



Influence of Information and Communication Technology (ICT) Strategies and Business Studies Students' Academic Performance in Junior Secondary Schools in Rivers State

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Abstract

This article predicts the extent of influence of Information and Communication Technology (ICT) strategies on business studies students' academic performance in junior secondary schools in Rivers State. Two research questions guided the study, two research hypotheses were tested at 0.05 level of significance. The descriptive survey research design was adopted for the study. Area of the study was public junior secondary schools in the three senatorial Districts in Rivers State. The population comprised of 280 schools in the three senatorial Districts and 3600 Business Studies students in Rivers state to reduce cost and for convenience. A total sample of 165 schools and 360 Business Studies students were used using Yaro Yamane formula. A random sampling technique was used to select the sample size. The researcher-made instrument titled "influence of Information and Communication Technology Strategies Questionnaire" (IICTSQ) and Business Studies Performance Test (FAPT) were used to collect information for the study. The data collected were analysed using simple regression to answer the research questions and test the research hypotheses at 0.05 level of significance using the statistical package for social scientist (SPSS). The finding revealed that audio and video cassettes tapes and power point used in teaching Business Studies significantly influence students' academic performance in junior secondary schools in Rivers State. The paper concluded and deduced that these strategies make it easier to integrate listening and viewing with other learning activities, which include reading, writing, applying knowledge, practicing skills, reflecting on attitudes and values. It also, review progress and share ideas to improve students' academic performance in Business Studies in junior secondary schools in Rivers State. The paper recommended among others that, there is need for the training and retraining of business studies teachers in order to up-date the



knowledge and enhance their skills in the modern-day technology. This could be achieved by encouraging the teachers to attend workshops, conferences, in-service training and other staff development programmes. Government can assist by providing computers to junior secondary schools.

Keywords: Information and Communication Technology, Business Studies, Academic

Performance

Introduction

The use of Information and Communication Technology (ICT) strategies in teaching Business Studies in Rivers State is the gradual switching over to automation of the educational processes, not only in administration activities like students' admission, registration and evaluation but, also, in developing a customized teaching and learning management system. ICT is an electronic and technical means of capturing, storing, processing, reviewing and transmitting data and information in the teaching process. According to Ukegbu, Bola, Eneremodu, Onyemelukwe and Dikeocha (2018) Business Studies could be defined as a vocational subject that study components of business subjects that will lead an individual into understanding the business world. The various areas of Business Studies include the following: Accountancy/Book-keeping, Banking/finance, office practice, shorthand, typewriting, computer, marketing, insurance, entrepreneurship and other vocational activities.

However, teaching strategy would be methods of instruction used by the teachers to help students to learn to apply their knowledge to achieve their academic goals. Teaching effectively involves the use of tools, techniques and strategies to optimize students' learning, understanding of context and motivation to learn more. Teaching strategies, also known as instruction strategies, are methods that teachers use to deliver course materials in ways that keep students engaged and practicing different skills set for solving existing problems. Introduction of information and communication technology have transformed classroom teaching by providing alternatives to traditional teaching methods, such as the standard lecture method format by giving teachers access to a wide range of teaching tools.

Significantly, the different information and communication technology strategies do not transform the teaching of Business Studies themselves. It is the appropriate use and manipulations of these strategies by teachers that transform their teaching into adequate students' performances. These strategies have the capacity of providing the teaching in personalized, just in time, up-to-date and user-centered education activities. These strategies among others are Audio/video cassette tapes and power point. Teachers are therefore, expected to combine the knowledge of ICT strategies with practicing and professional knowledge in order to bring innovations into the classroom. The teachers are expected to modify teaching strategies in order to create student-centered learning environment instead of the traditional teacher-centered environment by adopting the ICT strategies to improve the



students' academic performance in Business Studies in junior secondary schools in Rivers State. Besides the potential of ICT in providing education to anyone, anytime and anywhere, information and communication technologies have encouraged new research and development in teaching strategies.

Nevertheless, business studies as a vocational subject is an academic subject taught in junior secondary schools and at University. It could be defined as any legal commercial activities that is directed at satisfying human needs or wants profitably. Business studies deals with how business works, how people and resources are managed and proper keeping documentation of all necessary books. According to Rabi (2019), business studies provides the society with the knowledge, understanding and skills needed for productive work or services. Productive activity involves using business resources to make goods and services that satisfy human needs and wants. Business studies provide methods and techniques of setting up and running a business venture profitably.

Similarly, Information and Communication Technology is a systematic study used for the organization, processing, communication and application of information of facts in order to provide meaning for decision making. Akamobi (2015) described ICT as the physical structure of network of computer-based system (hardware, software and media) used for the purpose of organizing, processing, communication, assessing, presenting, storing, retrieving and simplifying information when needed and in the form, it is need. ICT can enhance the quality of education by increasing teacher motivation and engagement, by facilitating the strategies to enable new ways of teaching to be learner-centered. Iyeke (2011) stated that ICT is the use of hardware and software for efficient management of information, that is, storage, retrieval, processing communication, diffusion and sharing of information for social, economic and cultural upliftment.

However, the importance of ICT in teaching Business studies is to facilitate the acquisition and absorption of knowledge, enhance educational system, improve policy formulation and execution and create a wide-range of opportunities for businesses. Ajesife (2010) asserted that ICT supports the development of skills such as flexibility, adaptability, critical thinking, problem solving and collaboration which are essential to success in this information age. ICT stimulate students' interest in Business Studies by availing them the opportunities of having access to machines, that facilitate higher-order problem solving skills. It reduces the work load of the teacher by providing him/her with ease, the necessary information he/she needs in teaching. Udeze (2008) viewed that ICT has made the teaching and learning of Business studies easier by helping teachers and students to access information, process and synthesize concepts and creatively express ideas and exchange knowledge with one another.

**Audio and video cassettes in teaching Business Studies in Junior secondary schools in Rivers State.**

One of the Information and Communication Technology strategies is Audio/Video cassettes tapes. This is an indispensable tool that teachers of Business Studies could use to teach business studies skill such as book-keeping, office practice, marketing entrepreneurship and typewriting skills. Thomas (2001) opined that audio/video cassette tape have the capacities to offer the students a higher-level control over learning process. students can listen, view, stop, start, rewind and fast forward the tape. This means that the students can use the material as often as they like. Although, audio/video cassette tapes cannot offer the moving images of the video, nor can they provide access to the amount of information for interaction, it is most accessible to both teachers and students. It is also most affordable in terms of cost, distribution and use. It is the most appropriate strategy for a wide range of teaching and learning purposes.

Similarly, ICT makes it easier to integrate listening, speaking and viewing with other learning activities, which include reading, writing, applying knowledge, practicing skills, reflecting on attitudes and value, reviewing progress and sharing ideas to improve students' academic performance in Business studies in junior secondary schools in Rivers State. Agboh (2015) expressed that the use of computer assisted instructional techniques, enhance teachers' ability to change from teaching capacity to that of a guide, and when properly handled, removing fret and embarrassment on students, which would bring about meaningful learning and students' academic performances. This transfers all the courses of teaching into specialized online teaching tools. According to Adu and Olatundum (2013), ICT increases the flexibility of delivery of education so that learners can access knowledge anyhow, anytime and from anywhere.

More so, Audio/Video cassette tapes strategy emphasizes on active teaching, enhances collaborative learning, encourages the independence of students in learning and is task-based for teachers. The audio/video cassette tape strategy enhance the ability of computers to bring realism and learner-centeredness to support teaching. Sithole and Nhete (2016) stated that there are prospects for computer-assisted teaching and learning in classroom, as emphasis is placed on authentic learning environments, realism and active student involvement in learning task. The audio/video cassette tapes would have a deep impact on the teaching and learning of Business Studies, in that, large amounts of data can be stored in them. Audio/video cassette tape enable quick processing of data and it is used as teaching and learning aids by teachers and students to search for information.

**Utilization of power in teaching Business Studies in junior secondary schools in Rivers State.**

Power point is another strategy used in teaching business studies in junior secondary school in Rivers Schools. Power point, shows a presentation of important information, charts and images. It makes it easier to create, collaborate, present ideas in dynamic and visually compelling ways. Class presentation through power point enhances the ability to capture students' attention through the various use of colours, fonts and images as well as providing visual clarity. Burke and James (2008) opined that power point stimulate classroom discussion, behaviour and attitudes among students. These include paying attention during learning, note taking and motivation to attend classes. This enhance effective teaching and learning environment for academic performance.

The power point could be used in teaching complex concepts, where sequential and logical steps must be followed, such as ledger entries to record the sale of a non-current assets, activities which aid commerce, where a diagram of aids to trade are required. The power point chronologically exhibits what and how a learner should proceed at any given state. For example, financial accounting topics such as, Manufacturing Accounts, incomplete records, partnership accounts and Bank reconciliation statements accounts can be delivered using power points, with individual components and sub-components being visually displayed and the nature of formats and presentation articulated. Similarly, in marketing, topics such as classification of products, marketing mix, organizational behaviour , types of markets and consumer behaviour can also be delivered using power points. Once mastered, students will input data using the prescribed format in attempting different sets of classroom exercises to improve on their academic performances in business studies.

Statement of the Problem

Students' failure in business studies examination is among other disturbing development to education sector in recent times in Rivers State. This is worrisome and calls for immediate attention. The poor students' academic performance in business studies could be due to the neglect of Audio and Video cassette tapes, which could have stimulated the interest of students in learning. This strategy requires less talk on the part of the teachers, more activities and contributions from the students. It is more fragile and difficult to handle. This discouraged the teachers from utilizing this strategy.

Besides, the neglect of the use of information and communication strategies could cause the poor students' academic performance in business studies in junior secondary schools in Rivers State. Inadequate qualified teachers find it difficult to use power point properly, distracts learning and induce irrelevant information on the slides. Uncontrolled speed in presenting the lecture, too strict order of slides which affect students' learning



process, neglect interaction with students and poor method of presentation hinders academic performance of business studies in junior secondary schools in Rivers State. Therefore, the above problem necessitated this study to determine the extent of prediction of utilisation of information and communication technology strategies in teaching business studies on students' academic performance in junior secondary schools in Rivers State.

Purpose of the Study

The main purpose of the study is to determine the influence of information and communication technology strategies on business studies students' academic performance in junior secondary schools in Rivers State. Specifically, this study seeks to determine the following objectives.

1. The extent to which audio/video cassette tape influence students' academic performance in junior secondary schools in Rivers State.
2. The extent to which power point influence students' academic performance in junior secondary schools in Rivers State.

Research Questions

The following research questions guided the study:

1. What is the influence of audio/video cassette tape on business studies students' academic performance in junior secondary schools in Rivers State?
2. What is the influence of power point on business studies students' academic performance in junior secondary schools in Rivers State?

Research Hypotheses

The following research hypotheses were formulated and tested at 0.05 level of significance:

- Ho₁ Audio/video cassette tapes used in teaching business studies do not significantly influence students' academic performance in junior secondary schools in Rivers State.
- Ho₂ Power point used in teaching business studies do not significantly influence students' academic performance in junior secondary schools in Rivers State.

Methodology

The descriptive research design was adopted for the study. The population of this study comprised 280 junior secondary schools from the three Senatorial Districts (Rivers West, Rivers East and South East) and 3600 business studies students (respondents) of public junior secondary schools in Rivers State to reduce costs and convenience. A total



sample of 165 schools from the three Senatorial Districts and 360 respondents in the public junior secondary schools in Rivers State constituted the sample size for the study. Yaro Yamane was used to determine the sample. A random sampling technique was used to select the sample size to guarantee the representation of the respondents in the strata. The researcher-made instrument titled: “Influence of Information and Communication Technology Strategies Questionnaire” (IICTSQ) and business studies performance test (BSPT) were used to collect information for the study. The questionnaire was on a four-point rating scale of: very great extent (4-points), great extent (3-points), little extent (2-points), very little extent (1-point). The instrument was face validated by three experts, two from the Department of Business education, one from Computer Science Education, all in the University of Uyo. Internal consistency of the instrument was obtained using Cronbach Alpha. A trial test was carried out using 30 students who did not take part in the actual study. The reliability coefficient index was 0.82. the high index made the instrument suitable for the study. Simple linear regression model was used to answer the research questions and test the research hypotheses at 0,05 level of significance using the Statistical Package for Social Scientist (SPSS). In answering the research questions, coefficient of determination (R^2) was converted to percentage. Any value that falls within the range of 1-25% was considered very little extent. 26-50% is considered little extent, 51-75% is considered very little extent, 51-75% is considered great extent, 76-100% is considered very great extent. In testing the null hypotheses, when the p-value is less than or equal to the level of significance ($p \leq 0.05$) the result is significant, hence the null hypothesis is rejected, when the p-value is greater than the level of significance ($p \geq 0.05$) null hypothesis is retained.

Results

Research Question 1: What is the influence of audio/video cassette tapes in Business Studies students’ academic performance in junior secondary schools in Rivers Studies?

Table 1: Coefficient of determination in the Regression Analysis of audio/video cassette tapes in teaching business studies and students’ academic performance in secondary schools in Rivers State.

Variables	R	R-square	% of Contribution	Std. Error	Remarks
Audio/video cassette tapes	.722	.611	61.1	1.324	GE
Students’ academic performance					

GE = Great Extent; Source: Field Work (2021)

The simple linear regression analysis was conducted to determine the extent of influence of audio/video cassette tapes in teaching business studies students’ academic



performance in junior secondary schools in Rivers State. Data presented in table reveal that the coefficient of determination (R^2) is .611. This is interpreted that 61.1% is the contribution of influence of audio/video cassette tapes in teaching Business Studies to students' academic performance in secondary schools in Rivers State. With 61.1% contribution, it therefore means that audio/video cassette tapes in teaching Business Studies influence to a great extent students' academic performance in secondary schools in Rivers State. The significance of the result is further tested in Table 2.

Research Hypotheses 1: Audio/video cassette tapes used in teaching business studies do not significantly influence students' academic performance in junior secondary schools in Rivers State.

Table 2: Regression Analysis of influence of audio/video cassette tapes in teaching Business studies and students' academic performance in junior secondary schools in Rivers State. (n = 360)

Model	Sum of Squares	Df	Mean Square	F-cal	P-Value	Remarks
Regression	81.281	1	81.281	44.74**	.000	S
Residual	138.808	358	1.816			
Total	221.089	359				

**significant at $P \leq .05$, S = Significant (Source, Field Work, 2021)

The result in Table 2 reveals that the computed F-value is 44.74 with 1 and 358 degree of freedom as well as p-value of .000. since the p-value is less than the level of significance ($p < 0.05$) the result is significant, hence, the null hypothesis which stated that audio/video cassette tapes used in teaching business studies do not significantly influence students' academic performance in secondary in secondary schools in Rivers State. This implies that audio/video cassette tapes used in teaching business studies significantly influence students' academic performance in junior secondary schools in Rivers State.

Research Question 2: What is the influence of power point on business studies students' academic performance in junior secondary schools in Rivers State?

Table 3: Coefficient of determination in the Regression Analysis of power point in teaching business studies and students' academic performance in secondary schools in Rivers State

Variables	R	R-square	% of Contribution	Std. Error	Remarks
Power point					
Students' academic performance	.652	.566	56.6	1.122	GE

GE = Great Extent; Source: Field Work (2021)



The simple linear regression analysis was conducted to determine the extent of influence of power point in teaching Business Studies students' academic performance in junior secondary schools in Rivers State. Data presented in table 2 revealed that the coefficient of determination (R^2) is .566. this is interpreted that 56.6% is the contribution of influence of power point in teaching business studies to students' academic performance in secondary schools in Rivers State. With 56.6 contribution, it therefore means that influence of power point in teaching business studies predict to a great extent students' academic performance in junior secondary schools in Rivers State. The significance of the result was further tested in table 4.

Research Hypotheses 2: Power point used in teaching business studies do not significantly influence students' academic performance in junior secondary schools in Rivers State.

Table 4: Regression Analysis of utilization of audio/video cassette tapes in teaching Business studies and students' academic performance in junior secondary schools in Rivers State (n = 360)

Model	Sum of Squares	Df	Mean Square	F-cal	P-Value	Remarks
Regression	102.547	1	102.547	62.39**	.000	S
Residual	118.542	358	1.721			
Total	221.089	359				

**significant at $P \leq .05$, S = Significant (Source, Field Work, 2021)

The result in Table 4 reveals that the computed F-value is 62.39 with 1 and 358 degree of freedom as well as p-value of .000. since the p-value is less than the level of significance ($p < 0.05$) the result is significant, hence the null hypothesis which stated that Power point used in teaching business studies do not significantly influence students' academic performance in junior secondary schools in Rivers State. This implies that the use of power point in teaching business studies significantly influence students' academic performance in junior secondary schools in Rivers State.

Findings of the Study

1. Audio and video cassettes tapes in teaching Business Studies influence to a great extent students' academic performance in junior secondary schools in Rivers State.
2. Power point in teaching Business Studies influence to a great extent students' academic performance in secondary schools in Rivers State.
3. Audio and video cassettes tapes used in teaching Business Studies significantly influence students' academic performance in junior secondary schools in Rivers State.
4. Power point used in teaching Business Studies significantly influence students' academic performance in junior secondary schools in Rivers.



Discussions of Findings

Audio/video cassettes and students' Academic performance in Business Studies in Junior Secondary Schools in Rivers State.

The findings in Table 1 revealed that the extent to which audio/video cassettes in teaching business studies influence students' academic performance is great. The corresponding hypothesis in Table 2 revealed that audio and video cassettes in teaching Business Studies significantly influence students' academic performance in junior secondary schools in Rivers State. This is because Audio/video cassette tapes are indispensable tools that teachers of Business Studies could use to teach business studies skills, such as book-keeping, office practice, commerce, entrepreneurial skills, consumer and society, keyboarding as a communication tool.

It makes it easier to integrate listening, speaking and viewing with other learning activities, which include reading, writing, applying knowledge, practicing skills, reflecting on attitudes and values. It helps in reviewing progress and sharing ideas to improve students' academic performance in Business Studies in junior secondary schools in Rivers State. The findings are in line with the findings of Thomas (2001) who opined that audio/video cassette tapes have the capacities to offer the students a higher-level control over learning process. Students can listen, view, stop fast forward the tape. This means that the students can use the materials as often as they like. Adu and Olatundum (2013) supported that ICT increases the flexibility of delivery of education so that learners can access knowledge anyhow, anytime and from anywhere.

The audio and video cassette tapes would have a deep impact on the teaching and learning of business studies, in that, large amounts of data can be stored in them. They enable quick processing of data and it is used as teaching and learning aids by teachers and students to search for information. This position is in consonant with the opinion of Sithole and Nhethe (2016) who stated that there are prospects for computer-assisted teaching and learning in classroom, as emphasis is placed on authentic learning environments, realism and active student involvement in learning task.

Power point and students' Academic Performance in Business Studies in Junior Secondary Schools in Rivers State.

The findings in Table 3 revealed that the extent to which the use of power point in teaching Business Studies influence students' academic performance is great. The corresponding hypothesis in Table 4 revealed that the use of power point in teaching Business Studies significantly influence students' academic performance in junior secondary schools in Rivers State. This is because power point shows a presentation of important information, charts and images. It makes it easier to create, collaborate, present ideas in dynamic and visually compelling ways. Class presentation through power point enhances the



ability to capture students' attention through the various use of colour, fonts and images as well as providing visual clarity. This finding supports the findings of Burke and James (2008) who asserted that using power point in the classroom leads to effective teaching environment and academic performance. Power point chronologically exhibits what and how a learner should proceed at any given state. Business studies topics such as ledger and classification of accounts, forms of business organization, division of occupation, the ideal office, meaning of consumer, market and society, and need for monitoring and controlling food, drugs and chemicals can be delivered using power point, with individual components and sub-components being visually displayed. The nature of formants and presentation articulated. Once mastered, students will input data using the prescribed formats in attempting different sets of classroom exercises to improve on their academic performance in financial accounting.

Conclusion

Based on the discussion in the paper, it can be deduced therefore, that the Information and Communication Technology (ICT) strategies in teaching Business studies in junior secondary schools in Rivers State which include Audio/Video cassette tapes and Power point enhance the teachers to create an opportunity to bring almost real-life situation into the classroom and makes the lesson practical and authentic. These strategies also make it easier to integrate listening, viewing, reading and writing improve students' academic performance. These strategies encourage students to apply knowledge, practice skills, reflect on attitudes and values and share ideas to improve their academic performance. Hence, business studies as a practical subject should be able to stimulate the imagination of students to achieve their expectations. Business studies should be a replica of what is happening in the contemporary society which will enable students to be self-reliant.

Recommendations

Based on the aforementioned, the following recommendations are made.

1. There is need for the training and re-training of business studies teachers in order to up-date their knowledge and skills in the modern- day technology. These could be achieved by organizing workshops, conferences, in-service training and other staff development programmes by the State Government.
2. State Government can assist by providing computer to schools. Practice leads to increase in dexterity. A skilled Business Studies teacher benefits both the students and the society at large.
3. Business Studies teachers should assist to improve students study habits by using ICT strategies in mentoring teachings.
4. School principals should make effort to organize special talk on ICT strategies, as to help teachers and students achieve the best results in Business Studies. The



curriculum planners should retain and adequate policy in curriculum implementation to inspire teachers to achieve excellence in using ICT strategies in teaching Business Studies.

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