm of Artificial Intelligence (Verma, 2018). Rooted in computer science, AI focuses on designing intelligent systems that emulate human behaviors associated with reasoning, language processing, perception, vision recognition and spatial processing (Ocana et al., 2019). As Strusani and Houngbonon (2019) emphasize, AI involves harnessing vast data volumes and computing power to simulate diverse human intellectual abilities,

marking a pivotal era in technological evolution.

The integration of AI into education signifies a paradigm shift, presenting opportunities for unprecedented advancements in the learning process and administrative efficiency. As AI becomes integral to educational systems, the implications for student engagement, personalized learning and resource optimization are substantial, promising a future where technology plays a central role in shaping a more adaptive and effective educational landscape.

Artificial Intelligence (AI) has become a focal point in Nigeria's educational landscape, exemplified by the establishment of the National Agency for Research in Robotics and Artificial Intelligence (NARRAI) in 2018. The government of Nigeria, recognizing the transformative potential of AI, entrusted NARRAI with the coordination and oversight of all AI and robotics research endeavors. The Minister of Science and Technology, emphasized NARRAI's commitment to collaboration with international research bodies, partnership with tertiary institutions and the facilitation of Nigeria's proficiency in leveraging AI technologies for economic growth (Ladeinde, 2019). This strategic initiative reflects the government's proactive stance in integrating AI into the national curriculum.

AI is a machine that thinks, understands languages, solves problems, diagnoses medical conditions, keeps cars on the highways, plays chess and paints impressionistic imitations of van Gogh paintings. AI is often defined as a computer system with the ability to perform tasks commonly associated with intelligent beings. Artificial intelligence is now commonly defined as a scientific discipline; as the activity that creates machines that can function appropriately and with foresight in their environment.

The word "artificial intelligence" (AI) refers to the ability of machines to perform certain intellectual tasks such as reflective thinking, perceiving, learning, finding solution to problems and making a rational decision. It was inspired by the ways in which man utilize their brains to observe, learn, think out and conclude the action to take (Saini 2022). According to Sun et al. (2021), Artificial intelligence education (AIEd) is defined in the area of education as the use of artificial intelligence. There are presently many AIEd-driven tools in secondary schools and higher institutions. The artificial intelligence (AI) software that promotes the Fourth Industrial Revolution is the engine that propels the revolution itself. Its effect can already be seen in man's homes, places of business and the political activities. Soon, it will be embodied in the shape of robots that are capable of driving automobiles, filling warehouses and providing care for children and old people (Saini 2022).

Artificial intelligence (AI), in line with Copeland (2022), is the capability of a digital computer or computer-controlled robot to carry out certain tasks usually in connection with intelligent beings. Frankenfield (2023) explained Artificial intelligence (AI) as simulation of human intelligence by software-coded heuristics. Artificial Intelligence is an aspect of science manufacturing and studying the machines targeted at stimulation of man’s intelligence processes. Alagbe et al. (2021) perceived AI as the capability of a computer or tools to mimic the abilities of the human mind – learning from examples and experience, identifying objects, knowing and reacting to language, taking decisions, tackling problems and bring these together and other abilities to carry out

certain functions a human might perform, such as attending to a hotel guest or driving a car. Ogunode (2023) described Al as system packaged with human-like intellectuals and designed in forms of computer, robot, or other tools to aid in the supply of any kind of service or works to improve social, economic and political wellbeing of the society.

As rapid advancements in machine learning (ML) increase the scope and scale of artificial intelligence deployment across all aspects of day-to-day life, and as the technology itself can learn and change on its own, multi-stakeholder collaboration is required in order to optimize accountability, transparency, privacy and impartiality in order to build trust (Saini 2022). In addition, in the words of Bhbosale et al. (2020), AI is the technology which is very helpful for human being. By using this technology, the hard work of human can be escaped. The artificial intelligence can be used in healthcare, education, in electronics, software development, pharmacies, games, engineering, communication and development. AI is based on science and technology on disciplines like information technology, biology, phycology, mathematics etc. The main advantage of artificial intelligence is, the work will be accurate and the time can be saved.

There are many investigations on AI as relating to education. For instance, Ogunode, & Olowonefa (2023) examined the problems facing development of Artificial intelligence (AI) education in Nigerian Schools. Secondary data were used in the paper. The data were collected from print and online publications. The paper concluded that Artificial intelligence (AI) can be applied in preparation of students result report, school administration, aid effective learning, effective teaching implementation (intelligent tutoring), virtual learning environment and effective data management. The paper also identified funding problems, shortage of AI teachers, inadequate infrastructure facilities (laboratories), shortage of instructional materials and lack of sound AI curriculum as problems facing development of teaching and learning of AI in Nigerian schools.

This study by Ogunode & Ukozor (2023) investigated the pivotal role of artificial intelligence (AI) in enhancing curriculum implementation within Nigerian tertiary institutions. Utilizing secondary data from diverse sources, the research underscores AI's multifaceted contributions to curriculum execution, encompassing lecture planning, instructional resource preparation, presentation, student assessment, script marking, assignment allocation, student readiness, progress monitoring and the selection of optimal teaching methodologies. The findings emphasized the indispensable impact of AI on education. Consequently, the study advocates increased government funding for tertiary institutions and the judicious deployment of AI to harness its transformative potential in curriculum implementation on a global scale. In a similar vein, Ogunode & Ejike (2023) carried out a study that explored the application of AI in curriculum Implementation of Post-Basic Education and Career Development (PBECD) schools. The paper concluded that AI aids effective school management, lesson presentation, improve learning engagement, assists in conduct of examinations, aids online teaching and learning, aids effective classroom management, aids fast marking and result preparation and aids effective school security.

A study by Ogunode, Okolie, & Chinedu (2023) examined the concept

of AI and its roles in tertiary education management. Secondary data collected from print and online publications was used in this paper. The paper concluded that AI can aids effective tertiary institution administration, effective implementation of teaching programmes, enhances effective student learning in tertiary institutions, aids effective conduct of examination in tertiary institutions, support virtual learning in tertiary institutions, improve research programme development, improves the provision of community service programme, aids effective data management, improves security in tertiary institutions and can improve the attendance of staff in tertiary institutions.

Khalid et al (2023) conducted a study that identified the impact of the use of artificial intelligence techniques in improving the outputs of higher education in Business Administrative Colleges in the universities under study that formed the research community. As for the sample, it consisted of 130 academic respondents in the universities under study. The research concluded that there is a statistically significant effect of using artificial intelligence techniques (expert systems, neural networks) in improving the outputs of higher education in Business Administrative Colleges under study. It was found that artificial intelligence technologies contribute to finding graduates who are able to carry out the process of modernization and professional development in various fields of work. These technologies also contribute to improving and developing the skills of graduates in the labour market and providing them with new skills and characteristics to perform their duties.

This study by Borbajo, Malbas, & Dacanay (2023) explored the global impact of integrating Artificial Intelligence (AI) in education and its implications for educational reform. Through a comprehensive meta-analysis of studies from Scopus indexed journals, the effects of AI on student learning outcomes, teaching practices, pedagogical approaches and educational policy were examined. The findings indicated that AI integration in the classroom has the potential to significantly enhance student learning outcomes. AI-powered adaptive learning platforms and intelligent tutoring systems provide personalized instruction and differentiated learning experiences, addressing individual student needs and learning styles. The integration of AI also facilitates data-driven decision making, enabling teachers to make informed instructional choices based on student data analysis. Furthermore, the integration of AI influences teaching practices by promoting personalized instruction, facilitating collaborative learning as well as supporting the assessment and feedback processes. AI technologies enable teachers to adopt student-centered instructional approaches, promote collaboration among students, and provide timely and objective feedback to enhance student learning and growth. The implications of integrating AI in education for educational policy and reform on a global scale were also discussed. It calls for a paradigm shift in educational systems, redefining curriculum, learning outcomes and assessment practices. Policy guidelines should address ethical considerations, ensure equitable access to AI technologies and prioritize comprehensive teacher training and professional development.

A study of Zarrouqi and Falta (2020) was premised on the role of artificial intelligence in improving the quality of higher education. Results from the study showed that academic programs that rely on artificial

intelligence increase opportunities for self-education for students, and make them more effective in the educational process and not just been mere recipients of information from the professor in the lectures given especially in the traditional classes.

A study by Ogunode, Agbade, & Bassey, (2023) assessed the barriers to effective usage of artificial intelligence in tertiary institutions in North-Central, Nigeria. The study identified the barriers to effective usage of artificial intelligence in Nigerian tertiary institutions particularly in North-Central geopolitical zone. Hence, the study was guided by one objective and one research question. Survey research design was used for the study. The result of the study revealed that poor funding, high cost of artificial intelligence maintenances, high cost of artificial intelligence facilities, unstable internet services, unstable electricity, low level of digital literacy among staff, low level of digital literacy among students and shortage of artificial intelligence personnel are some of the barriers to effective usage of artificial intelligence in tertiary institutions in North Central, Nigeria.

Consequently, there is a growing recognition that curriculum innovation is imperative for bridging the gap between outdated educational practices and the evolving needs of contemporary learners. Recognizing the need for education to transcend spatial constraints, the integration of AI into curriculum development emerges as a vital imperative. AI, characterized by machine learning algorithms, neural networks and natural language processing, represents an advanced technological paradigm that simulates human intelligence processes. In the context of education, AI holds the promise of revolutionizing learning experiences. Although the application of AI is still in its nascent stages in developing countries like Nigeria, its potential has already manifested in personalized learning experiences, real-time feedback mechanism, and early detection of learning obstacles in more advanced nations. In this regard, the paper emphasizes the critical role of AI in aligning educational practices with the demands of a rapidly evolving digital era, more especially in an innovative discipline such as Social Studies Education.

Social Studies as a discipline in Nigeria's Upper Basic Schools places a high premium on the development of long-term skills necessary for socializing and humanizing each student. Social Studies curricula should be developed, structured, and organized in such a way that they reflect the requirements of current eras by being open-ended, adaptable and dynamic in nature. It is to include all pertinent subjects in order to accomplish the noble goals of Social Studies as a discipline and of education in general. Mezieobi, as cited in Edinyang (2018), viewed Social Studies as a necessary course of instruction that aims to equip students with the perception, values, character and necessary skills for survival in an ever-changing society that is constantly changing in terms of information, values, and awareness (Nwaubani, Ottoh-Offfong, Usulor and Okeke, 2016).

Effective Social Studies curriculum implementation is focused on creating a well-designed and structured curriculum. It is the process through which the curriculum's contents are transformed into real-world activities. According to Nzewi, Okpara, and Akudolu (2015), Social Studies curriculum implementation is often carried out in the classroom via the collaborative efforts of the teacher, students and other stakeholders. The teacher is required to use appropriate

teaching methods and instructional resources to assist students' learning while implementing the Social Studies curriculum as teaching topics. If genuine, authentic and meaningful learning is to occur, learners must be positively and energetically engaged in the process of interacting with learning materials and activities. No discussion of Social Studies curriculum is complete without making recommendations on how to apply it effectively.

Methods adopted by teachers may promote or hinder learning. Effective strategies tend to inspire the interest of learners in the subject under consideration and provide the foundation for the achievement of desired goals. On the other hand, ineffective methodologies and strategies may dissuade learners' efforts and curiosity if they are not managed appropriately. Similarly, studies indicated that most Social Science subject teachers are unwilling to adapt to utilization of innovative instructional strategies even when they are aware of them. To buttress this, Fatokun, Jimoh and Enefure (2019) stated that, many innovative teaching and learning strategies are already in existence but many teachers do not utilize them when teaching, either because they are not well versed on how to use them or as a result of their unwillingness to adopt these new approaches.

It appears that many of the Social Studies instructors in Nigerian schools are more inclined to the use of traditional teaching techniques. Onyilofor (2013) noted that many instructors who teach Social Studies rely heavily on the traditional manner of teaching which is not solemnly acceptable in the 21st century teaching and learning process as the teachers are always advised to make their teaching activities based and learner-centred approach with the use of technology devices that align with global best practices. Activities based learner-centered methods are means of facilitating learning with the learners being active participants in the learning environment as against to the passivity of learners in the teacher-centered oriented methods. In the use of these methods, teachers consider the learners' needs and interests by inspiring them to contribute to the classroom activities (Al-Murshidi, 2014). The best way to make learners active in the classroom could be through the use of technology in teaching. The worldwide developments in technology, economy, society, culture and politics influences the development of human communities, especially those in emerging societies such as Nigeria, in a varied way.

The curriculum of Social Studies was designed to provide students with the skills and talents they require to continue their life in society (Nigerian Educational Research and Development Council, NERDC, 2013).

Jemialu (2018) stressed the effective implementation of the Social Studies curriculum to educational efficiency. It is considered a manifestation of material knowledge, teaching skills, the construction of the ideal learning environment and a kind of class transaction between teachers and students which contributes to the development of pupil knowledge. It reflects the achievement of every learning objective or most of the students and the removal of cognitive differences. The technique used by the teachers in Social Studies, according to Akeke and Aluko (2017), may have a significant impact on learners' performance level. Teaching effectiveness can be seen as a teacher's ability to be intellectually challenging, motivating students, setting high standards, approachable, presenting

materials well, making the Social Studies class interesting, encouraging self-initiated learning and having good elocutionary skills that triggers learning and produces useful outcomes.

According to Abidoye and Afolabi (2013), they both lamented that the teaching of the subject is characterized by traditional teaching methods, despite the commendable objectives and benefits of Social Studies in the school curriculum which sometimes gives rise to inefficient study and poor attitude towards the subject. Oluwagbohunmi and Abdu-raheem (2014) emphasized that ancient teaching techniques must be rejected and new approaches that are active and guarantee that apprentices participate actively in order to accomplish the learning goals must be embraced. Adesanya and Adesina (2014) in a recent study pointed out that only suitable teaching techniques and approaches can be used for meaningful learning of fundamental ideas and processes in the instructional context especially in this 21st century. The failure to use the different techniques of teaching in Social Studies Education may render teaching and learning inefficient. It seems that many instructors in Social Studies in Nigeria rely heavily on the lecture teaching technique. In Onyilofor (2013), Ogundare in Okam (2011), Mezieobi, Fubara and Mezieobi demonstrated that many Professors of Social Studies are mostly using the lecture technique of teaching. Several researches have shown that both traditional and learner-centered approaches combined give the best way of teaching (Oyibe & Nnamani, 2014; Sawant & Rizvi, 2015; Adediran, Orukotan, & Adeyanju, 2015).

Despite the fact that the use of Artificial Intelligence tools and technology in tertiary education Social Studies classrooms has the potential to transform the methods of teaching and learning, however having accessibility, engagement and effective use has been a great challenge; its introduction into Nigeria's educational system has always been a difficult task on the part of both the teachers, students, government and parents. The inadequate infrastructure, such as unstable electricity supply and frequently interrupted internet support services, affect the use of Artificial Intelligence tools in schools, especially in rural areas. Also, lack of fund limits the availability of necessary technologies as well as training the educators on the uses of AI, while refusing to change from the old and arcade system of teaching among the teachers which stems from a lack of awareness and understanding of AI's benefits. All these poses challenges to the effective implementation of Artificial Intelligence as a driven tool to the teaching and learning of Social Studies among Colleges of Education in Osun state.

Research Objectives

This paper aims to investigate the level of usage of Artificial Intelligence among Social Studies lecturers in government-owned Colleges of Education in Osun State.

Research Question

1. What is the level at which Social Studies lecturers uses artificial intelligence in teaching in government-owned Colleges of Education in Osun State?

Research Hypotheses

The research hypothesis was formulated and tested at 0.05 level of significance:

1. There is no significant difference in the usage of artificial intelligence among Social Studies lecturers in government-owned colleges of education in Osun state

2. There is no significant difference in the mean response of male and female Social Studies lecturers on the uses of artificial intelligence in teaching.

Methodology

The research design adopted for this study is descriptive survey research design. The population for the study comprised all the lecturers in government-owned Colleges of Education in Osun State while the sample for the study consisted of all the 55 Social Studies Education lecturers in Osun State College of Education, Ila-Orangun and Federal College of Education, Iwo, Osun state who were purposively selected for the study using purposive random sampling techniques. A structured questionnaire developed by the researcher titled Teachers' Questionnaire on the Impact of Artificial Intelligence on the Implementation of Junior Schools Social Studies Curriculum (TQIAIISSC) consisting of 30 structured items which are based on four points Likert-rating scales of U (Used = 2), and NU (Not Used = 1) was used for data collection. The face and content validity of the instrument were ensured by experts in English Language, Social Studies and Civic Education as well as Tests and Measurement Department all in the University of Ilesa, Osun State. All the corrections, suggestions and modifications made were effected before it was finally used for the study. To determine the internal consistency of the questionnaire, a pilot test was conducted on 30 Social Studies Education lecturers in government-owned Colleges of Education in Ondo State. The data collected was subjected to statistical analysis using Cronbach Alpha Correlation statistical tool, and a reliability coefficient of 0.83 was obtained. Hence, the instrument was considered reliable to collect the needed data.

Result Discussion

Research Question one: What is the level at which Social Studies lecturers uses artificial intelligence in teaching in government-owned Colleges of Education in Osun State?

Table 1

S/N	Items on the Level of Utilization of Artificial Intelligence	N	X	Std.	Decision
1	I use presentation translator to present learning content both orally and visually to students, to provide them with customized materials and personalized feedback to my students.	55	1.74	0.89	Not Used
2	Khan Academy is always used to identify gaps in my student's understanding of a concept and also follow up instruction to meet the needs of every students.	55	1.54	0.75	Not Used
3	I use AI copilot application to draw my lesson note for good presentation before my students for simplicity and better understanding.	55	1.93	0.85	Not Used
4	I make use of grammarly premium to automate proofreading, identify and correct errors in students writing while preventing plagiarism.	55	2.26	1.07	Not Used
5	AI-powered cameras are used to track students' movements and monitor students' facial expressions automating examination supervision.	55	1.50	0.81	Not Used
6	I made a preparation for a robots to provide customized answers in response to learners' messages, grade their performance, and provide tips on what area learners need to improve.	55	1.40	0.62	Not Used
7	AI software such as Turnitin are used to assess, provide feedback to students and ascertain their level of plagiarism while writing assignment or projects.	55	2.69	1.07	Used
8	I use AI gemini application to draw my lesson note for good presentation before my students for simplicity and better understanding.	55	1.90	0.71	Not Used
9	I introduced Google scholar to my student for use for quick accessibility of main journals, disciplines and authors that publish in their area of interest, particularly in social studies.	55	3.01	0.88	Used
10	I use Smart board for my teachings to promote class discussions and improve students' experiences and presentation of skills in social studies classes.	55	1.84	0.83	Not Used
11	I make use of kahoot, a game based learning platform for the purpose of evaluating my students before and after the lesson.	55	1.41	0.72	Not Used
12	I make use of Gooru, an AI learning platform to find, remix and share collections of web resources with my students Intelligent tutoring system to provide personalized learning to student based on their learning style.	55	1.52	0.74	Not Used
13	I am used to AI writing assistants such as Grammarly to improve my students' writing skills while in Social Studies class.	55	2.10	1.01	Not Used
14	AI learning platforms such as goggle is used in my classroom to enhance lecturers and learners interaction in Social Studies.	55	1.89	0.95	Not Used
15	I make use of AI chatgpt application to prepare lessons for my students for simplicity and better understanding.	55	1.76	0.84	Not Used
16	AI learning platform like Netex learning is encouraged among my students to create customized students learning materials and incorporate interactive elements such as audio, video and self assessment into the learning material.	55	1.50	0.72	Not Used
17	Blendspace is always used to create digital lessons or use free lessons and activities created by other educators and assess my students' performance.	55	1.58	0.77	Not Used

18	I use padlet to enhance collaborative learning among my students, gauge my students understanding of a topic or concept.	55	1.56	0.79	Not Used
19	Automated facial recognition like biometric face scanning surveillance are always in use to automate attendance roll marking in class and during examination.	55	1.54	0.73	Not Used
	Grand Mean			**1.81**	**Not Used**

Table 1 presents colleges of education Social Studies lecturers level of usage of Artificial Intelligence for teaching and learning. From the above table, item 1, 2, 3, 4, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19 had mean rating within 1.3 – 2.37 (NU) which is high and indicate that Social Studies lecturers in the colleges of education does not used these items. While, item 5 and 7 had mean rating within 2.4 – 3.51 (U) meaning that colleges of education Social Studies lecturers used these items and which is very low. The table further revealed that the grand mean score response to the 19 items is 1.81 which is low and falls under the mean rating of Not Used. This implies that colleges of education Social Studies lecturers does not used AI for teaching and learning.

Hypothesis one: There is no significant difference in the usage of artificial intelligence among Social Studies lecturers in government-owned colleges of education in Osun state

Table 3

S/N	Items on the Level of Utilization of Artificial Intelligence	N	X	Std.	Decision
1	I use presentation translator to present learning content both orally and visually to students, to provide them with customized materials and personalized feedback to my students.	55	1.74	0.89	Not Used
2	Khan Academy is always used to identify gaps in my student's understanding of a concept and also follow up instruction to meet the needs of every students.	55	1.54	0.75	Not Used
3	I use AI copilot application to draw my lesson note for good presentation before my students for simplicity and better understanding.	55	1.93	0.85	Not Used
4	I make use of grammarly premium to automate proofreading, identify and correct errors in students writing while preventing plagiarism.	55	2.26	1.07	Not Used
5	AI-powered cameras are used to track students' movements and monitor students' facial expressions automating examination supervision.	55	1.50	0.81	Not Used
6	I made a preparation for a robots to provide customized answers in response to learners' messages, grade their performance, and provide tips on what area learners need to improve.	55	1.40	0.62	Not Used
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19	Automated facial recognition like biometric face scanning surveillance are always in use to automate attendance roll marking in class and during examination.	55	1.54	0.73	Not Used
	Grand Mean			**1.81**	**Not Used**

In testing hypothesis one, the mean response of colleges of education lecturers on the level of usage of Artificial Intelligence in teaching social studies was analysed using independent samples t-test as presented in Table 3

Table 3: Independent samples t-test of colleges of education lecturers on the level of usage of Artificial Intelligence for teaching social studies

Table 3 presents colleges of education social studies lecturers level of usage of Artificial Intelligence for teaching and learning. From the above table, item 1, 2, 3, 4, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17,18 and 19 had mean rating within 1.3 – 2.37 (NU) which is high and indicate that Social Studies

lecturers in the colleges of education does not used these items. While, item 5 and 7 had mean rating within 2.4 – 3.51 (U) meaning that colleges of education Social Studies lecturers used these items which is low. The table further revealed that the grand mean score response to the 19 items is 1.81 which is low falls under the mean rating of Not Used. This implies that there is no significant usage of artificial intelligence among Social Studies lecturers in government-owned colleges of education in Osun state.

Hypothesis two: There is no significant difference in the mean response of male and female Social Studies lecturers on the uses of artificial intelligence in teaching.

Table 4

Gender	N	Diff	$\bar{X}$	Std. Deviation	t-value	p-value
Male	30	42.46	13.802	257	1.719	0.083
Female	25	47.52	17.493			

Table 4: Independent samples t-test of male and female colleges of education lecturers on the level of usage of Artificial Intelligence for teaching social studies.

Table 4 shows the independent samples t-test results of male and female colleges of education lecturers level of usage of Artificial Intelligence for teaching of social studies. From the above, t = 1.719,

p = 0.083. The p-value is greater than the level of significance, hence hypothesis tow was not rejected. This implies that there is no significant difference in the mean response of male and female lecturers level of usage of Artificial Intelligence for teaching in colleges of education.

Discussion of Findings

This study revealed that colleges of education lecturers does not used AI for teaching and learning of social studies. This finding coroborates with the findings of Onasanya et al. (2011) who reported that science teachers' level of ICT utilisation was very low. Similarly, Agbatogun (2013) revealed that the most faculty members were yet to utilise emerging digital technologies for teaching and learning. Olanrewaju et al. (2014) discovered that lecturers of Colleges of Education did not use Educational Resources. Edumadze et al. (2014) revealed that lecturers use of technology for instructional delivery was low. Also, Amuchie (2015) reported a very low usage of ICT resources in teaching and learning in secondary schools.

Furthermore, Yushau and Nannim (2020) study revealed that lecturers extent of utilisation of ICT facilities was low. Onah et al. (2020) study discovered that the utilisation of ICT for teaching and learning Cultural Creative Arts in secondary schools was poor. In addition, the findings of Fakomogbon et al. (2014) revealed that lecturers overall usage of Instructional Media (IM) was low. The finding contradicts that of Comia (2017) who reported that the utilisation of educational innovations and was moderate. Similarly, Alba and Trani (2018) revealed that teachers often used ICT in their teaching, assessment and administrative tasks.

Result of the study also showed that male and female lecturers in the colleges of education does not used Artificial Intelligence for teaching and learning of social studies which is in line with the finding of Fakomogbon

et al. (2014) who revealed no significant difference in the awareness of male and female lecturers on Instructional Media in the state-owned COE. Alba and Trani (2018) study also revealed no significant difference in the extent of ICT usage by male and female teachers. However, the findings of Gbadamosi (2013) reported that female Biology teachers utilised innovative teaching strategies than the male Biology teachers. Onasanya et al. (2011) also reported that the male science teachers utilised ICT more than their female counterparts. Similarly, Sivathaasan et al. (2013) revealed that male lecturers used Electronic Information Resources than female lecturers. In addition, Mahdi and Al-Dera (2013) result indicated that male teachers' usage of ICT was higher than their female counterparts. Moreover, Nannim (2018) result also showed that male lecturers slightly had higher mean rating than their female counterparts on the extent of utilisation of ICT teaching facilities.

Recommendations

Based on the findings of this study, the following recommendations are made:

- The college management should regularly organise professional training, workshop, seminar and retreat for lecturers on how to use AI to teach effectively.
- College of Education management should always come up with workable policies on lecturers usage of AI and strictly follow up their level of compliance with such policies.
- Management of college of education should also endeavor to provide an enabling and comfortable environment for the lecturers that can support the use of AI in achieving sound and effective teaching learning process.
- Government should increase funding of Colleges of Education for the development of artificial intelligence in all public Colleges of Education across the country.

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