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STUDENTS' PERCEPTION ON THE IMPACT OF TEACHING WITH TECHNOLOGY AND INTEREST IN ACADEMIC WORK IN SOUTH – SOUTH GEO–POLITICAL ZONE OF NIGERIA

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ABSTRACT
The aim of this study was to investigate to investigate Students' Perception on the Impact of Teaching with Technology and Interest in Academic Work in South – South Geo-political Zone of Nigeria. Based on the objectives, three research questions were raised to guide the study. The study adopted the survey research design; the study population comprises of all the public senior secondary students of 2023/2024 academic session in the South – South Geo-political Zone of Nigeria. A sample size of 400 senior secondary two (SS 2) students was selected using the multistage sampling technique.The instrument for data collection was a self-constructed questionnaire titled "Students Perception on the Impact of Teaching with Technology and Interest in Academic Work Questionnaire (SPITTIQ)", which had been validated and subjected to a cronbach alpha reliability index of 0.80 and 0.84 for each measure.The analysis was done using mean and standard deviation and Pearson r with aid of IBM Statistical Package for Social Science (SPSS) version 26.0. The results revealed positive students' perception on the impact of teaching with technology and their interest in academic work in Rivers State. The result r-value of .87 reveals a relationship between teaching with technology and students' interest in academic work. In conclusion the study indicates that students generally view technology-enhanced teaching as a positive and effective tool for improving engagement, comprehension, and motivation in learning. Based on these findings, it is recommended that schools should invest in technological infrastructure, provide adequate training for teachers on digital instructional methods and ensure equitable access to technological resources for all students.

Keywords: Students' Perception, Teaching with Technology, Interest in Academic Work, South – South Geo-political Zone

INTRODUCTION
Most research work today in our society both home and abroad are more concerned with students' performances or achievement, rather than what gives the students the interest to study in their academic work. Hidi as cited in Harackiewicz and Hulleman (2010), described interest as a process that contributes to learning and achievement. i.e., being interested in any subject or topic is a mental resource that facilitates learning, which in turn leads to better performances as well as achievements. So the researcher observed that interest in students' academic work; will bring about good performances or outcomes, and the teachers are the main determinant that will bring about this good performances or outcomes from students. In the world today, several policies of education have explicitly included technology

requirements in process of teachers' qualification (Mouza et al., 2014), which Voogt, et al. (2016) considered the requirement of technology as an active agent shaping the educational practices. It has been argued that in order to use appropriate tools of technology in teaching, the teachers need to have a well-grounded Technological Pedagogical Content Knowledge (Cox & Graham, as cite in Abadom, 2020). Which according to Mishra and Koehler in Abadom (2020), is a blend of pedagogical knowledge (PK), content knowledge (CK), and technology knowledge (TK) and has been addressed in many research studies as an indicator of successful technology use. He further described that, the Technological Pedagogical Knowledge (TPK)is knowledge of the existence, components, and capabilities of various technologies as they are used in teaching and learning processes or settings and conversely, knowing how teaching might change as the result of using particular technologies.

As one can see with the evolution of technology in general, educational capabilities in particular are growing and as well changing day by day. No wonder Tondeur, et al. (2012), posit that, technology in this 21st century society is an essential knowledge and skill needed for everyone. And when technology is combined into lessons, students are expected to be more interested in the subjects they are studying. Evidence have shown that, most classroom around the globe have implemented several forms of technology in order to enhance students interest as well as achievement.

Problem

Student's academic performance in our societies is a topic of great concern to parents, teachers', stakeholders and even researchers. Many empirical studies in Nigeria such as Kpolovie, et al (2014); Fehintola, (2014); Charles, (2015); Gogo and Nduka, (2017) etc., had indicated that most secondary school students' academic performances are low. Take for instance the following unexpected low performances of Senior School Certificate Examination, UTME, Post UTME results etc. this shows that, the students' outcomes do not match the government and parental investment. The persistent poor performance of students is a problem of concerned. It is against this dropping in students' performances that the researcher is undertaking this investigation "Students Perception on the Impact of Teaching with Technology and Interest in Academic Work in South – South Geo-political Zone of Nigeria" to see if teaching is augmented with technology will stimulate the students' interest in their academic work in this 21st century society.

Aim and Objectives

The aim and objectives of the study was to investigate the Students Perception on the Impact of Teaching with Technology and Interest in Academic Work in South – South Geo-political Zone of Nigeria. In specific, the study sought to:

1. Examine the students' perception on the impact of teaching with technology in South – South Geo-political Zone of Nigeria.

2. Examine the students' perception on interest in academic work in South – South Geo-political Zone of Nigeria.

3. Investigate the students' perception on the impact of teaching with technology and interest in academic workin South – South Geo-political Zone of Nigeria.

Research Questions

The following research questions were raised to guide the study:

1. What is the students' perception on the impact of teaching with technology in South – South Geo-political Zone of Nigeria?

2. What is the students' perception on interest in academic work in South – South Geo-political Zone of Nigeria?

3. What is the relationship between students' perception on the impact of teaching with technology and interest in academic work in South – South Geo-political Zone of Nigeria?

LITERATURE REVIEW

Conceptual Review

Technology

The term "technology" refers to advancements in the methods and tools we use to solve problems or achieve a goal. The origin of technology according toOlaoye as cited in Onipede, (2010) is traced from the word "techne"; which means, activities by which man searches to adapt to his environment. The term technology has a large scope; the large scope has led to the various definition of technology. According to Olaoye (2009), he defined technology as the transformation of a theoretical idea to a practical skill in order to produce the objects of one's need. Homby (2002), defined technology as a scientific knowledge utilized in practical ways, especially in the designing of new machines, machineries as well as equipment.Grisham and Wosley (2006), they defined technology as the practical form of scientific knowledge or the science of application of knowledge to practical. From the various definitions of technology, technology can be seen as equipment or machines that can be applied to make difficult task to become seamlessly simple and more effective. It can be applied in many facets of our lives Abadom and Charles (2022), including our education system. In connection with the educational system, technology in teaching can encompass all kinds of tools, ranging from low-tech pencil, paper, and chalkboard, to the use of presentation software, or high-tech tablets, online collaboration and conferencing tools and more.

However in our contemporary society (Abadom & Charles, 2022), some of the most commonly used technologies to make teaching and learning process efficient are; Desktop and laptop Computers, Internet, Projectors, Audio Enhancements, Electronic bulletin board, Interactive Whiteboard, Television, Video tape recorder etc. These facilities are the most commonly used technological facilities in our classroom environment more especially the Desktop/laptop Computers, Internet, Projectors and Audio Enhancements (Abadom & Charles, 2022).

Impact of Technology in Teaching

The role of technology in the world of education has been ever changing. It has been supported in various ways to teach and learn. Most recently, technology has been a new phenomenon to help motivate, differentiate and permit students to achieve and excel in ways that, they have never been able to do before. Garcia et al., (2015) asserted that, the extensive use of technologies by students can positively impact students in accomplishing better course grades as well as finishing their course on time. According to Johnson (2003), the computer and technology, if used correctly, has the ability to "invoke dream in the minds of visionary educators who saw endless potential for altering traditional notions of teaching and learning" (p. 2). It has also been observed that learners of this 21st century are more innovative and interested in technological driven tasks. In addition, the newest technologies allow us to try things in physical and virtual classrooms that were not possible before. Today,technology is used in almost every part of our life, due to its increasing significance which the classroom is not an exception.

Students Interest in Academic Work

Krapp and Prenzel, (2011) sees interest as a representation of a specific and distinguished relationship between an individual and an object, that can be refer to concrete things such as a topic, a subject or an idea. Though students may expressed interest or non-interest in any subjects. The degree of an individual's interest has consistently been found to be a powerful influence on learning (Subramaniam in Abadom, 2018). He believes that interest influences an individual's attention, goals, as well as levels of learning. In a study by Thomas (2013) on "students' interest in academic work" she discovered that, there was a growing distance between the teachers and students; the interest levels were highest in teacher less classes while the delivery of the content experience was often a blot. However in situations where students believed that a teacher genuinely cared for them, will come to class once she or he is able, and that they (the students) will be actively involved in the lesson, they eagerly looked forward to that class. On the contrary, where the opposite situation existed, feelings of isolation, confusion, mistrust, hurt, anger, and resentment between teacher and student existed. No wonder Harackiewicz and Hulleman (2010), in their correlational study found out that, achievement goals and task values can work together in the development of subsequent interest. Support from significant others can have a substantial impact on adolescents' interest in academic work, overall academic performance, and other aspects of school (Thomas, 2013).

Farruggia et al. (2016) suggested that achieving academic success is closely linked to the development of a strong academic mindset. Students who demonstrate a high level of academic interest are more likely to continuously refine and expand their learning skills, particularly in subjects such as accounting. This is especially significant because accounting is often perceived as a difficult and uninteresting subject, which can negatively influence students' engagement and academic performance (Kögler& Göllner, 2018). Furthermore, academic interest has been found to have a strong relationship with self-efficacy, meaning that students who possess a higher level of interest in their studies tend to develop greater confidence in their abilities. This, in turn, has a considerable impact on their learning outcomes and overall academic achievement (Fallan & Opstad, as cited in Mappadang et al., 2022).

Empirical research has further supported the notion that academic interest plays a crucial role in educational success. For instance, studies conducted by Ahinful et al. (2019) and Pérez-López & Ibarrondo-Dávila (2020) identified a significant correlation between academic interest and student performance. However, other studies have suggested that the relationship between academic interest and achievement may not always be direct. For example, Lee et al. (as cited in Mappadang et al., 2022) found that while academic interest influences achievement, the relationship is indirect, suggesting that other mediating factors may be at play. On the other hand, contrasting findings have also emerged in the academic literature. A study conducted by Zhang and Wang (2020) in the field of mathematics reported no significant correlation between students' level of interest and their academic performance. This suggests that the role of academic interest in determining success may vary across different subjects and educational contexts, highlighting the complexity of the relationship between student motivation, engagement, and achievement.

Theoretical Review

The study adopted the Technology Acceptance Model (TAM). The model was developed byFred Davis in the year 1989. It is a theoretical model that explains the way in which users accept and embrace technology. The Technology Acceptance Model postulates that, the actual technology usage is shaped by behavioural intent. The model proposed that, perceived usefulness of new technology regulates the mind or attitude of a user towards the innovation.

While on the other hand, perceived easy used influences the users' utilization of technology. In general, the model assumes that once perceived usefulness as well as perceived ease of use interacts and the purpose to act is developed; then an individual is boundlessly able to act. According toDavis et al. (2002), this has been seen as the main limitation of the Model, since in reality people face constraints such as time, limited ability as well as organizational and environmental restraints. However in spite of the limitation of the model, when comprehending the way technology is advancing, it would have positive impact on students' interest in academic work.

Empirical Review

Mappadang et al. (2022) investigated "Academic Interest Determines the Academic Performance of Undergraduate Accounting Students: Multinomial Logit Evidence". Their major objective was to assess student's academic interest, learning attitude, and learning quality as well as control variables for the academic performance improvement of undergraduate students in Indonesia. They adopted the cross-sectional survey design and a sample size of 872 respondents was drawn from the target population. Data collection was done using the structured questionnaire and analysed using the multinomial logit regression model. The results showed that academic interest was proved to determine significantly the academic performance. However, the learning attitude and learning quality did not contribute to the student's academic performance. High academic interest students possessed a bigger chance to have better academic performance. Meanwhile, learning attitude and learning quality indicated otherwise, decrease the students' academic performance.

Stine and Guro (2017) studied the Effects of Technology on Students' Academic Performance: Rollout of Individual Laptops in Norwegian Upper Secondary Schools. Their study aim was to analyze the causal effect of the one to one laptop program in upper secondary education in Norway on the performance in three common core subjects namely: First-choice form of Norwegian, second-choice form of Norwegian and English. Their analysis was performed on a sample of 289 upper Secondary Schools in a time period from 2003 to 2016. They exploit data on average grades at school level and the rollout of the one-to-one laptop program across the country by using a generalized difference in difference approach and an event study specification. Their results indicated no clear benefits of technology use on academic performance in upper secondary education as no statistically significant effects were found.

Al-Hariri and Al-Hattami (2017), investigated the impact of students' use of technology on their learning achievements in physiology courses at the University of Dammam. The aim of their study was to investigate the possible relationship between students' use of technology and their academic achievements. Survey design was adopted and a population of health college students of Medicine, Dental, Clinical Pharmacy, Applied Medical Sciences, and Nursing from which a sample of 231 2nd year students were drawn. Pearson r and descriptive statistics were implemented to study the frequency and the relationship between, technology and learning achievement in physiology courses. From the findings, their study observed a significant relationship between students' use of technology and their achievements in the colleges. Their findings also demonstrated that, the most used devices are laptops (50%) and phones (42%) followed by tablets (7%) and desktop computers (0.5%). Based on their findings, they concluded that technology usage might produce comparatively more significant increases in academic achievement than would non usage.

Adeniyi, (2015), investigated the Effects of Information and Communication Technology (ICT) on Secondary School Students' Economics Performance in Kaduna State. The main purpose of her study was to investigate the performance of SS2 Economics students taught

with the use of CAI and those taught with the conventional method of teaching. Six research questions were raised and six hypotheses were formulated for the study. The research design adopted was quasi experimental and a target population of 23,406 public senior secondary two students in 12 educational zones of Kaduna State, which the stratified random sampling technique was used to draw 200 SS 2 Economics students. The instrument for data collection was a developed Economics Achievement Test (EAT) 40 items multiple choice objective test and ten fill in the blank questions which had been validated and tested for reliability. Analysis of the study was done using mean and standard deviation and two sample t-test. The findings amongst others revealed that, students taught with the use of Computer Assisted Instruction (CAI) performed significantly better than those taught without CAI. The findings also revealed that, the use of CAI in teaching Economics is not significantly affected by school location. Based on the findings, it was concluded that school location does not affect the performance of Economics students with the use of CAI. It was therefore recommended amongst others that CAI programme be encouraged as an effective tool for teaching and learning of Economics in schools.

Ullah, et al. (2019), investigated the Impact of ICT on Students' Academic Performance: Applying Association Rule Mining and Structured Equation Modeling. The aim of their study was to examine the effect of ICT on the students' academic performance at different universities in Chittagong, Bangladesh.They adopted the comparative research design, and their data collection was done using a survey questionnaire from the sampled universities in Chittagong. Their data analysis employed descriptive statistics, reliability analysis, Confirmatory Factor Analysis (CFA), OLS Regression, Structured Equation Modeling (SEM) and Data Mining Algorithms such as Association rule Mining and Éclat to evaluate the importance of the factors in identifying the academic performance of students. From their findings, the overall result indicated that; there is a significant relationship between ICT use and students' academic performance. Also, their finding revealed that students' addiction to ITC has a significant influence on the comparative measurement in identifying the academic performance of the students. As result of their findings; they gave some recommendation that: Technology should be used for own advancement and should control the unnecessary use of technology, Students should use ICT for their academic purposes most of the time, All the university should adopt the technology for academic purposes, Students should make aware of ICT use in Education etc.

Yebowaah (2018) investigated Internet Use and its Effect on Senior High School Students in Wa Municipality of Ghana. His aim was to investigate the use of internet and its impact on Senior High School students in the Wa Municipality of Ghana. A cross sectional survey design was employed to accomplish the research aim and specific objectives. The multistage sampling procedure was used in the selection of 314 third year Senior High School Students. The data collected from administered questionnaire were analysed both descriptive and inferential statistics of Chi-Square and Analysis of Variance (ANOVA). The findings indicated that, the source of internet to the students are; the school Information Communication Laboratory, Mobile Phones, Household Internet Facilities and Public Internet Cafes. In addition, students' access to internet was found to have a positive influence on their academic performance. Again different uses of the internet among students do not influence their academic performance. He concluded that availability of different internet sources to students does not grant all of the students immediate access. He recommended that Heads of Senior High School should liaise with policy makers and management of Ghana Education Service to provide internet infrastructure in schools.

Oseghale and John (2014) investigated the Impact of Computer Literacy on Students' Academic Performance in Senior Secondary Schools in Esan West Local Government Area,

Edo State, Nigeria. The aim of their study was to examine the impact of computer literacy on students' academic performance. Four research questions were raised to guide the study. The descriptive survey research design was adopted and a population of 14 senior secondary schools consisted of 1,200 students, which 120 final year student were randomly selected for the study. The instrument for the study was self-structure questionnaire titled "Questionnaire on Students' Computer Literacy Level and Computer Usage (QSCLLCU)", which the data gathered were analysed using mean difference statistics. The study findings revealed among others were: computer literate students perform better than non-computer literate; computer literate female students perform better than male students who are also computer literate; computer literate students who are not addicted to the use of computer facilities perform better than those who are addicted; computer literate students in co-educational secondary schools perform slightly better than those in single sex schools. Based on the findings, it was recommended that, all the students in LGA should be taught how to use computer facilities to search for valid information related to their academic work.

METHODOLOGY

This study adopted the descriptive survey design. The study population comprises of all the public senior secondary students of 2023/2024 academic session inthe South – South Geo-political Zone of Nigeria.A sample size of 400 senior secondary two (SS 2) students was selected using the multistage sampling technique. From theSouth – South Geo-political Zone, four states – Akwa Ibom, Bayelsa, Delta and Rivers State were selected; from each of the selected states, five schools were selected; from each of the selected five schools, twenty senior secondary two (SS 2) were selected. The instrument used for this study was a questionnaire titled "Students Perception on the Impact of Teaching with Technology and Interest in Academic Work Questionnaire (SPITTIQ). The questionnaires were of likert scale with four options of Strongly Agree with 4 points, Agree with 3 points, Disagree with 2 points and Strongly Disagree with 1 point that was subjected to face and content validity and a Cronbach alpha reliability technique was employed to test the reliability of the instrument. The Cronbach alpha reliability technique established a reliability index of 0.80 and 0.84 for each measure. Data were gathered from the administered questionnaires of which 384 out of the 400 administered were found useful and used for the final analysis. The analysis was done using mean and standard deviation and Pearson r with aid of IBM Statistical Package for Social Science (SPSS) version 26.0. Research question one and two were answered using mean and standard deviation with a criterion mean of 2.5, while research question three was answered using Pearson r.

ANALYSIS AND RESULTS

Table 1
Students' Perception on the Impact of Teaching with Technology

Items	N	Mean	St. Dev.
Technology-enhanced teaching makes learning more engaging and interactive.	384	3.30	.460
The use of technology in teaching improves my understanding of subjects.	384	3.38	.527
I find it easier to retain information when technology is integrated into lessons.	384	3.28	.450
Digital resources have positively impacted my learning experience.	384	3.29	.455
I feel more motivated to learn when lessons incorporate technological tools.	384	3.04	.476

I am comfortable using digital learning tools provided by my school.	384	3.30	.541
Criterion Mean = 2.5			

In Table 1, the values of all the items are above the criterion mean of 2.5 and the positive standard deviation respectively. This implies positive students' perception on the impact of teaching with technology in South – South Geo-political Zone of Nigeria.

Table 2
Students' Perception on Interest in Academic Work

Items	N	Mean	St. Dev.
I am interested to learn when a teacher can choose technologies that enhance the teaching approaches for a lesson.	384	3.33	.471
I am interested to learn if a teacher technological knowledge could influence his/her teaching approaches in the classroom.	384	3.21	.478
It interests me to learn when a teacher knows how to use technology in the classroom.	384	3.23	.424
It interests me to learn when a teacher can adapt the use of the technologies to different teaching activities.	384	3.39	.489
It interests me to learn when a teacher can use strategies that combine content, technologies and teaching approaches.	384	3.29	.490
I am interested to learn when a teacher can choose technologies that enhance the content for a lesson.	384	3.31	.504
Criterion Mean = 2.5			

In Table 2, the values of all the items are above the criterion mean of 2.5 and the positive standard deviation respectively. This implies positive students' perception on interest in academic work in South – South Geo-political Zone of Nigeria.

Table 3
Relationship between Students' Perception on the Impact of Teaching with Technology and Interest in Academic Work

Variables	n	r	Remarks
Teaching with Technology			
	384	.873	High Positive Relationship
Interest in Academic Work			

In Table 3, the r-value of .87 reveals a high positive relationship between teaching with technology and students' interest in academic work. This result implies that as teaching with technology increases, there is also a corresponding increase in interest in academic work in South – South Geo-political Zone of Nigeria.

Discussions

The results from research question one revealed the positive students' perception on the impact of teaching with technology in South – South Geo-political Zone of Nigeria.This result is similar with the findings ofAdeniyi, (2015) and Al-Hariri and Al-Hattami (2017).

Adeniyi, (2015), investigated the Effects of Information and Communication Technology (ICT) on Secondary School Students' Economics Performance in Kaduna State. The main purpose of her study was to investigate the performance of SS2 Economics students taught with the use of CAI and those taught with the conventional method of teaching. The findings amongst others revealed that, students taught with the use of Computer Assisted Instruction (CAI) performed significantly better than those taught without CAI. The findings also revealed that, the use of CAI in teaching Economics is not significantly affected by school location. Al-Hariri and Al-Hattami (2017), investigated the impact of students' use of technology on their learning achievements in physiology courses at the University of Dammam. The aim of their study was to investigate the possible relationship between students' use of technology and their academic achievements. From the findings, their study observed a significant relationship between students' use of technology and their achievements in the colleges. Their findings also demonstrated that, the most used devices are laptops (50%) and phones (42%) followed by tablets (7%) and desktop computers (0.5%). Based on their findings, they concluded that technology usage might produce comparatively more significant increases in academic achievement than would non usage.

The results from research question one revealed two the positive students' perception on the impact of teaching with technology in South – South Geo-political Zone of Nigeria.This result is also similar with the findings ofMappadang et al. (2022). Mappadang et al. (2022) investigated "Academic Interest Determines the Academic Performance of Undergraduate Accounting Students: Multinomial Logit Evidence". Their major objective was to assess student's academic interest, learning attitude, and learning quality as well as control variables for the academic performance improvement of undergraduate students in Indonesia. The results showed that academic interest was proved to determine significantly the academic performance. However, the learning attitude and learning quality did not contribute to the student's academic performance. High academic interest students possessed a bigger chance to have better academic performance. Meanwhile, learning attitude and learning quality indicated otherwise, decrease the students' academic performance.

The results from research question three revealed there is a relationship between teaching with technology and students' interest in academic work in South – South Geo-political Zone of Nigeria. This result is similar with the findings of Ullah, et al. (2019) and Yebowaah (2018). Ullah, et al. (2019), investigated the Impact of ICT on Students' Academic Performance: Applying Association Rule Mining and Structured Equation Modeling. The aim of their study was to examine the effect of ICT on the students' academic performance at different universities in Chittagong, Bangladesh. From their findings, the overall result indicated that; there is a significant relationship between ICT use and students' academic performance. Also, their finding revealed that students' addiction to ITC has a significant influence on the comparative measurement in identifying the academic performance of the students. Yebowaah (2018) investigated Internet Use and its Effect on Senior High School Students in Wa Municipality of Ghana. His aim was to investigate the use of internet and its impact on Senior High School students in the Wa Municipality of Ghana. The findings indicated that, the source of internet to the students are; the school Information Communication Laboratory, Mobile Phones, Household Internet Facilities and Public Internet Cafes. In addition, students' access to internet was found to have a positive influence on their academic performance.

CONCLUSIONS/RECOMMENDATIONS

This study explored students' perceptions of the impact of teaching with technology on their interest in academic work in South – South Geo-political Zone of Nigeria. Findings indicate that students generally view technology-enhanced teaching as a positive and effective tool for

improving engagement, comprehension, and motivation in learning. The integration of digital tools, multimedia resources and interactive teaching methods has contributed to increased student participation and a more stimulating learning environment. Based on these findings, it is recommended that schools should invest in technological infrastructure, provide adequate training for teachers on digital instructional methods and ensure equitable access to technological resources for all students.

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