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Instructional Resources And Academic Performance Of Business Education Students Of State-Owned Universities In Rivers State

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Abstract

This paper investigated instructional resources and academic performance of business education students of state-owned universities in Rivers State. Three research questions and three null hypotheses were used for this paper. A correlational survey research design was used for the paper. The population consisted of 2,467 students, comprised of 2,323 students and 144 students from Ignatius Ajuru University of Education and Rivers State University respectively. A sample of 740 business education students was used. Stratified random sampling technique was used to select the students from the two institutions. Two structured questionnaires titled- "Instructional Resources Questionnaires (IRQ)" and "Students Academic Performance Questionnaire (SAPQ) were used for the data collection. The instruments were validated, with reliability index of SAPQ = 0.75 and IRQ = 0.80, derived using Cronbach Alpha statistics. Pearson Product Moment Correlational Coefficient was used to answer the research questions and test the null hypotheses at a 0.05 Alpha level of significance. The findings of the paper show a very strong and positive relationship between computers and academic performance. Also, showed that there is a significant relationship between computers and the academic performance of business education students of State-Owned Universities in Rivers State. Based on the findings, the paper concludes that; projectors, smart boards and computers are indispensable for the academic performance of business education students in State Owned Universities in Rivers State. The paper therefore recommended that; the management of state-owned universities in Rivers State should provide projectors in all lecture halls and for every level of learning to enhance the academic performance of students so that they can continue to excel in their studies and be better prepared for the workforce upon graduation. Also, the management of state-owned universities in Rivers State should consider investing in more smartboard technology and providing training for educators on how to effectively incorporate it into their teaching methods in order to further enhance the academic performance of business education students, among others.

Keywords: Instructional, Resources, Academic Performance, Job Engagement, Business Education.

Introduction

Instructional resources play a crucial role in enhancing the teaching and learning experience by offering students valuable support and guidance in understanding complex concepts. These resources encompass a variety of tools such as textbooks, online modules, multimedia presentations, and hands-on activities that cater to diverse learning styles, ultimately enriching the educational process (Ajayi, 2020). Instructional resources have the power to enhance learning through interactive and engaging content, offering personalized instruction. They can accelerate skill development, motivate students, bridge the gap between school and work, and shape the future workforce. These resources also have the potential to revolutionize education, empower teachers, and foster connections between schools and the global community (Davis, 2023; Cloke & Sharif, 2021).

Instructional resources can enhance the efficiency and productivity of schools, offering a range of tools to support teachers in their professional duties (Kirschner & Woperies, 2023). Additionally, these resources enable schools to engage in communication with each other through email, mailing lists, chat rooms, and other platforms. Additionally, it offers faster and more convenient access to up-to-date and comprehensive information, as well as the ability to perform intricate mathematical and statistical computations. Moreover, it serves as a reliable platform for researchers to share their research findings and reports (Yusuf & Onasanya, 2019).

Educators utilize resources to communicate information, involve students, and facilitate the attainment of learning goals. These resources encompass textbooks, multimedia presentations, educational apps, lesson plans, and online platforms that enhance instructional effectiveness. It is evident that the integration of instructional resources has become essential in the daily lives of a significant portion of individuals in both developed and developing nations (Kirkwood & Price, 2022). Participation in the teaching and learning community is crucial for academic success (Kozma, 2020). Phillips et al. (2020) emphasized that future learning environments will undoubtedly rely on instructional resources to support students. This study focused on three key instructional tools that impact the academic performance of business education students at State-owned universities in Rivers State: projectors, smartboards, and computer usage.

A projector is a device that displays images or video onto a surface, typically a screen or wall, allowing for a larger audience to view it. It operates by utilizing light to project the images onto the selected surface. Projectors are widely utilized in classrooms, business presentations, home theaters, and other environments where large-scale visual display is needed. They are available in different varieties, including digital projectors, overhead projectors, and multimedia projectors, each serving specific functions. Mahmud and Ismail, (2010) found that the students' use of digital projectors in the classroom led to increased engagement and improved understanding of the material being presented. Overall, projectors have become an essential tool for enhancing visual communication and learning experiences in various settings (Adeyemi & Olaleye, 2010; Adejumo, 2018).

A smart board, also referred to as an interactive whiteboard, is an innovative display system that merges a conventional whiteboard with touch and gesture recognition

technology. This interactive tool enables users to seamlessly control and engage with computer applications directly on the board's surface. Smart Boards usually utilize a projector to showcase computer-generated content on the board, allowing users to interact with the content using their fingers or a stylus. These interactive whiteboards are extensively utilized in educational settings, conference rooms, and collaborative environments. They empower educators, speakers, or attendees to interact with digital content, annotate or sketch in real-time, and integrate multimedia elements into their presentations. Smart Boards boost interactivity and support dynamic, hands-on learning or collaborative discussions. A study by Fenstermacher and Richardson (2020) found that students who used interactive whiteboards in the classroom showed higher levels of engagement and retention compared to traditional teaching methods. Furthermore, Johnson (2010) found that interactive whiteboards also increased student participation and motivation in the learning process. These findings suggest that incorporating Smart Boards into educational settings can enhance overall student learning outcomes.

A computer as an instructional tool refers to an electronic device that processes data and performs tasks according to a set of instructions called a program. The use of a computer as an educational aid can greatly enhance learning experiences by providing interactive lessons and simulations that engage students in a more dynamic way. Additionally, it allows for personalised learning experiences tailored to individual student needs and preferences (Anderson & Bushman, 2021). Brassford et al., (2021) found that students in the United States of America (USA) who had access to computers for educational purposes showed higher levels of academic achievement compared to those who did not have such access. Aydin and Tasci (2020) found that secondary schools that integrated computer technology into their curriculum saw improvements in student engagement and motivation, leading to better academic performance overall. Furthermore, Blurton (2021) explained that integrating technology into education can also help bridge the digital divide by providing equal access to resources and opportunities for all students, regardless of their background or location. This ultimately leads to a more inclusive and equitable learning environment for all students.

Effective use of instructional resources play a pivotal role in shaping the learning experiences of students, ultimately influencing their academic achievement. Just as a skilled artisan relies on quality tools, students benefit immensely when provided with well-crafted materials, engaging technologies, and innovative methodologies. The synergy between instructional resources and effective teaching practices can greatly enhance student comprehension and retention of course material, leading to improved academic performance. By integrating projectors, smartboards, and computer usage into lesson plans, business educators can create dynamic and interactive learning environments that cater to the diverse needs of business education students. By exploring the relationship between instructional resources and academic performance of business education students in state-owned universities in Rivers State, this study aims to provide valuable insights for educators and administrators seeking to optimize student learning outcomes.

Statement of the Problem

The academic performance of business education students in state-owned universities in Rivers State is notably influenced by the inadequate utilization or complete lack of essential instructional resources. These resources, which include projectors, smartboards, and computers, play a crucial role in enhancing the learning environment and improving students' engagement and understanding of complex subjects. Without these tools, students may struggle to grasp important concepts, leading to lower academic outcomes and decreased motivation.

Projectors are vital in modern education as they allow for visual presentations of course material, thus catering to various learning styles. When instructors utilize projectors effectively, they can present information more dynamically, providing students with a clearer understanding of the subject matter. However, in many state-owned universities in Rivers State, the absence of projectors or insufficient training in their use hinders the delivery of engaging lessons. As a result, students may miss out on visual aids that can better illustrate concepts, ultimately affecting their comprehension and retention of knowledge.

Similarly, smartboards represent an innovative teaching tool that fosters interactive learning experiences. These devices encourage collaboration and participation among students, allowing them to engage directly with the content being taught. However, the under-utilization of smartboards in these institutions limits students' ability to interact with their learning environment actively. When lessons lack interactivity, students may become passive recipients of information rather than active participants, which can diminish their critical thinking skills and overall academic performance.

The availability and effective use of computers is another critical factor impacting the academic performance of business education students. Computers enable access to a wealth of information, online resources, and educational software that can enhance learning experiences. Yet, many state-owned universities in Rivers State face challenges such as insufficient computer access or outdated technology. This lack of resources restricts students' ability to conduct research, complete assignments efficiently, and familiarize themselves with essential software used in the business field. Consequently, students may find themselves ill-prepared for the demands of their future careers, leading to further academic difficulties.

Consequently, the non or under-utilization of instructional resources like projectors, smartboards, and computers may be the reason for the decline in academic performance and competitiveness of graduates from these institutions in the job market. Addressing these deficiencies is imperative to ensure that students receive a quality education that prepares them for success in their academic and professional endeavours.

Aim and Objectives

This paper examined instructional resources and academic performance of business education students in State Owned Universities in Rivers State. Specifically, the following objectives were examined:

1. The relationship between projector and academic performance of business education students in State Owned Universities in Rivers State.
2. The relationship between smart boards and academic performance of business education students in State Owned Universities in Rivers State.

3. The relationship between computer and academic performance of business education students in State Owned Universities in Rivers State.

Research Questions

The following research questions were used to guide the paper:

1. What is the relationship between projector and academic performance of business education students in State Owned Universities in Rivers State?
2. What is the relationship between smart boards and the academic performance of business education students in State Owned Universities in Rivers State?
3. What is the relationship between the computer and academic performance of business education students in State Owned Universities in Rivers State?

Hypotheses

The following null hypotheses were formulated and tested to guide this paper at a 0.05 level of significance:

Ho_1: There is no significant relationship between projectors and the academic performance of business education students of State-Owned Universities in Rivers State.

Ho_2: There is no significant relationship between smart boards and the academic performance of business education students of State-Owned Universities in Rivers State.

Ho_3: There is no significant relationship between the computer and academic performance of business education students of State-Owned Universities in Rivers State.

Conceptual Clarification

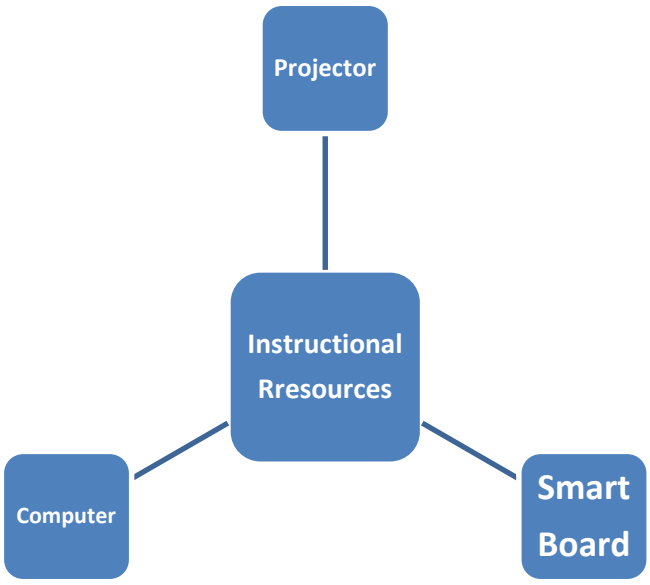

Fig. 1: Researcher's Conceptualization (2023)

Instructional Resources

Instructional resources refer to materials, tools, or content used to facilitate learning and teaching. These can include textbooks, online courses, videos, lesson plans, software, and other resources designed to help individuals acquire knowledge and skills in a particular subject or field. Jonassen (2000) views instructional resources as any information or support that facilitates learning, including technology-based tools, textbooks, and interactive multimedia. Wilson (2001) defines instructional resources as a diverse set of materials, technologies, and strategies that educators employ to create effective learning environments and facilitate the learning process. Instructional resources are tools or materials designed to facilitate learning and enhance the educational experience. These resources can take various forms, including textbooks, multimedia presentations, online courses, interactive software, and hands-on activities. The goal of instructional resources is to provide information, support understanding, and promote effective learning outcomes. They play a crucial role in diverse educational settings, from traditional classrooms to online platforms, offering educators and learners valuable tools to engage with and master academic content.

Academic Performance

Academic performance refers to a student's achievement and success in their academic endeavours. It is often measured by grades, test scores, and other assessments that reflect a student's understanding of the material and their ability to apply knowledge in an academic context. Academic performance can be influenced by various factors, including study habits, attendance, engagement in class, and the effectiveness of teaching methods. It serves as an indicator of a student's mastery of academic content and skills within a specific educational system. Hattie (2009) views academic performance as the visible outcomes of learning, emphasizing the importance of feedback, teacher-student relationships, and effective instructional strategies in enhancing student achievement. Dweck (2006) considers academic performance in the context of mindset, highlighting the impact of students' beliefs about their abilities on their motivation, effort, and ultimately, their success in learning.

Methodology

The research design adopted for this paper was correlational. The population consisted of 2,467 students, comprised of 2,323 students and 144 students from Ignatius Ajuru University of Education and Rivers State University respectively (Source: HOD of Business Education Ignatius Ajuru University of Education and Rivers State University). A sample of 710 business education students provided for 30% of the total population. Stratified random sampling technique was used to determine the sample of 710 business education students providing for 30% of the total population. The research instruments for data collection were two structured questionnaires titled- “Instructional Resources Questionnaires (IRQ)” and “Students Academic Performance Questionnaire-(SAPQ)”. The questionnaire was divided into three sections: Section: “A”, “B” and “C”. Section A- was used to gather data on the demographic variables of the respondents. On the other hand, section ‘B’ was the Instructional Resources questionnaire (IRQ) instrument, and section ‘C” was the Students’ Academic Performance Questionnaire- (SAPQ) instrument. The instruments were validated and reliability was carried out using Cronbach Alpha which yielded a reliability index of 0.75 and 0.80 respectively. Out of the 710 copies of the questionnaire that were distributed, 703 copies were retrieved giving a return rate of 51% and were used for analysis. The Pearson Product Moment Correlation (PPMC) statistics were used to answer the research questions, and test the hypotheses at 0.05 level of significance using

Statistical Package for Social Sciences (SPSS Version 25). The Strength and direction of the relationship between variables: $\pm 0.80 - 1.00$=Very strong and significant relationship, $\pm 0.60 - 0.79$ = Strong and significant relationship, $\pm 0.40 - 0.59$= Moderate and significant relationship, $\pm 0.20 - 0.39$ =Weak relationship and $\pm 0.00 - 0.19$ =Very weak relationship Source: (Ahiauzu & Asawo, 2016; Dunn 2001).

Result and Discussion

Research Question One: What is the relationship between projector and academic performance of business education students in State Owned Universities in Rivers State?

Table 1: **Pearson Product Moment Correlation Coefficient analysis showing the relationship between projector and academic performance of business education students in State Owned Universities in Rivers State.**

Variables	n	ΣX	ΣY	ΣX^2	ΣY^2	ΣXY	r	Remark
Projector (X) & Academic Performance (Y)	703	5324	5487	95316	100865	97834	0.70	Strong

Table 1 shows the relationship between projector and academic performance of business education students in State Owned Universities in Rivers State. The result indicated that the relationship that exists between the projector and academic performance of business education students in State Owned Universities in Rivers State is strong (r = 0.70).

Research Question Two: What is the relationship between smart boards and the academic performance of business education students in State Owned Universities in Rivers State?

Table 2: **Pearson Product Moment Correlation Coefficient analysis showing the relationship between smart boards and academic performance of business education students in State Owned Universities in Rivers State.**

Variables	n	ΣX	ΣY	ΣX^2	ΣY^2	ΣXY	r	Remark
Smart Boards (X) & Academic Performance (Y)	703	5348	5487	96032	100865	98249	0.73	Strong

Table 2 shows the relationship between smart boards and the academic performance of business education students in State Owned Universities in Rivers State. The result indicated that the relationship that exists between smart boards and the academic performance of business education students in State Owned Universities in Rivers State is strong (r = 0.73).

Research Question Three: What is the relationship between computer and academic performance of business education students in State Owned Universities in Rivers State?

Table 3: **Pearson Product Moment Correlation Coefficient analysis showing the relationship between computer and academic performance of business education students in State Owned Universities in Rivers State**.

Variables	n	ΣX	ΣY	ΣX^2	ΣY^2	ΣXY	r	Remark
Computer (X) & Academic Performance (Y)	703	5369	5487	96789	100865	98618	0.70	Strong

Table 3 shows the relationship between computer and academic performance of business education students in State Owned Universities in Rivers State. The result indicated that the relationship that exists between computer and academic performance of business education students in State Owned Universities in Rivers State is strong (r = 0.70).

Test of Null Hypotheses

Ho_1: There is no significant relationship between projectors and the academic performance of business education students of State-Owned Universities in Rivers State.

Table 4: **Pearson Product Moment Correlation Coefficient analysis showing the relationship between projector and academic performance of business education students in State Owned Universities in Rivers State.**

Variables	n	df	r	Zcal.	Zcrit.	Sig.	Decision
Projector Academic Performance	703	701	0.70	16.92	1.96	0.05	Reject: H_{O1}

Table 4 indicated that the r = 0.70, Zcal = 16.92, Ztab = 1.96, and df = 701. Thus, since Zcal > Ztab, then the result implied that the null hypothesis one is rejected at the 0.05 significant level. Therefore, there is a significant relationship between projectors and the academic performance of business education students at State-Owned Universities in Rivers State.

Ho_2: There is no significant relationship between smart boards and the academic performance of business education students of State-Owned Universities in Rivers State.

Table 5: **Pearson Product Moment Correlation Coefficient analysis showing the relationship between smart boards and academic performance of business education students in State Owned Universities in Rivers State**.

Variables	n	df	r	Zcal.	Zcrit.	Sig.	Decision
Smart Boards Academic Performance	703	701	0.73	18.44	1.96	0.05	Reject: H_{O2}

Table 5 indicated that the r = 0.73, Zcal = 18.44, Ztab = 1.96, and df = 701. Thus, since Zcal > Ztab, then the result implied that the null hypothesis two is rejected at the 0.05 significant level. Therefore, there is a significant relationship between smart boards and the academic performance of business education students at State-Owned Universities in Rivers State.

H_{O3}: There is no significant relationship between the use of computers and the academic performance of business education students of State-Owned Universities in Rivers State.

Table 6: **Pearson Product Moment Correlation Coefficient analysis showing the relationship between use of use of computers and the academic performance of business education students in State Owned Universities in Rivers State**.

Variables	n	df	r	Zcal.	Zcrit.	Sig.	Decision
Computer Academic Performance	703	701	0.70	16.92	1.96	0.05	Reject: H_{O3}

Table 6 indicated that the r = 0.70, Zcal = 16.92, Ztab = 1.96, and df = 298. Thus, since Zcal > Ztab, then the result implied that the null hypothesis three is rejected at the 0.05 significant level. Therefore, there is a significant relationship between the use of computers and the academic performance of business education students at State-Owned Universities in Rivers State.

Discussion of Findings

The findings from Table 1 showed that there is a strong and positive relationship between the projector use and academic performance. This finding is in line with the findings of Pardemean and Suparyanto (2014) found that the students' use of computer skills had a strong correlation with their achievements. Therefore, it is important to consider the influence of the use of computer skills on achievement when implementing smart boards into the learning process. A use of computer skills test should be designed and administered as a part of the student admissions requirements.

The findings from Table 2 showed that there is a strong and positive relationship between smart boards and academic performance. These findings are corroboration by the findings of Fenstermacher and Richardson (2020) found that good learners are engaged and motivated to learn precisely because they know all the processes and strategies of learning.

The findings from Table 3 showed that there is a very strong and positive relationship between computers and academic performance. The findings also showed that there is a significant relationship between computers and the academic performance of business education students at State-Owned Universities in Rivers State. These findings in corroboration with the findings of Brassford et al., (2021) found that students in the United States of America (USA) who had access to computers for educational purposes showed higher levels of academic achievement compared to those who did not have such access.

Conclusion

The instructional resources provided for business education students in State-owned universities in Rivers State play a pivotal role in shaping academic performance. The synergy between robust learning materials, skilled educators, and modern technology creates an environment conducive to holistic development. As students engage with these resources, they are empowered to excel academically, fostering a generation of

skilled professionals poised to contribute meaningfully to the dynamic field of business education.

Recommendations

Based on the findings of this paper, the following recommendations were made:

1. The management of state-owned universities in Rivers State should provide projectors in all lecture halls and for every level of learning to enhance the academic performance of students so that they can continue to excel in their studies and be better prepared for the workforce upon graduation.
2. The management of state-owned universities in Rivers State should consider investing in more smartboard technology and providing training for educators on how to effectively incorporate it into their teaching methods in order to further enhance the academic performance of business education students.
3. The management of state-owned universities in Rivers State should consider implementing policies that encourage and support increased computer use among business education students to further enhance their academic performance.

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