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Influence of Technology on the Teaching of Social Studies among Secondary School Teachers in Ibadan South Area, Oyo State, Nigeria

Yejide Adepeju IBIKUNLE, PhD
Department of Art and Education, Lead City University, Ibadan, Nigeria
ibikunleyejide@gmail.com

Olawale Ayoola OGUNSANMI, PhD
Department of Educational Foundations and Counselling, Obafemi Awolowo University, Ile-Ife, Nigeria
olawaleogunsanmi82@gmail.com

Oyeronke Christiana PARAMOLE, PhD
Department of Educational Foundations and Counselling, Obafemi Awolowo University, Ile-Ife, Nigeria
olaronkus27@gmail.com

Abstract

Technology has revolutionized education by facilitating the adoption of innovative, student-centered teaching methods that enhance instructional effectiveness. The study investigated the use and impact of technology in Social Studies education in Ibadan South, Oyo State. Employing a descriptive survey design, it sampled 50 Social Studies teachers from 25 public Junior Secondary Schools using simple random sampling. Data was collected through a self-developed questionnaire titled "Influence of Technology on the Teaching of Social Studies Questionnaire (ITTSSQ)" and analysed with frequency counts, percentages, and mean statistics. The results revealed a moderate level of technological integration (mean = 2.45, S.D = 1.48), with teachers commonly using online resources (90%), interactive whiteboards (74%), educational software (50%), and online collaboration tools (54%). Technology significantly improved teaching quality and student outcomes, with (mean = 3.07, SD = 1.05) above the 2.5 criterion. However, challenges in integrating technology were prevalent (mean = 3.16, SD = 1.05), as reflected by high mean scores for challenge-related items. The study concluded that while technology adoption is moderate, its positive effects on teaching and learning are evident. It recommended improved access to technological infrastructure to enhance instructional effectiveness.

Keywords: Technology, Integration, Social Studies, Teachers, Student Learning Outcome

Introduction

Technology has revolutionized education, becoming essential for transformative learning experiences by enabling innovative, student-centered teaching methods tailored to diverse learning styles. Tools such as interactive software, multimedia, and internet resources enhance teaching effectiveness and student engagement, making learning more impactful and accessible (Kaylayan, 2024; Hyeung, Micheal, & Junfeng, 2019). Technology expands learning opportunities beyond classrooms, fostering lifelong learning and self-directed study. Studies confirm that technology fosters collaborative learning, and critical thinking, and connects theoretical concepts to practical applications (Akujieze, 2024). It also facilitates advanced teaching strategies and energizes learning processes through digital tools (Johnson et al., 2013; Kay, 2024). As a result, researchers, educators, and policymakers increasingly prioritize technology integration, recognizing its potential to improve educational practices and outcomes.

While technology offers immense benefits in education, its integration in Nigerian schools faces critical challenges. Key issues include inadequate infrastructure, such as unreliable electricity, poor internet connectivity, and a lack of modern computer laboratories, which hinder the implementation of digital learning tools (Luise, 2023). Additionally, the high cost of devices limits access for both students and teachers, exacerbating inequalities and reducing opportunities for engagement with digital resources. Another major challenge is insufficient teacher training in technology use. Without adequate professional development, even available tools are underutilized, impeding effective teaching and learning (Luise, 2023). These barriers create a significant gap between the potential advantages of educational technology and its actual adoption in Nigerian schools.

There is a significant disparity in access to and usage of technology between public and private schools in Nigeria. Yusuf and Balogun (2011), as cited in Alabi and Ijaiya (2022), indicate that public educational institutions often struggle with issues such as outdated technology and insufficient internet access, in contrast to private schools, which typically possess enhanced resources and facilities. This digital divide

exacerbates educational inequalities. In Oyo State, initiatives to enhance technological infrastructure and teacher training have been launched, including programs providing computers, internet access, and other digital tools (Oyo State Ministry of Education, 2019). However, the effectiveness of these efforts varies across regions, schools, and subjects. Social Studies, a key subject in Nigerian education, plays a vital role in fostering civic competence and social understanding. Historically reliant on lecture-based approaches and rote memorization, its teaching methods often lack engagement and critical thinking promotion (Johan, 2015). Effective teaching requires integrating digital resources, promoting active learning, and employing innovative strategies to align with 21st-century educational goals (Oyibe, 2015). The integration of technology in social studies education has the potential to revolutionize traditional teaching methods, fostering improved student engagement, motivation, and learning outcomes. By incorporating interactive simulations, virtual field trips, and digital storytelling, teachers can make social studies content more relatable and engaging, ultimately supporting the development of higher-order thinking skills such as analysis, evaluation, and creation (Ersoy, 2015; Francis, 2017). Understanding the impact of technology on teaching effectiveness and student outcomes is essential for devising strategies to optimize educational practices.

However, despite its benefits, technology integration in classrooms faces significant challenges, particularly in the Ibadan South area of Oyo State, Nigeria. While the region's schools reflect broader national efforts to incorporate technology, issues such as inadequate training for educators, a lack of necessary tools, and poor infrastructure hinder progress. Many teachers report insufficient professional development in both pedagogy and technology, which limits their ability to integrate digital tools effectively into lesson plans (Ertner, 2010; Sakin, 2017). Additionally, disparities in technological resources such as unreliable internet, a shortage of computers, and high costs of equipment due to fluctuating exchange rates exacerbate these challenges, particularly in public schools (Nathaniel, 2021; Lawal, 2014). Efforts by the Oyo State Ministry of Education to improve technological infrastructure, including providing computers and internet access, have seen mixed results due to disparities in implementation and access (Oyo State Ministry of Education, 2019). These challenges underscore the need to address the

barriers preventing the effective use of technology in social studies instruction.

This study aims to investigate and optimize the influence of technology on Social Studies teaching among secondary school teachers in Ibadan South, Oyo State. By focusing on this region's unique context, the study seeks to fill a research gap and provide insights into the strategies necessary to enhance teaching practices and learning outcomes through effective technology integration. To achieve the aim of the study the following research questions were raised

Research Questions

i. What is the current level of technological integration in teaching Social Studies among secondary school teachers in the study area?
ii. What types of technology are commonly used and their frequency of use in teaching Social Studies?
iii. To what extent does technology influence the teaching effectiveness of Social Studies and student outcomes in the study area?
iv. What are the challenges that secondary school teachers encounter when integrating technology into Social Studies instruction in the study area?

Methodology

The study employed the descriptive survey research design. This is because the research design enables the researchers to gather relatively limited data from relatively large cases. The population used for the study comprised all Social Studies teachers in Public Secondary in Ibadan South local government of Oyo State. The sample size for the study consisted of twenty (50) Social Studies teachers selected using the simple random sampling technique from 25 public Junior Secondary Schools in Ibadan South local government, Oyo State. The research instrument for data collection was a self-developed questionnaire titled “Influence of Technology on the Teaching of Social Studies Questionnaire (ITTSSQ).” The questionnaire is divided into five sections. Section A consists of the respondents' demographic data while section B consists of statements to elicit information on the level of technological integration in teaching social studies among secondary school teachers. Section C consists of statements to elicit information on

the types of technology that are commonly used and their frequency of use. Section D consists of a statement to elicit information on the influence of technology on social studies teaching effectiveness and student outcomes. Section E consists of statements to elicit information on secondary school teachers' challenges when integrating technology into social studies instruction. The response option was a Likert-type scale of measurement Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). The data collected from the study was analysed using frequency counts, percentages, and mean statistics to address the research questions.

Results

Research Question One: What is the current level of technological integration in teaching social studies among secondary school teachers in the study area?

To address this research question, data collected using a 10-item instrument on technological integration in teaching social studies were scored using a four-point Likert scale. Responses of "Strongly Agree" (SA) were assigned a score of '4', "Agree" (A) was assigned '3', "Disagree" (D) was assigned '2', and "Strongly Disagree" (SD) was assigned '1'. These 10 items were used to measure the level of technological integration in teaching social studies among secondary school teachers in Ibadan South in Oyo State as presented in Table 1.

Table 1: Mean and Standard Deviation of the Level of Technological Integration

STATEMENTS	SA	A	D	SD	Mean	Std. Dev
			Frequency = 50			
I frequently use digital resources such as interactive maps in my social studies lessons	21	9	8	12	2.56	1.79
I don't utilise interactive whiteboards to present lessons and engage students in social studies classes	7	10	13	30	2.48	1.73
I actively seek out new technology resources to enhance my teaching.	10	5	18	17	2.50	0.93

I incorporate educational software designed for social studies to enhance my teaching and students' learning experiences	4	11	19	16	2.06	1.04
I effectively use multimedia tools (e.g., PowerPoint presentations) in my Social Studies instruction.	8	27	7	8	2.70	0.97
I don't know how to conduct assessments and quizzes online to evaluate my students on social studies topics.	12	12	14	12	2.48	0.93
I have received adequate training on how to integrate technology effectively in my social studies teaching.	7	13	11	14	2.06	0.90
I integrate social media platforms (e.g., Twitter, Facebook) to discuss current events and historical topics relevant to social studies	11	6	18	15	2.62	1.78
I feel confident in my ability to use technology to enhance my teaching of social studies	19	10	9	12	2.72	1.50
I assess students' technology skills and provide support as needed in my Social Studies lessons	11	7	22	10	2.38	1.39
Grand Mean					**2.45**	**1.48**

Note: SA Strongly Agreed, A = Agree, D = Disagree, SD = Strongly Disagree, Std. Dev. = Standard Deviation

Table 1 presents the frequency of response options, mean scores, and standard deviations for all items. The results show that 5 items have mean scores below the criterion mean of 2.5, while 5 items have mean scores of 2.5 and above. Additionally, the grand average for mean and standard deviation is 2.45 and 1.48, respectively. These results indicate a moderate level of technological integration in teaching social studies among secondary school teachers in Ibadan South in Oyo State.

Research Question Two: What types of technology are commonly used and their frequency of use in teaching social studies?

To answer the question, the frequency and percentage of each type of technology and the frequency of their use by teachers were calculated and presented in Figures 1 and 2 respectively.

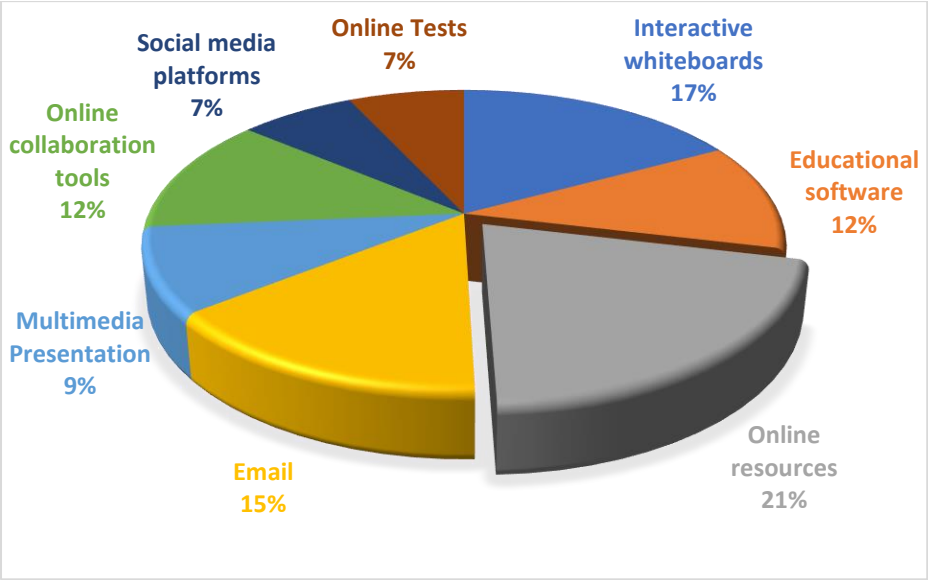

Figure 1: Percentage of Commonly Used Technology

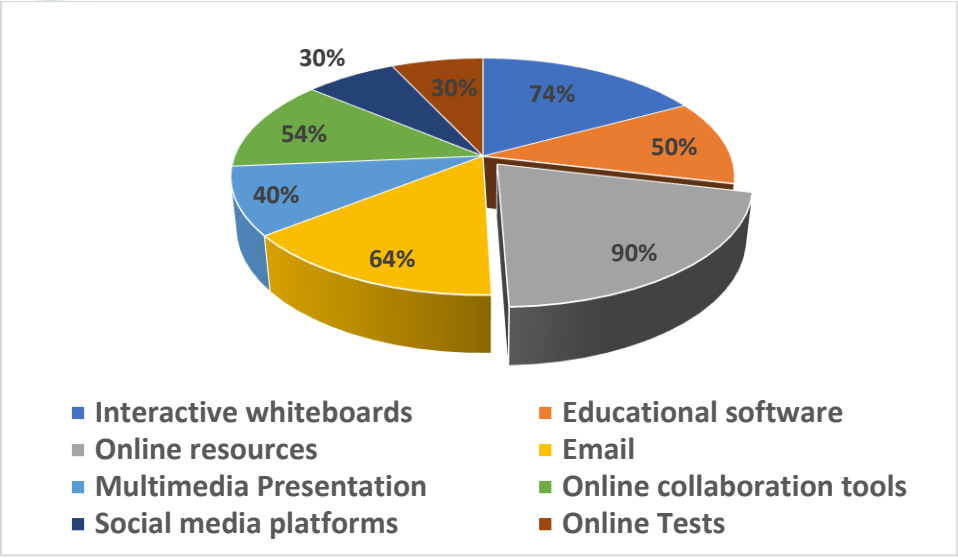

Figure 2: Percentage of Teachers Using Each Type of Technology

Figure 1 shows the types of technology used by secondary school teachers in teaching social studies, along with the number and percentage of teachers utilising each type as shown in Figure 2. Online resources are the most widely used, with 90% of teachers incorporating them into their teaching. Interactive whiteboards follow closely, utilized by 74% of teachers, while email, used by 64%, remains an important tool for communication and sharing materials. Online collaboration tools and educational software are moderately integrated, with 54% and 50% adoption rates, respectively. Multimedia presentations are employed by 40% of teachers. However, social media platforms and online tests are the least utilized, with only 30% of teachers using them.

Research Question Three: To what extent does technology influence the teaching effectiveness of social studies and student outcomes in the study area?

Table 2: Mean and Standard Deviation of the extent of Influence of Technology

STATEMENTS	SA	A	D	SD	Mean	Std. Dev
			Frequency = 50			
Technology with the use of Internet facilities enables effective teaching and learning of Social Studies in schools	21	19	8	2	3.18	0.79
Technology like computers, projectors, slides, etc. complicates Social Studies teaching.	37	10	3	0	3.62	1.23
Application of technology in teaching and learning of Social Studies has improved the performance of students	20	10	13	7	2.86	0.93
E-learning has made teaching and learning of Social Studies interesting	24	11	9	6	3.06	1.04
The use of technology has enhanced student engagement in social studies lessons	28	12	7	3	3.30	0.89
email as a tool for communicating with students and providing feedback on their assignments is not effective	14	12	11	13	2.54	0.93
Technology in social studies class improved students' critical thinking skills	17	23	7	3	2.94	0.90
technology has helped students retain information learned in social studies?	21	15	7	7	3.00	1.18
Technology has facilitated better collaboration among students in social studies	19	20	9	2	3.12	1.30
Technology has made the teaching of social studies effective	21	17	7	5	3.08	1.39
Grand Mean					**3.07**	**1.05**

Note: SA= Strongly Agreed, A = Agree, D = Disagree, SD = Strongly Disagree, Std. Dev. = Standard Deviation

Table 2 presents the frequency of response options, mean, and standard deviation for all items measuring the influence of technology on teaching effectiveness and student outcomes in Social Studies. The results indicate that item 1 has a mean score of 3.18, which exceeds the criterion mean of 2.5. This suggests that respondents acknowledge the effectiveness of Internet facilities in enhancing the teaching of Social Studies in schools. Similarly, all other items have mean scores above the criterion mean of 2.5. Additionally, the grand average for mean and standard deviation is 3.07 and 1.05, respectively implying that the application of technology in teaching and learning Social Studies has significantly improved the quality of instruction and student learning outcomes.

Research Question Four: What are the challenges that secondary school teachers encounter when integrating technology into social studies instruction in the study area?

Table 3: Mean and Standard Deviation of the Challenges Facing Technology Integration

STATEMENTS	SA	A	D	SD	Mean	Std. Dev
			Frequency = 50			
Availability of technical support for technology integration in the school.	16	12	8	15	2.62	1.07
I face difficulties in accessing adequate technological resources (e.g., computers, tablets, projectors) for my social studies classes	37	12	0	0	3.68	0.93
There are relevant and sufficient training or professional development opportunities for integrating technology into your social studies teaching	30	10	3	7	3.20	1.13
No reliable internet connectivity to use online resources	24	11	9	6	3.08	1.04

time constraints prevent me from effectively integrating technology into the social studies curriculum	25	18	2	5	3.26	1.29
lack of administrative support or encouragement affects my ability to integrate technology into your social studies teaching	28	12	5	5	3.16	1.03
Grand Mean					**3.16**	**1.05**

Note: SA= Strongly Agreed, A = Agree, D = Disagree, SD = Strongly Disagree, Std. Dev. = Standard Deviation

Table 3 shows the frequency of the response options, mean, and standard deviation for all the items. These 6 items show the challenges facing the effective integration of technology into teaching social studies in secondary schools. these factors include inadequate access to technological resources and support, inadequate training and professional development, no reliable internet connectivity, time constraints, and financial constraints. The results show that all items have their mean scores above the criterion mean of 2.5. This implies that all the items were accepted as secondary school teachers' challenges when integrating technology into social studies instruction in the study area.

Discussion of Findings

The findings highlight a moderate level of technology integration in social studies instruction among secondary school teachers in Ibadan South, Oyo State. While certain technologies, such as online resources and interactive whiteboards, are widely adopted and effectively enhance teaching and learning, others, including social media platforms and online tests, are underutilized due to barriers like privacy concerns and distractions. This aligns with prior research by Ibikunle, Ogunsanmi and Lijofi (2024), indicating that while technology is used, it is not consistently or fully integrated into teaching practices. The varied adoption rates suggest that teachers have diverse experiences with technology, and some tools are used more effectively than others (Aina et al., 2019). High usage of online resources underscores their role in

modern education, offering vast information and interactive content. Similarly, interactive whiteboards and educational software facilitate engaging lessons and adaptive learning. Email remains crucial for communication, while multimedia presentations and collaboration tools support visual learning and teamwork. However, the low integration of social media platforms and online tests indicates the need for strategies to address these challenges and maximize their potential. Respondents generally perceive technology as having a positive impact on teaching effectiveness and student outcomes in social studies, supported by high mean scores across evaluated items. This consensus highlights a shared acknowledgment of technology's benefits, emphasizing its value in enhancing educational practices. However, the study also identifies significant challenges, including inadequate access to resources, insufficient training, unreliable internet connectivity, and financial constraints. These challenges, recognized by all respondents, underscore the need for a comprehensive approach to improving technology integration. Efforts should focus on enhancing resources, infrastructure, and professional development to ensure that technology can be fully leveraged in social studies instruction. The finding is consistent with a previous study by Nathaniel, Philip-kpae and Dickson (2019) that highlights similar barriers and the need for targeted interventions to address them.

Conclusion

There is a moderate adoption of technology in teaching Social Studies, however, its positive impact on instruction quality and student outcomes is clear. Also, addressing the identified challenges is crucial for more effective and widespread integration of technology in education. This will enable secondary school teachers to fully leverage technological tools, thereby enriching the educational experience and outcomes for students in Social Studies.

Recommendations

Based on the findings of this research, the following recommendations are hereby made.

i. All schools should be adequately equipped with the necessary technological infrastructure to support effective teaching and learning.
ii. Technology integration should be a core component of teacher professional development to ensure that educators are well-prepared to incorporate digital tools into their teaching practices.
iii. Increased funding from government and private sectors should be advocated to support the integration of technology into education.
iv. Policies that support and encourage the use of technology in education should be developed and implemented.

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