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Application of Modern Technology in Teaching Economics Among Secondary School Teachers in Sokoto State, Nigeria

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Abstract

Introduction of new innovations and technology has transformed the global education landscape, which necessitate shifting towards digital education for teaching and learning. Currently the predominant medium for teaching and learning practice is now digital technology. Moreover, the utilization of digital technology and innovations in teaching and learning is not widely embraced in teaching economics among teachers in Secondary Schools in Sokoto State. Therefore, this study aims at investigating the availability and adequacy of Modern innovation and Technology application by economics teachers in their teaching and learning processes. The study adopted a descriptive survey design. The population of the study consists of 70 economics teachers in 35 senior secondary schools in the Sokoto State with over 20 years of teaching experience. A structural questionnaire was used as instrument for data collections. The questionnaire was administered to the respondent from the targeted population, and the research questions were analyze with mean and standard deviation, while the hypotheses were tested with the use of z-test statistics. Base on the findings of the study new technological tools for teaching of economics in Sokoto State are relevant to certain extent. The study concluded that, new innovations on technologies are seen to be relevant in teaching economics but the technologies are scarcely and inadequate for teachers to use in secondary schools in Sokoto State. It was recommended that new technology should be made available for teaching economics in secondary school in Sokoto State.

Keywords: Application and Modern Technology, Teaching, Economics

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Introduction

Modern innovations and technology are now become part and parcel of teaching and learning globally, and it has a great impact on teacher education as well as students. The era of technology explosion in educational system has changed the traditional system of teaching in the classroom to a more interesting and fascinating one (Koko & Amadi 2023). Technology is now shaping the future of education all over the world because we are now living in the knowledge based global world where there is a rapid advancement in science and technology (Udu, 2018). This means that technology will not only determine the future of education and its success, but also the way educators in the twenty-first century may teach (Jalaosho, 2023). Therefore, modern technology has increasingly become an important teaching tool in global educational sector at all levels (Pallent, 2020).

Teacher education is a programme designed to develop teachers and enhance their proficiency and competencies to enable them meet the requirements of the profession and face the challenges therefrom (Udu, 2018). Therefore, innovation and technology in teaching and learning encompasses the advancement of knowledge and practical solutions to real life problems in the education sector, (Mohd et al. 2020). Education plays a significant role in shaping the minds of students. Teaching and learning is constantly evolving, therefore, in teaching economic concepts, teachers must adopt innovative means of enhancing the students' understanding and prepare them for the challenges of a global economy (Jalaosho, 2023). Educational innovation, which implies integrating new teaching methods, technologies, and approaches, has the significant impact on student critical thinking and engagement as well as problem-solving skills (Stumbrien, D., et al. 2023).

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Innovative approaches to teaching economics such as technologically based instrument which comprise projector base, smart classrooms, and digitalized board (Mohd et al. 2020). Similarly, adoption of digital base system in teaching and learning process is part of millennium development goals which requires that every teacher use effective, efficient and highly productive teaching and learning methods (Nwanewezi, 2005). There is no doubt that the use of relevant new technology by teachers in teaching economics can enhance teaching of economics in schools. Economics as a subject in schools and other institutions of learning requires that at the end of the programme students become relevant in everyday aspect of life and be prepared to have meaningful future career. Economics as a field of study involves teaching that is directed towards deductive and inductive reasoning (Nwanewezi, 2005).

Sokoto State is characterized by diverse traditional and historic economic activities ever since the time of Sokoto Caliphate leaders (Mohd et al. 2020). In such a dynamic environment, economic education is crucial for equipping students with the knowledge and skills necessary to navigate the complexities of the local and global economy. Economic teachers in Sokoto State and Nigeria at large face the challenge of preparing students for an ever-evolving economic landscape, where traditional teaching methods may fall short of meeting the demands of the modern workforce (Mohd et al. 2020).

Economics equips students with the knowledge of resource allocation, production, distribution, and consumption hence it is made a core subject in the senior secondary school curriculum in Nigeria (Pallent, 2020). The course is designed to train future economic teachers and managers in all sectors of the economy. Effective teaching of economics requires the use of new technologies and tools that make economic concepts concrete and relatable (Udu, 2028). In recent years, modern technology such as computers, projectors,

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interactive smart boards educational software, and internet based resources have proving effective in improving teaching delivery (Nwanewezi, 2005). However, despite the recognized benefits of technology integration in education, its application and availability in teaching economics in secondary schools of Sokoto State among teachers remains limited and inconsistent (Mohd et al. 2020). Many economics teachers continue to relay predominantly on conventional practice of chalkboard methods, which often fail to capture students' interest of facilitating practical understanding of economic theories and real-world applications (Nwanewezi, 2005).

Therefore, this study aims to assess the availability and adequacy of modern innovations by Economics teachers in teaching and learning processes across Sokoto State. Furthermore, the extent to which these teachers accept and adopt such innovative practices remains uncertain. Understanding their acceptance of technological innovations is paramount to promoting effective implementation and maximizing student learning outcomes.

Research Questions

To achieve the purpose of this study, the following research questions were formulated to guide the investigation:

i. What is the extent of availability of modern technological tools for teaching Economics in secondary schools in Sokoto State?

ii. How adequate are the available modern technological tools used by Economics teachers in secondary schools in Sokoto State?

Hypotheses

The following null hypotheses were formulated and will be tested at a 0.05 level of significance: i. H_{01}: There is no statistically significant difference between male and female

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Economics teachers regarding the mean rating on the availability of modern technological tools in secondary schools in Sokoto State.

ii. H_{02}: There is no statistically significant difference between male and female Economics teachers regarding the mean rating on the adequacy of modern technological tools in secondary schools in Sokoto State.

Literature Review

The emergence of various technologies for teaching and learning has brought a new face to the classroom. Globally, the teaching and learning process requires a modernized approach driven by Information and Communication Technology (ICT). Following global best practices in education, Mormah and Bassey (2021) stated that teaching and learning should be activity-based, learner-centered, experiential, and ICT-supported.

Different views exist regarding educational innovations versus technological innovations in education. Educational innovations focus on specific procedures or methods of educational activity that significantly differ from established practices, while innovations in education comprise broader coverage, including scientific and technological innovation (Naz, F. 2019).

The adoption of innovations in education offers educational institutions the opportunity to improve teaching methods. This is because the reforms desired in the educational sector can only be achieved when innovations are widely adopted. It is generally accepted that any move in education to accommodate new knowledge, eliminate obsolete practices, and adopt a multidisciplinary orientation constitutes an innovation in education (Udu, 2018).

Developing and adopting innovations is essential for schools and educational institutions to stay competitive in the education market, meet current challenges, and address society's demand for quality education (Mykhailshyn, 2019). Considering our growing population with

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diverse learning needs and preferences, innovative approaches are required to make learning conducive and stress-free.

Furthermore, these approaches are essential for shaping a creative, innovative young generation capable of driving future technological advancement, skills, and knowledge (Naz. 2019). Overall, the concept of technological innovation has evolved over time, making it important to maintain a holistic perspective on innovation in today's society across various fields, including the educational system and the teaching of economics in secondary schools (Stumbriene, D., et al, 2023). Regarding the availability of new technological tools and innovative practices in teaching economics, traditional instructional methods face severe challenges in today's educational landscape. These traditional approaches often alienate students and make the subject seem disconnected from real-world contexts.

The application of innovative and technological tools in teaching economics involves integrating technology into the classroom to bridge the gap between traditional methods and the demands of the current global ICT era. This integration serves to promote transformative innovation in teaching and learning, ultimately improving academic performance, opportunities, and learning outcomes (Semi, et al. 2017).

Given the role of education in national development and the growing student population, the availability and application of modern technological tools for economics instruction have become paramount, as their adoption by teachers enhances the overall educational process. Emphasizing the importance of innovative practices and the availability of ICT facilities as instructional materials for economics education, Ajayi (2011) asserted that through the adoption of technological tools, key educational needs will be realized.

However, observations of schools and higher institutions in Sokoto State and Nigeria at large show that many teachers and lecturers still rely heavily on conventional "chalkboard, chalk,

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and talk" methods rather than adopting modern technological tools, primarily because ICT facilities are not provided in most schools. It must be stressed that the effective use of various technological methods by economics teachers depends directly on the availability of these facilities and the teachers' competence in utilizing them. Observations indicate a widespread lack of functional technological infrastructure in most schools across Sokoto State, highlighting the limited familiarity of students and teachers with modern tech-driven instruction. Consequently, the need for accessible innovation and technology in Sokoto State schools cannot be overstated.

Methodology

Research Design

This study will adopt a descriptive survey research design. This design is appropriate as it allows for the collection of data from a targeted group of respondents to describe the current status regarding the availability, adequacy, and usage of modern technology in teaching Economics across secondary schools in Sokoto State.

Population and Sampling Technique

The target population for this study comprises all Economics teachers in senior secondary schools within Sokoto State ($N = 70$). Because the entire population is relatively small and manageable, a full census technique (complete enumeration) will be utilized. Consequently, the sample size for this study consists of the entire population of 70 Economics teachers. All 70 distributed questionnaires were successfully retrieved and included for analysis.

Research Instrument

The instrument for data collection is a self-structured questionnaire titled *"Modern Technology Application in Economics Teaching Questionnaire" (MTAETQ)*. The instrument is structured into sections designed to elicit responses on the availability and adequacy of

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modern technological tools. Items are measured using a 4-point Likert rating scale formatted as: Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1).

Validity and Reliability of the Instrument

To establish face and content validity, the instrument was evaluated by experts in Educational Technology and Economics Education within the Faculty of Social Science and Science Education at Shehu Shagari University of Education, Sokoto. Their corrections and recommendations were incorporated into the final draft.

To determine internal consistency, the instrument was field-tested, and data were analyzed using the Cronbach's Alpha reliability method. A reliability coefficient (α) of 0.80 was obtained, indicating that the instrument is highly reliable for field deployment.

Method of Data Collection

A total of 70 copies of the MTAETQ were personally administered by the researcher (and trained research assistants) directly to the Economics teachers in their respective schools. All 70 copies were retrieved, yielding a 100% response rate.

Method of Data Analysis

Data will be processed and analyzed using SPSS Statistics (Field, 2018, IBM Corp., 2019). Research questions addressing the availability and adequacy of technology will be answered using descriptive statistics, specifically mean scores ($\overline{X}$) and standard deviations (SD). A benchmark/criterion means score of 2.50 was set for decision-making (Boone & Boone, 2012; Cresswell & Cresswell, 2018)

Criterion Mean = $\frac{4+3+2+1}{4} = 2.50$

Mean ≥ 2.50: Agreed

Mean < 2.50: Disagreed

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To test the null hypotheses at the 0.05 level of significance ($\alpha = 0.05$), An Independent Samples t-test is the appropriate parametric test when comparing the means of two independent categorical groups (Male vs. Female Economics teachers) on a single continuous dependent variable (mean ratings of availability/adequacy) (Pallant, 2020). Decision Rule for Hypotheses**:** If the calculated *p*-value is less than or equal to 0.05 ($P < 0.05$), the null hypothesis (H_o) will be rejected. If the calculated *p*-value is greater than 0.05 ($P > 0.05$), the null hypothesis (H_o) will fail to be rejected or retained (Cohen, 1988).

Results and Discussion

After analyzing the data collected the results were presented base on the each research question formulated in the study; which is presented in below tables

The table below describes the respondent's profile which comprises gender, age, years of teaching experience and education respectably:

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Table 1.1 Demographic profiles of the Respondents

Gender	Age Groups	Educational Background	Total years at Teaching experience
Male	31 – 51	NCE, B.Sc. & B.Sc. Ed & M.Sc.	5 – 28
Female	25 – 46	NCE, B.Sc. & B.Sc. Ed & M.Sc.	5 – 20

Source: Authors field survey: 2026

Table 1.1 above shows the demographic characteristics of the respondents of the age group between 31 to 51 years were male and had the highest number of years in teaching experience with 5 to 28 years teaching economics in Secondary school. Similarly, the female respondent's age groups are between 25 to 46 years and their years of experience in teaching economics are 5 to 20 years respectively.

Regarding the educational qualifications of the respondents, National Certificate of Education NCE, Bachelor of Science (B.Sc.), Bachelor of Science Education (B.Sc. Ed) and Master Degree are obtained by male respondents. Thus, the female respondents have no master's degree in the area of economics.

Table 1.2: Responses on the availability of the new technological tools for teaching economics in Sokoto State Secondary Schools

S/N	Items	Male		Decision	Female		Decision
		X_1	SD_1		X_2	SD_2	

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1-	Smart room	2.10	0.90	NA	2.67	1.10	A
2-	Computers (desktop)	3.10	0.90	A	2.48	1.43	A
3-	E-learning centre & E-library facilities	2.47	1.06	NA	2.02	1.04	NA
4-	Internet service	1.50	1.46	NA	2.12	1.06	NA
5-	Projector	2.80	1.30	A	2.10	0.65	NA
6-	Smart board	2.15	1.50	NA	2.05	1.04	NA
7-	Scanner	2.12	1.08	NA	1.75	0.60	NA
8-	Laptop computer	2.36	1.64	NA	1.55	1.25	NA
9-	Printer	3.03	0.81	A	2.25	1.49	A
10-	Photocopier Machine	2.78	1.25	A	1.68	1.63	A
11-	Computer lab services	1.29	0.15	NA	2.88	1.09	NA
12-	Flash drive	2.03	1.10	NA	1.50	1.05	NA
13-	Economic resource room	1.05	1.40	NA	1.89	2.00	NA
	Mean / SD	**2.19**	**0.81**	**NA**	**2.12**	**1.17**	**NA**

Source: field Survey, 2026

Table 1.2 reveals the respondents views on the availability of new technological tool for teaching economics in Secondary school in Sokoto State. For the male respondents item 2 and 10 indicate availability at high extent. These were ascertained by the mean values of 3.10 and 2.78 respectively. Consequently all other items indicated availability at lower extent. Moreover, the female teachers responses indicate that item 1 and 11 were also available at high extent in the teaching economics in Sokoto State Secondary Schools. Also, the mean

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values of 2.67 and 2.88 confirmed acceptability. On the other hand of it, the rest revealed at low extent in the teaching of economics in Sokoto State Secondary schools.

Table 1.3 presents the responses on the Adequacy of the new Technological tools for teaching economics in Sokoto State Secondary Schools

S/N	Items	Male		Decision	Female		Decision
		X_1	SD_1		X_2	SD_2	
1-	Smart room	1.76	0.82	NA	1.68	0.73	NA
2-	Computers	3.02	0.92	A	2.74	0.80	A
3-	E-learning center & E-library facilities	2.41	0.98	NA	2.07	1.08	NA
4-	Internet services	1.69	0.73	NA	2.08	0.94	NA
5-	Projector	2.35	0.94	NA	2.27	0.83	NA
6-	Smart Board	1.76	0.83	NA	1.69	0.73	NA
7-	Scanner	2.37	0.19	NA	1.97	0.19	NA
8-	Laptop Computer	2.05	1.04	NA	1.99	0.97	NA
9-	Printer	2.23	1.07	NA	1.78	0.84	NA
10-	Photocopier machine	2.69	1.09	NA	1.89	0.89	NA
11-	Computer lab services	3.10	0.82	NA	1.68	0.74	NA
12-	Flash drive	1.75	0.85	NA	1.73	0.76	NA
13-	Economic resource room	1.87	0.18	NA	2.06	1.09	NA
	Mean / SD	**2.15**	**0.74**	**NA**	**2.09**	**0.80**	**NA**

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Source: field Survey, 2026

Table 1.3 shows how respondents expressed their views on the adequacy of new technological tools for teaching economics in Sokoto State Secondary Schools. From the responses of male teachers, items 5, 7, and 12 indicates to be relevance at high response considering their mean values. Similarly, the other items were found to be relevant at low extent in term of teaching economics in Secondary Schools in Sokoto State. With regards to female teachers' responses it indicates that item 1, 3, 11 and 12 shows low responses, this is confirmed by their mean value of 1.68, 2.07, 1.68 and 1.73. Similarly, the rest items were affirmed to be adequate to certain extent.

TEST OF HYPOTHESIS

To test the hypothesis of the study, Z-test was employed for the analysis of male and female economics teachers on the adequacy and availability of new technological tools in teaching economics

Table 1.4: Hypothesis 1 Analysis of Male and Female Economic Teachers on the Availability of Technological tools in teaching of economics in Sokoto State Secondary Schools

Category	N	Mean	SD	Df	P	Z,cal.	Z-crit	Decision
Male Teachers	40	2.20	0.74					
				67	0.05	-12.1	1.97	Accepted
Female Teachers	30	2.12	1.19					

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Source: field survey: 2026

As shown in Table 1.4 above the calculated Z-value was -12.1 indicating less than the total t-value of 1.97 at 0.05 level of significance use at 67 degree of freedom (df) in his case the null hypothesis of no significant difference between the mean response of male and female teachers on the availability of technological tools in teaching economics in Secondary Schools in Sokoto State was not accepted. As confirmed from the analysis, this is revealed from the views of male and female economics teachers.

Table 1.5: Hypothesis 2 Analysis of Male and Female Economic Teachers on the Adequacy of Technological tools in Teaching of Economics in Sokoto State Secondary Schools

Category	N	Mean	SD	Df	P	Z,cal.	Z-crit	Decision
Male Teachers	40	2.46	0.71					
				67	0.06	-4.76	1.97	Accepted
Female Teachers	30	2.12	0.83					

Source: field survey: 2026

The second hypothesis analysis in table 1.5 shows that the Z calculated value was -4.76 which indicate less than cervical value of 1.97 at 0.05 level of significance and at 67 degree of freedom (df). At this juncture the null hypothesis that postulates no significance difference between the mean response of male and female economics teachers on the adequacy of new technological tools for teaching economics in Secondary schools in Sokoto State was accepted. As such was ascertaining from the analysis.

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CONCLUSION

Globally, new technology is one of the key instruments that could uplift teaching of economics in schools; therefore, it is important to cultivate innovation in the economics teaching and learning in Secondary schools in Sokoto State. In this regards, it is necessary that all teachers "ought" to be acquainted with applicable aptitudes and skills that drive from new technology tools. It is therefore, pertinent that effective teaching of economics in Secondary schools and in colleges requires availability and adequacy of new technological tools. The findings are in conformity with the views of Brunges (2012) who noted that new technologies are needed for effective teaching in secondary schools. The study revealed among others, the constraints hindering the availability and adequacy of technological tools in teaching and learning economics includes inadequate facilities in most of the secondary schools in the Sokoto State, limited technological literacy, and a deficient political will.

RECOMMENDATIONS

Considering the findings of this study the following recommendations were made:

1. Government should endeavor to make adequate provision of new technologies to the schools to enable effective teaching and learning economics

2. Teachers should also adjust to apply the available new technologies in teaching and learning in secondary school.

3. Teachers should be exposed to training and development skills in the use of technology facilities

References

Ajayi, I.A. (2011). Towards effective use of information and communication technology for teaching in Nigeria colleges of Education Asean J. Infor technal, 7(3), 210 – 214

Boone, H. N., & Boone, D. A. (2012). Analyzing Likert Data. *Journal of Extension*, 50(2), 1–5.

Brunges, M. (2012). The quality and extent of online education in the United States

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Lawrence Erlbaum Associates.

Cresswell, J. W., & Cresswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed.). SAGE Publications.

Felicia O. Mormah and Bassey A. Bassey (2021) Teacher education in Nigeria and the emerging technologies in the 21st century classroom African Educational Research Journal Vol. 9 (3), Pp. 643 – 647. DOI:10.30918/AERK. 93 – 19. 049

Field, A. (2018). *Discovering Statistics Using IBM SPSS Statistics* (5th ed.). SAGE Publications.

IBM Corp. (2019). *IBM SPSS Statistics for Windows, Version 26.0*. Armonk, NY: IBM Corp.

Jolaosho, Ramon Adisa, (2023). The Importance of Educational Technologies in Economics Classroom: The Nigeria Perspective. International Journal of Research Publication and Reviews, Vol 4, no 1, pp 317-322, DOI: https://doi.org/10.55248/gengpi.2023.4128

Koko M. & Amodi Ela Kwachi (2023), New Technology Application in Teaching of Economics in Senior Secondary School in Port Harcourt Metropolis" International Journal of Innovative Information Systems & Technology Research 11(2), 33 – 41.

Merriam, S. B., & Tisdell, E. J. (2016) Qualitative Research: A Guide to Design and Implementation (4th ed.). San Francisco, CA: Jossey Bass

Mohamed Zuber Abd Majid and Nefouz Mafarjaa (2024) Understanding the Educational Innovation practice in Teaching and learning among Economics Teachers in klary valley. SHS web of conference 182. Access 2023 https://doi.org 10.10s1/shscon F/2024 18201005

Mohd Nor, N.F., Abdullahi, N.A., & Yusof, N.M (2020). Innovative teaching and learning practices in economics education: A systematic literature review. Journal of critical Reviews, 7(13), 1 -9

Mythailyshyn, H., Kandur, O., & Sermen, L. (2019) Innovation of Education and Educational innovations in conditions of modern Higher Education institutions Journal of Vagyl stefanyk precerpathian

Naz, (2019) Innovative Teaching: An effective ingredient for Educational change of University level. Pakistan journal of Education, 36(2) https://doi.org/10:30971/pje.v.36i2-691.

Pallant, J. (2020). *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM SPSS* (7th ed.). McGraw-Hill Education

Semi-Echaluce, M.L., Fidalgo-Blanco, A., & Alves, G. (2017) Technology behaviour in Education innovation Computer in Human Behaviour, 72, 596-598 https://doi.org 10.1016/j.chb.2016.11.049

Stumbriene, D., Jeusikova, T. & kontvaine, V. (2023) Key factors influencing teachers' motivating to transfer technology – enabled educational innovation. Educ inf Technology, 1-35. https/doi.org/10.100 7/s 10639-023-118916

Udu, D. A. (2018) Innovative practices in science Education: A Panacea for improving secondary school students' academic achievements in science subjects in Nigeria. Global Journal of Educational Research, 17: ISSN 1596-6224.