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UTILIZATION OF DIGITAL SKILLS ON STUDENTS' ACADEMIC ASSESSMENT IN PUBLIC SECONDARY SCHOOLS IN RIVERS STATE

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Abstract
The study investigated the connection between digital skills usage and students' take-home assignments in public junior secondary schools in Rivers State. Two research questions and two null hypotheses were formulated to guide the study. A correlational research design was used, with a focus on a population of 38,518 students. A sample size of 400 students was determined using the Taro Yamane formula. Data was collected using a researcher-developed instrument, the Utilization of Digital Skills Questionnaire (UDSQ), which had a reliability coefficient of 0.80. The Pearson Product Moment Correlation Coefficient was applied to analyze the research questions and test the hypotheses at a 0.05 significance level. The results showed a significant correlation between computer use and students' take-home assignments, as well as a significant link between smartphone use and students' take-home assignments. The study concluded that both computer and smartphone usage significantly and positively influenced students' take-home assignments. Based on these findings, the researcher recommended that students be encouraged to use computers and smartphones for their assignments, with proper monitoring to avoid misuse.

Introduction

Digital talents are the capacity to effectively use a range of technologies, including computers, smartphones, fax machines, satellites, the internet, email, radio, and television. These technologies are crucial for improving communication, learning, and evaluation by enabling virtual interactions between educators and learners. Digital skills are particularly crucial for educational institutions without physical campuses to stay up with the growing trend of online learning. Tools like e-books and e-libraries enable instantaneous global connectivity, removing the need for travel and saving time, money, and resources. The integration of digital skills has had a major impact on global education (Evey et al., 2010), and their significance in educational assessments is increasingly being acknowledged (Okoro & Ekpo, 2016). Digital tools have revolutionized

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research and teaching methods. Accurately evaluating students' knowledge requires improved motivation and engagement, which digital tools provide (Davis and Tearle, 2014, cited in Yusuf, 2015). Ashley (2016) highlights how digital technology fosters critical problem-solving abilities and discusses the importance of preparing children for success in a technologically sophisticated society. When digital resources are integrated into instruction and assessment, students acquire critical workforce skills and benefit from a more flexible and adaptive educational experience. Abubakar (2016) emphasizes the value of digital skills in education by showing how they may facilitate the usage of various digital platforms, foster knowledge development, and give teachers and students access to a wealth of online resources. These abilities enable teachers to employ a range of instructional and evaluation strategies, letting students select the ones that best suit their individual learning preferences. Additionally, the interconnection of the modern digital environment is reflected in the use of digital skills to facilitate global collaboration between instructors and students (Barun, 2014). Additionally, they facilitate learning from any location at any time, and they relieve teachers of some of their workload by providing them with instant feedback through digital assessments. Additionally, by giving teachers immediate feedback through digital exams, they ease the burden of teaching and make it easier for students to learn from anywhere at any time.

Research Question

The following research questions guided the study;

1. To what extent dose use of computer relate to students' take-home assignment in public junior secondary schools in Rivers State?
2. To what extent dose use of smartphone relate to students' take-home assignment in public junior secondary schools in Rivers State?

Research Hypotheses

The following research hypotheses were tested at 0.05 level of significance.

1. There is no significant relationship between use of computer and students' take-home assignment in public junior secondary schools in Rivers State.
2. There is no significant relationship between use of smartphone and students' take-home assignment in public junior secondary schools in Rivers State.

Method

This study employed a correlational research design and focused on a population of 38,518 junior secondary school students from 178 schools in Rivers State, as reported by the Ministry of Education (Rivers State Post Primary Schools Board, 2018).

The sample size was determined using the Taro Yamane formula, yielding a total of 400 students. Participants were selected through simple random sampling, with 40 students chosen from each of 10 purposively selected schools, resulting in a final sample of 400 students.

Data collection was carried out using the "Utilization of Digital Skills Questionnaire (UDSQ)," developed by the researcher. The questionnaire consisted of two sections: Section A, which gathered demographic information, and Section B, which included 20 items with five response options (Strongly Agree, Agree, Disagree, Strongly Disagree) to measure the study's variables.

Results

Research Questions One: To what extent use of computer relates to students' take-home assignment in public junior secondary schools in Rivers State?

Hypothesis One: There is no significant relationship between use of computer and students' take-home assignment in public junior secondary schools in Rivers State

Table 4.1: Relationship between use of computer and Students' take-home assignment

Correlations

		Use of computer	Students' take-home assignment
Use of computer	Pearson Correlation	1	-0.18**
	Sig. (2-tailed)		.001
	N	380	387
Students' take-home assignment	Pearson Correlation	-0.18**	1
	Sig. (2-tailed)	.001	
	N	.387	387

**. Correlation is significant at the 0.05 level (2-tailed).

Table 4.1 revealed a correlation of -0.18 between computer use and students' take-home assignments in public junior secondary schools in Rivers State, indicating a weak negative relationship. Additionally, this correlation was found to be statistically significant at the 0.05 level, with a p-value of 0.001, which is below the 0.05 threshold. Consequently, the null hypothesis is rejected, supporting a meaningful association between computer use and students' take-home assignments in these schools.

Research Questions Two: To what extent use of smartphone relates to students' take-home assignment in public junior secondary schools in Rivers State?

Hypothesis Two: There is no significant relationship between use of smartphone and students' take-home assignment in public junior secondary schools in Rivers State.

Table 4.2: Relationship between the Use of Smartphone and Students' Take-Home Assignment in Public Junior Secondary Schools in Rivers State

Correlations

		Use of smartphone	Students' take-home assignment
Use of smartphone	Pearson Correlation	1	-0.65**
	Sig. (2-tailed)		0.000
	N	380	387
Students' take-home assignment	Pearson Correlation	-0.65**	1
	Sig. (2-tailed)	0.000	
	N	387	387

**. Correlation is significant at the 0.05 level (2-tailed).

Table 4.2 reveals a significant negative correlation of -0.65 between smartphone usage and students' performance on take-home assignments in public junior secondary schools in Rivers State, indicating a strong inverse relationship. This correlation is statistically significant at the 0.05 level, with a p-value of 0.000, which is well below the established significance threshold. As a result, the null hypothesis is rejected, suggesting a meaningful association between smartphone usage and students' performance on assignments in these schools.

Discussion of Findings

The analysis of research question one and hypothesis one (Table 4.1) shows a weak negative correlation between computer usage and students' performance on take-home assignments in public junior secondary schools in Rivers State. This implies that increased computer usage by students tends to correlate with lower performance on assignments. However, this relationship remains statistically significant at the 0.05 level. These

findings challenge the positions of Antonelli (2018), Andoh (2017), and Avinash (2018), who suggested that excessive computer use negatively impacts academic performance by reducing time allocated for studying.

Similarly, the findings from research question two and hypothesis two (Table 4.2) show a negative correlation between greater smartphone usage and students' performance on take-home assignments. This indicates that higher smartphone usage is linked to poorer performance on assignments. This correlation is also statistically significant at the 0.05 level. These findings contradict previous studies by Murray (2017), Marriem and Cafarella (2019), and Ndubueze (2018), who reported a negative relationship between smartphone usage and academic performance.

Conclusion

The study's results lead to the conclusion that there is a notable relationship between computer usage and students' performance on take-home assignments in public junior secondary schools in Rivers State. Additionally, the study affirms a significant link between smartphone usage and students' performance on these assignments.

Recommendations

Based on the study's outcomes, the following recommendations are suggested:

1. Students should be encouraged to use computers for academic purposes, under proper supervision to ensure focused and productive usage.
2. Students should be encouraged to use smartphones for educational purposes, with appropriate monitoring to minimize distractions and prevent misuse.

Suggestions for Future Research

The researcher proposes the following directions for future studies:

1. Future research should examine the impact of other digital technologies not covered in this study to gain a broader understanding of their effects on students' academic performance.
2. Future studies should involve a larger sample size to enhance the generalizability and applicability of the findings.

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