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# Technological Tools for Enhancing Quality Social Science Education Pedagogy

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**Abstract**

The purpose of the study was to explore the technological tools used by social science education lecturers in Imo State University (IMSU). The study adopted a descriptive survey research design. Two research questions and two hypotheses guided the study. The population of the study was 21 lecturers from the department of social science education (12 females and 9 males) in Imo State University (IMSU). The entire population was used for the study. This is because the population of the study was small and manageable. On this ground, no samples were drawn. A structured questionnaire developed by the researchers with two clusters was used to collect information from the respondents. A mean and standard deviation were used to answer the research questions, while a t-test was used to test the hypotheses. The study shows that the extent of utilization and competency of lecturers in the use of technological tools for the teaching and learning of social science education in the area under study is very poor. The study also found that there is no significant difference in the mean ratings of the males and females in the extent of utilization and competency of lecturers in the use of technological tools for the teaching and learning of social science education in the area under study. Some recommendations were made.

**Key words:** Technological tools, Teaching-learning, Utilization, Competence.

## Introduction

Social science education is an academic field that encompasses the study of geography, economics, political science, and social studies. It is the youngest subject taught at the college of education, as compared to fields such as science and art education. Thus, social science education is an evolving field of study. Social Science Education consistently generates new ideas and research techniques, making it a dynamic field. Several changes have occurred in the teaching and learning of Social Science Education courses, including the use of technology in the teaching and learning process (Iwuamadi, 2013). Shazia and Ishfaq (2021) asserted that most technological tools are pieces of software that can be used to make or support online course material. However, this study focused on a few that may improve the pedagogy of social science teaching. Shazia and Ishfaq, included Easy Class, Zoom, Google Form, Near Pod, Mentimeter, Google Hangouts Meet, Microsoft Teams, and YouTube as examples of technology tools. Others include Socrative, ClassDojo, Animoto, Toppr, Google Earth, Street View, Google Expedition, social explorer, Gap minder, Wordle, Piktochart, ReadWrite Thinks flowchart, Google Keep, Arc GIS, Google Classroom, Edmodo, and social media tools like Twitter, Facebook, WhatsApp, and Kahoot.

Social science instructors might use Easy Class, a free and straightforward online learning management system. Teachers design online courses for students, which they may access at any time and at their speed. Zoom Classrooms is also a tool for learning management systems. The web-based video conferencing and digital classroom systems provide face-to-face, two-way video, and audio communication for up to 100 participants. A Google Form is used as a technical instrument for evaluating and verifying pupils' prior knowledge. These forms may also be used to provide and receive feedback from students and parents. Google Expedition and Street View on PCs enable students to experience virtual reality (VR) field excursions with 360-degree and three-dimensional views from across the world and into space. In addition to these technologies, students visit online sites with their teachers to see locations they could not readily access in person and to prepare for field excursions to the actual location. Google Classrooms is a free online teaching-learning platform and web service created by Google for schools. Here, teachers can set up virtual classrooms where students can submit their work and teachers can give online quizzes.

YouTube Videos was launched as a video distribution platform in 2005 and has since become the world's most popular and most frequented website. It is an essential technological teaching tool that is mostly used by educators for educational purposes. Teachers are able to create their classroom channel and publish their lectures as material, audio, or videos. ArcGIS and Google Earth are tools that facilitate spatial reasoning and allow pupils to visualize places more effectively than a flat map. It also enables students to analyze the globe via various layers of data sets, including population density, highways, and seismic activity, in a geographical setting (Giridhar, Priyadarsini, Viswanadh, Arathi&Chandrabose, 2012). Hofer and Swan (2008) claimed that the age of limited access to geospatial data on traffic and weather in geography education was a direct result of the employment of a didactic teaching technique. Edmodo is a learning platform that assists instructors in managing their classes and engaging their students in a simple and

instructive setting. Edmodo includes all the resources a teacher may need to set up and instruct an online class. Social science instructors may utilize social media sites such as Twitter, Facebook, and WhatsApp to engage and facilitate in-class and out-of-class learning with their students. Social media platforms, which are popular among educators, make it simple to find politicians and other people with similar interests (Carpenter &Krutka, 2014).

Gender differences may influence the lecturers' level of usage and proficiency in the use of technological tools in the teaching and learning of social science education. According to Uzoegwu (2004), gender refers to the diverse socially and culturally created roles, attributes, and behaviors given to men and women in various communities. Gender is the classification of matter into sexes (male and female) in the physical universe (Fraser, 2018). Almekhlafi and Almeqdadi (2010) assessed gender to be the most influential element in terms of technology usage and competency. Their research revealed that male and female instructors utilize technology differently. In the same way, Almekhlafi, Ismail, and Al-Mekhlafy (2017) found that there are big differences between how men and women use technology in the classroom.

In contrast, several studies failed to find a statistically significant difference. According to Onwuagboke and Singh's (2016) research on the use of ICT in teaching and the attitudes of male and female instructors at three tertiary institutions in Nigeria, there were no significant gender disparities. Top, Yukselturk, and Cakir (2011) examined gender inequalities in the use of Web 2.0 apps by ICT instructors in terms of their awareness components. The goal of this study is to find out if gender has any effect on the extent of utilization and competence in the use of technological tools by social science lecturers.

***Purpose of the Study***

The main purpose of the study was to explore the technological tools that could enhance Social Science Education pedagogy in IMSU. Specifically, the study investigated:

1. The extent of utilization of technological tools in the teaching and learning of Social Science Education courses.
2. The extent of competence of lecturers in the use of technological tools in the teaching and learning of Social Science Education courses.

## Research Questions

The following research questions guided the study:

1. To what extent are technological tools utilized in teaching and learning of social science education courses?
2. To what extent are social science lecturers competent in the use of technological tools in the teaching and learning of social science education courses?

***Hypotheses***

The following hypotheses were formulated for the study.

$Ho_1$: There is no significant difference in the mean ratings of male and female lecturers on the extent of utilization of technological tools in teaching and learning ofsocial science education

$Ho_2$: There is no significant difference in the mean ratings of male and female lecturers on the extent of competence in the use of technological tools in the teachingand learning of social science education

## Methods

The study adopted the descriptive survey research design to explore the technological tools that could enhance the Social Science Education pedagogy in Imo State University, Owerri, Imo State. The population of the study consists of all the 21 Social science Education Lecturers (12 females and 9 males) in Imo State University. The entire 21 lecturers were used because the population is small and manageable. Therefore, there was no sampling. The instrument for data collection was developed by the researchers. It was developed into two sections. Section A dealt with respondents' bio-data while section B was used to elicit information for the research questions posed in the study, as it was organised. The respondents were made to choose the best options that suits their view about the question item raised. Four-point scale of Highly Utilized (HU= 4 points), Utilized (U = 3 points), Moderately Utilized (MU = 2 points) and Not Utilized (NU = 1 point) was used to gather information for research question one and Highly Competent (HC= 4 points), Competent (C = 3 points), Moderately Competent (MC = 2 points) and Not Competent (NC = 1 point) was used to gather information for research question two. The instrument was subjected to face validation by a measurement and evaluation expert, information and Communication Technologist and social science educationist. Their inputs, corrections and modifications were reflected into the final draft of the instrument. The instrument was trial tested on 10 social science education lecturers at the University of Nigeria, Nsukka in which was not within the study area. Upon analysis of their responses, the Cronbach Alpha method was used to determine the internal consistency of the items of the instrument. The instrument shows an overall index of 0.86 showing that the reliability coefficient is high and that the instrument is reliable. The instrument was distributed and collected by the researchers. On the spot mode of administration and collection was used to ensure high percentage rate of return. All the copies of the administered questionnaire were retrieved. The generated data were analyzed using mean and standard deviation to answer research questions. Any

item response within and above 2.50 which is the instrument scale mean was accepted while any below it was rejected. The hypothesis was analyzed using t-test statistical tool tested at 0.05 level of significance.

## Results

The results were presented in line with the research questions and hypotheses that guided the study

**Research Question One:** What is the extent of utilization of technological tools in the teaching and learning of social science education?

**Table 1: Mean and Standard Deviation of the Responses of Lecturers on the Extent of Utilization of Technological Tools in the Teaching and Learning of Social Science Education Courses.**

**N = 21**

| **Technological Tools** | **Mean** | **Std. Deviation** | **Remarks** |
|---|---|---|---|
| 1. Easy Class | 1.44 | .63 | NU |
| 2. Zoom | 2.62 | .55 | MU |
| 3. YouTube | 1.33 | .62 | NU |
| 4. Google Form | 1.53 | .64 | NU |
| 5. Edmodo | 1.32 | .48 | NU |
| 6. Twitter | 1.75 | .51 | NU |
| 7. Facebook | 1.61 | .65 | NU |
| 8. WhatsApp | 3.73 | .53 | U |
| 9. Google Earth | 1.50 | .65 | NU |
| 10. Street View | 1.15 | .36 | NU |
| 11. Google Expedition | 1.26 | .62 | NU |
| 12. Social Explorer | 1.18 | .38 | NU |
| 13. ArcGIS | 1.77 | .60 | NU |
| 14. Gap Minder | 1.72 | .53 | NU |
| 15. Wordle | 1.54 | .43 | NU |
| **Grand Mean and Standard Deviation** | **1.69** | **.55** | **NU** |

NU=Not Utilized, MU=Moderately Utilized, U=Utilized

Table 1 shows the mean and standard deviation of the ratings of lecturers on the extent of utilization of technological tools in the teaching and learning of social science education courses. The result shows that the mean ratings of the lecturers on items 2 and 8 are within the mean range of 2.5 and above meaning that the lecturers utilize Zoom and WhatsApp in the teaching and learning of social science education. However, Zoom is moderately utilized. The mean ratings for items 1, 3, 4, 5, 6, 7, 9 to 15 are within the mean range below 2.50 implying that the lecturers do not utilize those technological tools. The grand mean of 1.69 is a clear indication that technological tools are poorly utilized in the teaching and learning of social science education.

**$Ho_1$**: There is no significant difference in the mean ratings of male and femalelecturers on the extent of utilization of technological tools in teaching and learning of social science education courses.

**Table 2: T-Test Analysis of the Difference in the Mean Ratings of Male and Female Lecturers on the Extent of Utilization of Technological Tools in the Teaching and Learning of Social Science Education Courses**

| Lecturers | N | Mean | Std. Deviation | df | t | Sig | Decision |
|---|---|---|---|---|---|---|---|
| Male | 12 | 1.71 | .58 | 19 | .052 | .925 | NS |
| Female | 9 | 1.67 | .52 | | | | |

***NS = Not Significant***

Table 2 reveals that there is no significant difference in the mean ratings of male and female lecturers on the extent of utilization of technological tools in the teaching and learning of social science education courses, t (19) = .052, $p$ = 0.925. This implies that the null hypothesis formulated was accepted since the associated probability value of 0.925 was greater than the 0.05 significant level.

**Research Question Two:** What is the extent of Lecturer's competence in the use of technological tools in teaching and learning of social science education courses?

**Table 3: Mean and Standard Deviation of the Responses of Lecturers on the Extent of Lecturer's Competence in the Use of Technological Tools in Teaching and learning of Social Science Education Courses**

**N = 21**

| Item Statement | Mean | Std. Deviation | Remarks |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 1. Easy Class | 1.24 | .64 | NC |
| 2. Zoom | 2.89 | .61 | MC |
| 3. YouTube | 1.25 | .52 | NC |
| 4. Google Form | 1.83 | .59 | NC |
| 5. Edmodo | 1.26 | .49 | NC |
| 6. Twitter | 1.69 | .53 | NC |
| 7. Facebook | 1.68 | .62 | NC |
| 8. WhatsApp | 3.72 | .68 | C |
| 9. Google Earth | 1.59 | .64 | NC |
| 10. Street View | 1.38 | .49 | NC |
| 11. Google Expedition | 1.49 | .56 | NC |
| 12. Social Explorer | 1.86 | .49 | NC |
| 13. ArcGIS | 1.93 | .58 | NC |
| 14. Gap Minder | 1.76 | .54 | NC |
| 15. Wordle | 1.85 | .57 | NC |
| **Grand Mean and Standard Deviation** | **1.83** | **.57** | **NC** |

NC=Not Competent, MC= Moderately Competent, C=Competent

Table 3 shows that the mean and standard deviation of the ratings of lecturers on the extent of their competency in the use of technological tools in the teaching and learning of social science education. The result shows that mean ratings of the lecturers to items 2 and 8 are within the mean range of 2.5 and above meaning that the lecturers utilize Zoom and WhatsApp in the teaching and learning of social science education. However, their competence in the use of Zoom is moderate. The mean ratings for items 1, 3, 4, 5, 6, 7, 9 to15 are within the mean range below 2.50 implying that the lecturers are not competent in the use of those technological tools. The grand mean of 1.79 for lecturers is a clear indication that social science education lecturers have a very low competence in the use of technological tools in the teaching and learning of social science education.

**$Ho_2$:** There is no significant difference in the mean rating of male and female lecturers on the extent of their competency in the use of technological tools in the teaching and learning of social science education

**Table 4: T-Test Analysis of the Difference in the Mean Ratings of Male and Female Lecturers on the Extent of their Competency in the Use of Technological Tools in the Teaching and Learning of Social Science Education Courses**

| Lecturers | N | Mean | Std. Deviation | df | t | Sig | Decision |
|---|---|---|---|---|---|---|---|
| Male | 12 | 1.84 | .58 | 19 | .612 | .526 | NS |
| Female | 9 | 1.82 | .56 | | | | |

***NS = Not Significant***

Table 4 reveals that there is no significant difference in the mean ratings of male and female lecturers on the extent of their competency in the use of technological tools in the teaching and learning of social science education courses, $t$ (19) = .612, $p$ = 0.526. This implies that the null hypothesis formulated was accepted since the associated probability value of 0.526 was greater than the 0.05 significant level.

## Discussion of Findings

The findings of the study with respect to research question one show that the lecturers do not utilize Easy Class, YouTube, Google Form, Edmodo, Twitter, Facebook, WhatsApp, Google Earth, Street view, Google Expedition, Social Explorer, Gap Minder, ArcGIS and Wordle while WhatsApp and Zoom are moderately utilized. It shows that there is a poor level of the utilization of technological tools in the teaching and learning of social science education courses. This finding is in agreement with the finding of Edet and Francis (2013) whose results show that there was poor utilization of technological tools in Cross River State.

The findings of the study with respect to research question two revealed that the lecturers are not competent in the use of Easy Class, YouTube, Google Form, Edmodo, Twitter, Facebook, WhatsApp, Google Earth, Street view, Google Expedition, Social Explorer, Gap Minder, ArcGIS and Wordle while their competence in the use of WhatsApp and Zoom are moderate. It shows that lecturers in social science education are of poor competence in the use of technological tools in teaching and learning of social science education. This finding is in agreement with the findings of Ikwuanusi and Nwoke (2016) which shows that most science teachers in secondary schools are of low competence in the use of technology facilities in teaching and learning of science subjects.

The findings of the study with respect to hypotheses one and two analyzed in tables 3 and 4 showed that gender has no significant influence on the extent of utilization and competence in the use of technological tools by lecturers. This finding is in line with the findings of Onwuagboke and Singh (2016) about the use of ICT in teaching and the attitude of male and female teachers in three tertiary institutions which reported no significant differences in relation to gender.

## Conclusion

Based on the findings, most of the technological tools are mot utilized in the teaching and learning of social science education and this is a problem for sustainable teaching and learning of social science education. The study also revealed that social science education lecturers are not competent in using technological tools in teaching and learning. It was concluded that the poor level of utilization of these technological tools in the teaching and learning of social science education could be that the lecturers are not competent in using them showing that there could be a relationship between the lecturers' competence and utilization of technological tools in the teaching and learning process.

### *Recommendations*

Based on the findings of the study, the researchers recommended that:

1. Lecturers should always utilize technological tools for quality social science pedagogy.
2. The university management should train and re-train lecturers on the technological tools to be used in the teaching and learning process so that they will be competent enough to utilize them.
3. The university management should also subscribe to some of the technological tools that are not free. This would give lecturers the opportunity to use any appropriate tool for teaching and learning.

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