STUDENTS' PERCEPTION OF UTILIZATION OF TECHNOLOGY AND INNOVATION IN TRANSFORMATION OF SOCIOLOGY OF EDUCATION AT TERTIARY INSTITUTIONS IN BENUE STATE, NIGERIA

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Abstract

This study investigated students' perception of transforming sociology of education through technology and innovation at the tertiary education in Benue State. The research design employed was descriptive survey. Population made up of all the tertiary institutions in Benue State with a population of 1000 students using a sample size of 150 students using sampling method by "hat and draw". Two research questions were asked. Instrument was content validated by three experts in Technology and Innovation in Sociology of Education (TISE).Reliability coefficient was established using Cronbach's alpha which yielded 0.85. Findings were that sociology of education through technology and innovation enhance social cohesion among students and it promotes inclusive learning environment which addresses systematic inequalities. Based on the findings of the study, it was concluded that students could use technology and innovation to transform the society and avoid traditional notion of learning. The researcher suggested that government at all levels should embark on technology and innovation in training lecturers at the tertiary level especially in Benue State.

Keywords: Transformation, Sociology, Technology, Innovation, Tertiary- Students.

Introduction

Transformation refers to the process of bringing about significant and fundamental changes in teaching and learning, curricula and educational systems to improve outcomes and foster innovation as well as technological and cultural demands. It involves also a shift in pedagogy with educational goals, institutional practices or learners' experiences to meet the needs of a dynamic and interconnected world.

According to Mezirow (2022), transformation in education involves a "process of effecting change in a frame of reference," it often linked to critical reflection and transformative learning where individuals critically examine their beliefs and assumptions. To UNESCO (2020), educational transformation is described as a "fundamental change in the way education is delivered and experienced to ensure equity inclusion and sustainability in an increasingly complex world. Reimers and Schleicher (2020) again refers to transformation in education as entailing "systemic innovation to redesign educational goals, teaching methods, and learning environments" to prepare students for future challenges, which aligns with the sociology of education.

Sociology of education is a critical discipline that examines the interplay between education and society. It explores how social structures, cultural norms, and institutional practices influence educational systems and outcomes. This field helps to identify the role of education in social mobility, inequality and cultural reproduction. Despite its importance, sociology of education often struggles to achieve its potential impact due to reliance on traditional teaching methods. Recent studies (Abah, 2021; Adejoh & Musa, 2023) emphasize the need for innovative approaches to bridge the gap between theoretical concepts and real-world applications in this discipline.

The discipline that investigates how individuals' experiences shape their interactions with schooling affecting their educational achievements and outcomes. Such outcome involved studying these dynamics, the sociology of education seeks to understand the role of education in social stratification and mobility, as well as its function in transmitting culture and promoting social cohesion, particularly in the context of how digital advancements and tools shape learning environments and access to education through technology (Abah,2021).

Technology in the field of education refers to the tools, systems, and resources that help with teaching and learning, it is a powerful enabler of educational innovation. The integration digital tools and technologies in education have transformed traditional teaching methods by offering new ways to engage learners and deliver content. The technological pedagogical content knowledge (TPACK) framework emphasizes that effective teaching with technology requires understanding the relationship between technology pedagogy Koehler & Mishra (2009). Technology facilitates access to diverse resources, supports interactive learning and bridges geographical and temporal barriers. According to recent research (Ibrahim &

Adamu, 2020; Adeyemi, 2023), integrating technology into education significantly improves teaching efficiency and learning outcomes. The use of technology in education promotes collaboration between lecturers and tertiary students, increases students' engagement, streamlines administrative duties, expands access to educational resources, and personalizes learning. It seeks to raise academic standards and get students ready for a technologically advanced world. to raise academic standards and get students ready for a technologically advanced world through innovation.

Innovation in the context of education refers to the process of introducing new ideas, tools, and strategies to transform the educational experience. Educational innovation involves a deliberate and planned effort to improve students' learning outcomes, going beyond traditional teaching methods and paradigms. In 2020, Newman et al. emphasized that educational innovation is crucial for promoting creativity, critical thinking, and problem-solving skills in tertiary students. It also highlighted the importance of focusing on basic skills, changing teaching practices, and optimizing the skill mix to drive innovation in education. Pacheco (2020) defines educational innovation again as a process that requires sensitivity, commitment, consistency, creativity, empathy, and the ability to motivate and excite students. It further identifies seven fundamental keys to promoting and implementing innovation in classrooms, including the quality of teachers, changes in school management, and innovating educational models. In addition, Serdyukov (2017) notes that innovation in education can take many forms, including new pedagogical theories, methodological approaches, teaching techniques, instructional tools, learning processes, and institutional structures .In order to enhance student learning outcomes and equip them for success in the twenty-first century, educational innovation generally entails questioning conventional teaching practices and embracing fresh concepts, resources, and tactics in Tertiary institutions.

Tertiary institutions, is a post-secondary stage which are educational institutions that offer education after the secondary level. These institutions offer a wide range of academic, vocational, and professional programs that lead to certificates, diplomas, and degrees. Tertiary institutions include universities, colleges, polytechnics, technology institutes, and vocational training schools. Professional schools (e.g., law, medicine, and engineering). Research shows that employers use educational credentials such as degree classification and grade point averages to sort applicants (Piopiunik et al, 2020) .In Nigeria, where Benue State is located, tertiary

institutions includes: Universities, polytechnics and collages of Educations These institutions play an important role in providing tertiary students with higher education and training, as well as the knowledge, skills, and competencies required to succeed in their chosen professions. Therefore, this study aims to explore how innovative teaching strategies, enhanced by technology, can improve the teaching and learning of sociology of education.

Statement of the Research Problem

Tertiary institutions in Benue State continue to face significant challenges in integrating technology and innovation into the sociology of education for some decades. These institutions often grapple with outdated teaching methods, limited access to technological infrastructure, and a lack of capacity to adopt innovative pedagogies. This has resulted in a gap between theoretical sociological concepts taught in classrooms and their practical application in addressing real-world societal issues. Moreover, the global shift toward digital education highlights the urgent need for these institutions to adapt to technological advancements. Despite the potential of technology and innovation to enhance learning outcomes, foster critical thinking, and improve students' readiness for the labor market, many institutions in Benue State remain constrained by inadequate funding, limited training for educators, and insufficient policy support. Consequently, graduates may lack the skills needed to navigate the rapidly changing social and technological landscape.

This problem necessitates a comprehensive exploration of how technology and innovation can be harnessed to transform the sociology of education in tertiary institutions in Benue State addressing these challenges is crucial for producing graduates who can contribute meaningfully to societal development and for ensuring the relevance of sociology education in an increasingly digital world.

Research Questions

1. What is the extent of technology use in teaching and learning sociology of education in tertiary institutions in Benue State?
2. How do innovative practices impact tertiary students teaching and learning outcomes in Benue State?

Methodology

This study adopted descriptive survey design to gain a comprehensive understanding of how technology and innovation are transforming the sociology of education at

tertiary institutions in Benue State. Population for this study includes tertiary students, and administrative staff of tertiary institutions in Benue State. The institutions were selected based on their use of technology in the classroom and their involvement in creative approaches. A simple random sampling method was used to determine the sample size of 150 studentsto ensure representation across different demographics such as age, gender, academic discipline, and level of study. The data was collected using questionnaire titled "Technology and Innovation in Sociology of Education" (TISE).The questionnaire was validated by three expertsinTechnology and Innovation in Sociology of Educationbefore **f**inally adopting the corrected instrument for the study. The reliability coefficient was established using Cronbach alpha, which yielded 0.85. Descriptive and inferential statistics, including frequency tables and percentages, were used for analysis.

Results

Research Question 1: What is the current extent of technology use in teaching sociology of education in tertiary institutions Benue State?

Table 1: Extent of Technology Use in Teaching and Learning Sociology of Education

Technology Tools	Usage Frequency	Percentage (%)
E-learning platforms	85	56.7
Multimedia projectors	65	43.3
Online research databases	72	48.0
Social media tools	92	61.3

Table 1 reveals a moderate use of technology in teaching sociology of education in tertiary institutions in Benue State, with social media tools being the most commonly used (61.3%), followed by**e-**learning platforms(56.7%). Online research databases were utilized by 48.0% of respondents, indicating their importance in academic research. Multimedia projectors had the lowest usage at 43.3%, suggesting that while some technology tools are integrated into teaching, there is potential for greater adoption of multimedia and other e-learning tools. Overall, the frequent use of social media tools reflects a shift toward informal and accessible platforms for enhancing student engagement and learning.

Research Question 2: How do innovative practices impact students' learning outcomes in tertiary institutions in Benue State?

Table 2: Impact of Innovative Practices on Tertiary Students Teaching and Learning Outcomes

Learning Outcome	Before Innovation	After Innovation	Improvement (%)
Engagement level	45%	80%	35
Critical thinking skills	40%	75%	35
Academic performance	50%	82%	32

The table 2 reveals a significant improvement in students' learning outcomes after the introduction of innovative practices**.** Engagement levels increased from 45% to 80%, reflecting a 35% improvement, indicating a substantial boost in student participation. Critical thinking skills saw a 35% improvement, rising from 40% before innovation to 75% after, highlighting the effectiveness of innovation in enhancing students' analytical abilities. Similarly, academic performance improved from 50% to 82%, a 32% increase, suggesting that innovative practices had a positive impact on students' overall academic achievements. These results demonstrate the significant benefits of innovation in fostering higher levels of engagement, critical thinking, and academic success among students.

Discussion of Findings

On the extent of technology use in teaching and learning sociology of education. The results from Research Question 1**,** indicates where social media tools (61.3%) and e-learning platforms (56.7%) were the most frequently used technologies, reflect the growing adoption of digital tools to foster engagement and interaction among tertiary students. The findings from this study align with previous research, such as Abah et al. (2021)**,** which demonstrated that technology enhances learning outcomes in educational settings. These findings also echo Okoro and Nwafor's (2018) study, which showed that e-learning platforms significantly enhance tertiary students' engagement in Nigerian Universities.

Also Impact of Innovative Practices on Tertiary Students Teaching and Learning Outcomes, The findings of the also particularly in engagement, critical thinking, and academic performance. This is consistent with Nwachukwu et al. (2022) who found

that innovative teaching practices impacts significantly improve tertiary students' achievement in resource-constrained environments.

Conclusion

In conclusion, the integration of technology and innovation into sociology of education in tertiary institutions in Benue State holds significant potential for enhancing tertiary students' engagement, critical thinking, and academic performance. The transformative benefits of technology and innovative practices can only be achieved through systemic reforms that focus on improving financial resources, upgrading infrastructure, and equipping educators with the necessary skills to effectively utilize technology in teaching.

Recommendation

Based on the findings, the study recommended that educators, policy makers should collaborate using potentials of technology to create equitable, effective educational system in tertiary institutions across the board.

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