EXPERIENTIAL LEARNING STRATEGY AS A PREDICATOR OF MALE AND FEMALE STUDENTS INTEREST IN COMPUTER STUDIES IN NNEWI EDUCATION ZONE, ANAMBRA STATE, NIGERIA

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Abstract: This study examined the effectiveness of experiential learning strategy as a predicator of male and female students' interest in computer studies in Nnewi Education Zone, Anambra State. A quasi-experimental research design was employed. The sample size consisted of One Hundred and Nine (109)) Senior Secondary School 2 (SS2) students, 48 Males 61female students selected from two intact classes randomly drawn from two co-educational schools in the zone. One school was assigned to the experimental group, which received instruction in Microsoft Word using the experiential learning strategy, while the other served as the control group and was taught the same content using the conventional lecture method. The study was guided by research questions and two null hypotheses. Data were collected using a researcher-developed instrument titled *Computer Studies Interest Scale* (CSIS). The reliability of the CSIS was established using Cronbach's Alpha, yielding a coefficient of 0.89, indicating high internal consistency. Data analysis involved the use of mean, standard deviation, and Analysis of Covariance (ANCOVA). Findings from the study revealed that the experiential learning strategy is not gender-biased. Its hands-on, student-centered approach provides both male and female students with equal opportunities to engage in self-motivated and self-directed learning, thereby enhancing their interest in computer studies.

Keywords: Computer Studies, Experiential Learning Strategy, Interactions, Interest.

Introduction

In the 21st century, computer studies have become an essential component of modern education, shaping students' competencies for participation in a digitally driven world. As information and communication technologies (ICT) continue to influence every aspect of society, there is a growing need for effective teaching strategies that can enhance student interest and participation in computer-related subjects. Despite the integration of computer studies into the Nigerian secondary school curriculum, students' interest especially among different gender groups remains varied and, in some cases, low (Okekeokosisi & Okigbo, 2021). The main idea behind ICT integration is to provide computer literacy and computer skills which are needed in all facets of human life in the 21st century, including provision of entrepreneurial opportunities for secondary school students in Nigeria (Olojo, 2023). Information and Communication Technology (ICT) is an umbrella term that includes any communication device or application, encompassing radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications association with them (Enemuo & Muogbo, 2024).

This development calls for everyone to tap into Information and Communication Technology (ICT) Education which is

justifiably guarantees economic empowerment through entrepreneurship opportunities (Muogbo & Obiefoka, 2022). This raises concerns on the teaching strategy that can stimulate students' interest, foster meaningful engagement in learning Microsoft Word as part of computer studies.

Microsoft word is a widely used word processor package designed by Microsoft Corporation, it is a part of the Microsoft Office package which can also be purchased as a stand-alone product. Ms. Word is one of the most popular programs that are part of Microsoft Office suite, it is a powerful word processing software widely used for creating, editing, formatting, retrieving and printing documents. Ms. Word is popular in various domains, including education, business, and personal use, for its user-friendly interface and extensive features which has no discrimination in gender.

Male and Female students undertaking computer studies need to be taught in such a way as to constantly increase and sustain their individual interest in computer studies which in reality could be influenced by the teaching method adopted by the computer teacher. This implies that not every teaching method adopted by the computer teacher in delivering his or her lesson is strategically effective for all the computer students; this indicates that not all teaching strategies are effective. Some are better than

others in enhancing students' learning ability. This is where old teaching method which is lecture method is no longer effective rather experiential learning strategy is been introduced to assist in bringing about a relatively permanent learning to computer students.

Experiential Learning Strategy (ELS) is learning by doing, learning by action, learning through exploration and this has gained increasing attention as a student centered approach capable of transforming passive learning environments into dynamic, engaging spaces. Experiential learning strategy which is rooted in Kolb's experiential learning theory emphasizes learning through participation and allowing students to interact directly with content through hands-on, real-world experiences. When learners are actively involved in their own learning process, their motivation, interest and interaction effect tend to increase significantly (Kolb, 2015; Akudolu & Eze, 2020).

For learning of computer studies to take place effectively, interaction between the computer teacher and the computer students as well as the computer student and the computer must remain a fundamental component of the teaching-learning process used in computer studies. The term "interaction" was first used in the field of computing, but as society continues to develop, it is gradually being used in other fields (Xu & Chen, 2021). Interaction refers to the interface between people, with the help of symbols such as language and text. The act of computer interaction can be understood as the interaction between the computer "teaching" of the teacher and the computer "learning" of the students, as well as the interaction between different students' behaviours (Tang, et al., 2023). It is important that interaction in the classroom is friendly active, for it fosters interest of students in computer studies which is most likely to be enhanced through experiential learning strategy in male and female students in computer studies.

Given the historical gender imbalance in education particularly in developing countries such as Nigeria, it becomes important to examine how experiential learning strategy has impacted on male and female students undertaking computer studies. In the Nnewi Education Zone of Anambra State, understanding this dynamic factor is vital for promoting inclusive educational practices and ensuring that both genders have equal opportunities to develop digital literacy and computer skills. Therefore, this study investigates the extent to which experiential learning strategies can predict male and female students' interest in computer studies, aiming to contribute effective pedagogy and gender-responsive teaching in computer studies in relation with Microsoft word.

Statement of the Problem

In today's technology-driven world, computer studies have become a core subject in senior secondary school education curriculum. However, in many schools within the Nnewi Education Zone of Anambra State, students show a noticeable lack of interest in the subject. This low engagement in computer studies is of great concern, especially, considering the increasing demand for digital skills in both academic and professional spheres in the area. This situation is further complicated by gender differences in students' attitudes toward computer studies; with male students appearing most often to be showing more enthusiasm and confidence compared to their female students' counterpart; and one of the major contributing factors to this problem has been alleged to be the continued use of old teaching methods of teaching and learning which is teacher-centered. These methods often fail to capture students' attention or provide the practical experiences needed to

fully understand and appreciate computer concepts. As a result, many students find the subject uninterested and difficult. Therefore, there is need for a paradigm shift towards the adoption of a newer innovation and learner-friendly, learner-centered instructional strategy which in experiential learning strategy, offers a promising alternative.

This study, therefore, seeks to explore whether experiential learning can serve as a predictor of students' interest in computer studies and whether this effect differs by gender. Understanding this relationship is key to designing more effective and inclusive teaching strategies that can inspire all students to engage meaningfully with computer education with particular reference to Microsoft word.

Purpose of study

The main purpose of this study is to explore the experiential learning strategy as a predicator of male and female senior secondary school students' interest in computer studies. Specifically, the study sought to determine the:

➢ Difference in mean interest scores of male and female SS2 computer studies students taught Microsoft word using experiential learning strategy and those taught using lecture method.

➢ Interaction effect on method and gender on mean interest scores of male and female SS2 computer studies students taught Microsoft word using experiential learning strategy

Research Questions

➢ What are the differences in mean interest scores of male and female SS2 computer studies students taught Microsoft word using experiential learning strategy and those taught using lecture method?

➢ What is the Interaction effect on method and gender on mean interest scores of male and female SS2 computer studies students taught Microsoft word using experiential learning strategy?

Research Hypotheses

The following three null hypotheses were tested at 0.05 level of significance:

➢ Ho_1: There is statistically difference in the mean interest score of male and female SS2 computer studies students taught Microsoft word using experiential strategy and those taught using lecture method.

➢ Ho_2: There is no statistically significant difference in the interaction effect on method and gender on mean SS2 computer studies students taught Microsoft word using experiential learning strategy.

Method

A quasi-experimental research design, specifically the pretest-posttest non-equivalent control group design, was adopted for this study. The research was conducted in senior secondary schools located within the Nnewi Education Zone of Anambra State, Nigeria. A total of 109 Senior Secondary School 2 (SS2) Computer Studies students, comprised of 48 males and 61 females which were purposively selected from two co-educational secondary schools. In each school, an intact SS2 class was randomly chosen through a balloting method, and all students in the selected classes participated in the study. One school was assigned to the experimental group and the other to the control

group. The experimental group received instruction using the experiential learning strategy, while the control group was taught using the lecture method. The experimental group consisted of 28 males and 33 females (N=61), and the control group comprised 20 males and 28 females (N=48). Data collection was carried out using the Computer Studies Interest Scale (CSIS), a 30-item instrument developed by the researchers based on topics related to Microsoft Word, aimed at assessing students' interest in the subject.

Experimental Procedure:

The study utilized the regular computer teachers from the selected schools. The teacher in the experimental group received training on how to implement the experiential learning strategy in computer instruction. In the experimental school, the teacher actively engaged students in hands-on computer practice. Additionally, each student in the experimental group was assigned

to an individual computer, where they practiced Microsoft Word according to the instructions provided by the teacher. The learning process was structured to be experiential, allowing students to learn by doing. Specifically, students were taught how to type, edit, format, save, retrieve, and print documents within the Microsoft Word environment. During Lesson 2, students were encouraged to interact freely with one another and with the teacher, which contributed to enhancing their interest in computer studies. In contrast, students in the control group were taught using a pre-established lesson plan that employed a teacher-centered lecture method. The Computer Studies Interest Scale (CSIS) was administered as a preinterest prior to the treatment and as a postinterest following the treatment. Research questions were answered through the calculation of mean and standard deviation; while the hypotheses were tested at a 0.05 alpha level using Analysis of Covariance (ANCOVA).

Results

Table 1: Mean interest scores of male and female SS2 Computer Studies students taught Microsoft Word using experiential learning strategy and those taught using lecture method?

Gender	Teaching Method	Mean	Std. Deviation	N
Male	Experimental Learning Strategy	82.0714	8.19181	28
	Lecture Method	48.7000	9.91065	20
	Total	68.1667	18.83335	48
Female	Experimental Learning Strategy	81.6970	3.84452	33
	Lecture Method	48.7143	5.17012	28
	Total	66.5574	17.16248	61
Total	Experimental Learning Strategy	81.8689	6.17380	61
	Lecture Method	48.7083	7.42038	48
	Total	67.2661	17.85053	109

The data in table 1 indicates that students taught Microsoft Word using experiential strategy had the total mean rate score of 81.8689 for experimental learning strategy and 48.7083 for lecture method. Therefore, the difference interest score between the experimental learning strategy against lecture method is 33.1606, indicating that SS 2 computer studies students taught with Microsoft word had high interest learning scores than their counterpart taught with lecture method, indicating that students found experiential learning strategy more engaging than others.

Table 2: Interaction effect on gender on mean interest scores of male and female SS2 computer studies students taught Microsoft word using experiential learning strategy

Teaching Method	Gender	N	Mean	SD	Mean Different
Experiential Learning Strategy	Male	28	82.0714	8.1918	
	Female	33	81.6970	3.8445	0.3744

Table 2 shows that the total mean rate score of male students is 82.0714 for experiential learning strategy and 81.6970 for female counterpart in lecture method indicating that there is no significant difference on interaction effect of gender on mean interest scores of male and female SS2 computer studies students taught Microsoft word using experiential Learning Strategy. Therefore, the total mean difference is 0.3744.

Table 3: ANCOVA Results for Interest Scores based on Teaching Method

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	30242.196ᵃ	4	7560.549	188.511	.000	.879
Intercept	3524.232	1	3524.232	87.872	.000	.458
Pre-interest	701.653	1	701.653	17.495	.000	.144
gender	12.373	1	12.373	.309	.580	.003
method	26999.052	1	26999.052	673.182	.000	.866
gender * method	1.047	1	1.047	.026	.872	.000
Error	4171.089	104	40.107			
Total	527608.000	109				
Corrected Total	34413.284	108				

a. R Squared = .879 (Adjusted R Squared = .874)

The table 3 showed the statistical mean effect of teaching method on student's interest scores as $F_{(1,108)}=673.182$, $P>.000$. The result of the first hypothesis on teaching method was not accepted indicating that there was a statistically significant difference in the mean interest scores of SS2 Computer Studies student taught Microsoft word using experiential learning strategy and those taught using lecture method. The result of the second Hypothesis on gender evaluates whether male and female students in the experiential learning group differed significantly in interest levels. The results states $F_{(1,108)}=0.26$ $P<.872$ indicating that the result was accepted, no statistically significant gender difference in interest scores of students taught using same strategy, This confirmed that there is a statistical mean difference between the groups, with students in the experiential learning group showing significantly greater interest than those in the lecture method group indicating that teaching method has a very large significant impact, gender and gender-method interaction are not significant, suggesting that method works similarly across gender.

Discussion

This study revealed that the experiential learning strategy significantly improved both male and female students' interest in computer studies compared to lecture method. Engaging students in hands-on, minds-on activities allowed them to better understand and apply key concepts in Microsoft Word, rather than simply receiving verbal instruction. Through experiential learning strategy, students developed practical skills such as creating, editing, formatting, saving, retrieving, and printing documents which is core competencies essential to mastering Microsoft Word. These interactive experiences enabled students in the experimental group to outperform their counterparts in the control group, who received only lecture-based teaching.

The results further shown that experiential learning, as a "learning by doing" approach, enhances students' ability to practice and internalize computer skills more effectively. Moreover, the strategy proved to be equally beneficial for both male and female students, fostering a high level of interest in SS2 computer studies across genders.

Conclusions and Recommendations

This study found experiential learning to be an effective instructional strategy for teaching computer studies, offering students valuable opportunities to gain practical, real-world experience as they learn.

Based on the findings of this study, the following recommendations were made;

➢ Computer studies teachers should adopt experiential learning strategy as an effective pedagogical approach for enhancing student engagement and making the learning of computer concepts more practical, interactive, and meaningful for learners.

➢ School Management in Nnewi Education Zone should continuously organize workshops and trainings to equip teachers with the skills and techniques needed for effective implementation of experiential learning strategies for both male and female students in computer studies.

➢ Curriculum planners should integrate experiential learning into the computer studies curriculum at the senior secondary school level, as a learning strategy that promotes effective teaching and enhances students' practical understanding of the subject.

➢ The State Governments should equip schools with adequate computer systems needed for conducting experiential learning strategy in schools.

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