



IMPACT OF THE USE OF TEACHING AIDS ON SECONDARY SCHOOL STUDENTS' ACHIEVEMENT AND RETENTION IN BUSINESS STUDIES IN AWKA EDUCATION ZONE OF ANAMBRA STATE, NIGERIA

Okoye, Clara Ndidi, Nwobodo, Donatus (Ph.D.) and Osuji, Gregory Ekene (Ph.D.)

Godfrey Okoye University Ugwuomu-Nike, P.M.B 01014, Thinker's Corner, Enugu State, Nigeria

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Abstract: *It is of great importance to introduce the use of teaching aids in teaching and learning of Business Studies concepts. This enables learners to have meaningful and pleasurable learning outcomes. This study determined the impact of the use of teaching aids in Business Studies on the academic achievement and retention of students in Anambra State, Nigeria. It had two objectives; to establish the mean achievement scores of secondary school students taught Business Studies concept using teaching aids and those taught without teaching aids, and to ascertain the mean retention scores of secondary school students taught Business Studies concept using teaching aids and those taught without teaching aids. The study adopted a quasi-experimental design involving pre-test, post-test and delayed post-test on two equivalent groups designated as experimental and control groups. It targeted JSS 2 students. The sample consisted of 262 JSS 2 students of Business Studies. The study employed systematic sampling technique in selecting the participant of the study. Business Studies Achievement Test (BUSAT) was used to collect data. The research questions were analysed using mean while the hypotheses were analysed using T-Test. The study established that: there is a significant difference between the mean achievement scores of students taught using teaching aids and those taught without the use of teaching aids. Also, there is significant difference in the mean retention scores of students taught with teaching aids and those taught without teaching aids. Based on the findings, the study recommended that teachers should endeavour always to make use of teaching aids to facilitate the teaching of Business Studies to Junior Secondary School Students in Awka Education Zone of Anambra State, Nigeria.*

INTRODUCTION

Business Studies is an expository and discovery subject, which enables students to discover their skills and potentials. This helps them to operate effectively in their environment. Business Studies is also an integral part of vocational education, which lays emphasis on the use of the head and the hands to acquire specific skills required in business life. The Business Studies curriculum is broad and rich in skill acquisition subjects and students are expected to cover all the various subjects to enable them possess the prevocational skills and become useful citizens and contribute economically to the growth of the society. Al-Mutairi (2011) observed that inadequate use of teaching aids in teaching Business Studies gives rise to poor learning of

the required skills in Business Studies. Akinleye (2010) attested that effective teaching and learning requires a teacher to teach the students with instructional materials and use practical activities to make learning more vivid, logical, realistic and pragmatic.

Instructional materials are essential and significant tools needed for teaching and learning of school subjects to promote teachers' efficiency and improve students' performance. They make learning more interesting, practical, realistic and appealing. They also enable both the teachers and students to participate actively and effectively in lesson sessions. They give room for acquisition of skills and knowledge and development of self- confidence and self- actualization.

Okoye, Clara Ndidi, Nwobodo, Donatus (Ph.D.) and Osuji, Gregory Ekene (Ph.D.)



Ibeneme (2000) defined teaching aids as those materials used for practical and demonstration in the class situation by students and teachers. Ikerionwu (2000) emphasised that teaching aids are objects or devices that assist the teacher to present a lesson to the learners in a logical and manner. In the same vein, Okoye (2019) described instructional materials as visual and audio-visual materials, concrete or non-concrete, used by teachers to improve the standard of teaching and learning activities in Business Studies. Agina-Obu (2005) submitted that instructional materials of all kinds appeal to the sense organs during teaching and learning. Isola (2010) also described teaching aids as objects or devices that assist the teachers to present their lessons logically and sequentially to the learners. Oluwagbohunmi and Abdu-Raheem (2014) stated that teaching aids are such used by teachers to aid explanations and make learning of subject matter understandable to students during teaching learning process.

Al-Mutairi (2011), further explained that empirical studies in traditional learning of determinants of students' performance have pointed to issues such as student's aptitude, class attendance, gender differences, study habits, instructor's teaching style, computer experience, academic environment, and service received. Umar (2010), outlined factors that contributed to students' poor performance as social factors, which include romantic relationships, organizations and clubs.

Critically examining the poor performance of students, Kooi and Ping (2008), Ali (2013), and Ganai and Muhammad (2013) show that students' academic achievement is affected by a host of factors. These include individual and household characteristics such as student's ability and motivation, age and gender, quality of secondary education received, quality of teachers and their instructional strategies. Others include; class size, location and such environmental characteristics as lighting and ventilation, among others. Students' performance in Business Studies cannot be improved unless teachers adopt suitable teaching aids and approaches of teaching Business Studies. Suttor (2010) observed that some of the factors that can impact academic success in high school include determination, work ethics, home life, attendance, accepting constructive criticism and social skills.

Olumorin, Yusuf, Ajidagba, and Jekayinfa, (2010) indicated that teaching aids help teachers to teach conveniently and the learners to learn easily without any problem. They asserted that instructional materials have direct contact with all sense organs. Kochhar (2012) opined that instructional materials are very meaningful tools in teaching and learning. He noted equally that teachers should find required materials for teaching to support whatever textbooks would

provide in order to broaden concepts and arouse students' interests in the subject.

Udoukpang, Emah, and Umoren, (2012) observed that the poor performance of students in Business Studies stems from the mere fact that there are inadequate teaching aids or resources that will facilitate the teaching of Business Studies. This therefore makes Business Studies appear very abstract and difficult for the learners. However, Akinleye (2010) attested that effective teaching and learning requires a teacher to teach the students with instructional materials and use practical activities to make learning more vivid, logical, realistic and pragmatic. Tabotndip (2004) lamented that abstract teaching and learning goes on today, as teachers do not use apparatus or teaching aids, which would stimulate student's participation in class, increase knowledge and positively affect the achievement of the students' outcome. Teachers are encouraged to use teaching aids in the classroom in order to make learning more permanent in the mind of the students.

Proper initiation of teaching aids in learning environment assists students with meaningful, accurate and real life experiences from the subject taught. In support of this assertion, Abolade (2009) observed that the merits of instructional materials are that they are cheaper to produce, useful in teaching large number of students at a time, encourage learners to pay proper attention and enhance their interest. Teaching aids are needed in the execution of any educational programme in the school system. These teaching aids are inevitable because of the impact they create in the teaching and learning process.

The essence of these aids in teaching is to expose the learner to the subject content. Unless adequate activities and teaching materials are effectively employed, there is hardly a way the learner could be in contact with the subject content. The use of instructional materials is recommended at any stage of the child's development and level of education. Abdu-Raheem and Oluwagbohunmi (2015) also supported the idea that resourceful and skilful teachers should improvise necessary instructional materials to promote academic standard in Nigerian schools. It is against this backdrop that this study established the impact of the use of teaching aids on students' achievement and retention in Business Studies in secondary schools in Awka Education Zone of Anambra State, Nigeria.

Statement of the Problem

The importance of Business Studies for the nation's economic development cannot be overemphasized. That notwithstanding, the present poor performance of students in Business Studies as reflected in the State Basic Education Certificate Examination (BECE) is a cause of worry. Hence, the need for the present study on students' poor performance in Awka Education Zone is of utmost concern. According to



Okoye (2019), one of the reasons students find it difficult to comprehend immediately after being taught is because of non-availability of instructional materials or teaching aids that can easily convey the message of the lesson to the learners. The integration of instructional materials in classroom practice is believed to boost the quality of instruction by fostering student-centred pedagogies (Abdo & Semela, 2010). Mateer, Purdom, Ghent, and Porter, (2012) emphasized that the use of relevant teaching aids in the classroom is invaluable since it engages students, aids their retention of knowledge, motivates interest in the subject matter and helps to illustrate the relevance of many concepts taught. This is the need for the current study.

Research Questions

The following questions guided the study:

1. What are the mean achievement scores of secondary school students taught Business Studies concept using teaching aids and those taught without teaching aids?
2. What are the mean retention scores of secondary school students taught Business Studies concept using teaching aids and those taught without teaching aids?

Hypothesis

The following null hypotheses guided the study:

Ho₁: There is no significant difference in the mean achievement scores of students taught

Business Studies concept using teaching aids and those taught without teaching aids.

Ho₂: There is no significant difference in the mean retention scores of students taught

Business Studies concept using teaching aids and those taught without teaching aids.

Significance of the Study

The findings of the study will be useful to teachers of Business Studies. It will help them bring enthusiasm and varied teaching pedagogies into the classroom to address the different needs of students; thus, ensure sound and productive learning opportunities for every student. The study shall reveal appropriate teaching aids that could improve the teachers' effectiveness as well as ways the proper usage of these teaching aids improve the students' academic performance in Business Studies.

The findings of the study shall help curriculum planners and developers to obtain the necessary information, which will help to improve the Business Studies syllabus. The result of the study will assist the curriculum planners and developers to review and update the Business Studies curriculum especially in respect to areas of difficulties and using proper teaching aids to address them.

The findings of the study shall also be helpful to Examination Bodies. The Basic Education Certificate Examination (BECE) and various schools Examination Bodies at both Federal and State levels shall benefit from this study. It will help them in setting examination questions with emphasis on area of practical and theoretical works.

More so, the findings of this study shall be beneficial to the students. The proper usage of teaching aids will increase students' academic achievement and retention in Business Studies. The parents of these students will also feel the importance of this study in their children's improved academic performance in school.

The current study shall be beneficial to the school administrators in the area of providing and improvising teaching materials/aids to teachers of Business Studies in order to curb students' poor performance and retention in Business Studies. Business Studies book authors, publishers and the State Education Commission shall find this study relevant in areas of providing relevant instructional materials and up to date textbooks to schools. This study shall also be beneficial to other future researchers working in similar field, and it will add to existing knowledge and theory.

Scope and Delimitations of the Study

The study has both geographical, content, and level scope. The content scope focused on the achievement and retention in Business Studies of JSS 2 students' taught a concept with teaching aids and those taught without teaching aids. The content area of this study was delimited to the commerce aspect of Business Studies, which is the banking services. Geographically, the study covered all the junior public secondary schools in Awka South Education Zone of Anambra State. The study focused on students in Junior Secondary School Two (JSS 2) level.

Conceptual Framework of the Study

The conceptual framework of this study was informed by Thorndike's Classical Behavioural Theory, and Gestalt's Cognitive Theory that the study hinged on. This conceptual framework was also informed by the review of related literature. Figure 1 presents the conceptual framework of the study.

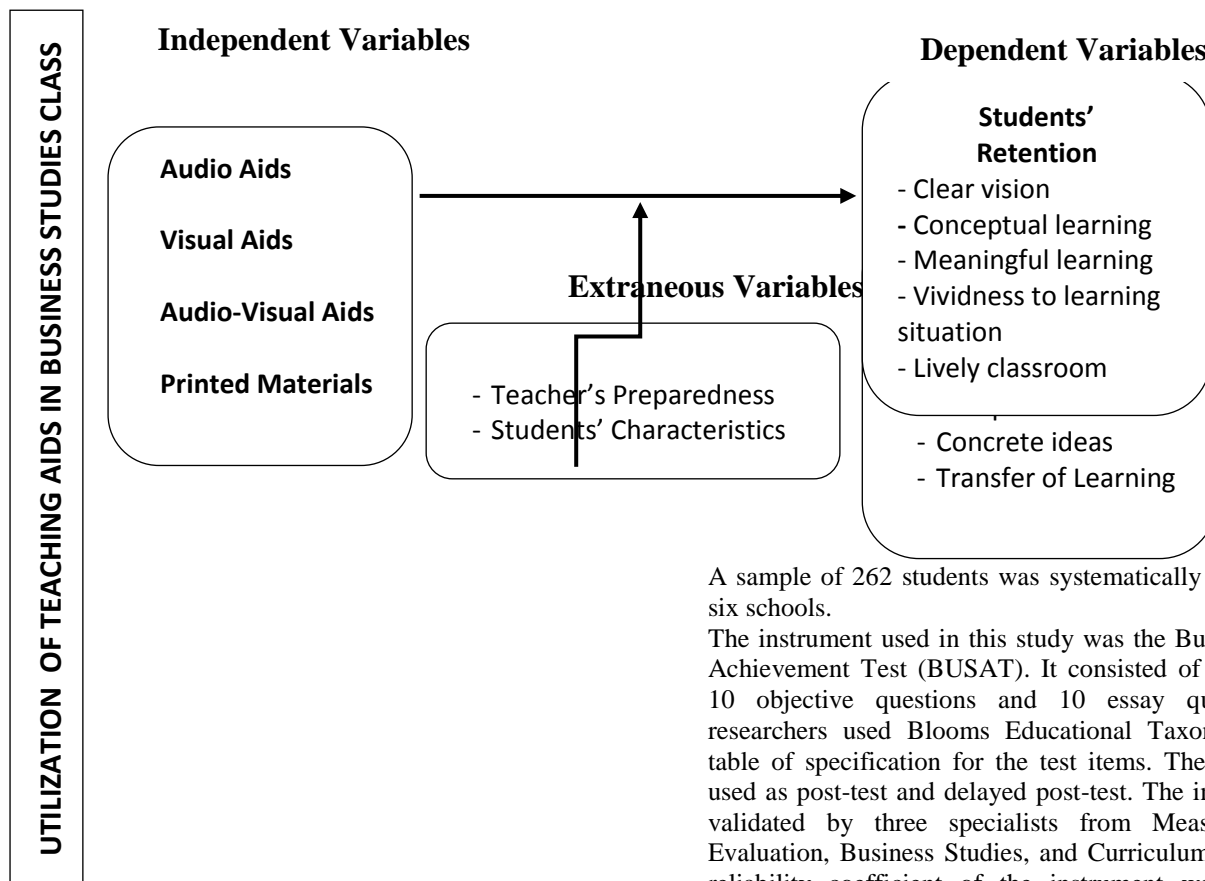


Figure 1: Conceptual Framework of the impact of Teaching Aids in teaching Business Studies

METHODOLOGY

The study adopted quantitative research paradigm. It specifically made use of quasi-experimental design. It involved post-test and delayed post-test. The post-test measured the level of achievement of students while the delayed post-test measured their level of retention. One group was subjected to manipulation while the other was controlled. Teaching aids were used to teach students in the experimental group while the control group was taught with normal conventional method without any teaching aid. This study focused only on the public secondary schools in Awka South Local Government Area (L.G.A) of the zone.

The entire population of the study consisted of two thousand six hundred and ninety-four (2,694) junior secondary school two (JSS 2) students from eighteen (18) public secondary schools in Awka South L.G.A of Awka Education, Anambra State, Nigeria (Post Primary Schools Service Commission Awka Anambra State, 2018). The sample size was determined using 30% of the entire population (Mugenda & Mugenda, 2003).

A sample of 262 students was systematically selected from six schools.

The instrument used in this study was the Business Studies Achievement Test (BUSAT). It consisted of 20 questions; 10 objective questions and 10 essay questions. The researchers used Blooms Educational Taxonomy for the table of specification for the test items. The BUSAT was used as post-test and delayed post-test. The instrument was validated by three specialists from Measurement and Evaluation, Business Studies, and Curriculum Studies. The reliability coefficient of the instrument was 0.78. This implied that the instrument had high and positive reliability. In analysing the research questions, that is, the descriptive statistics, a measure of central tendency; mean was used. For the hypotheses, T-Test was used to get the inferential statistics at 0.05 level of significance. The decision for the inferential statistics was: Accept if $P < 0.05$ and reject if P is > 0.05 .

RESULT

The findings of the study was presented according to the research questions. The corresponding hypotheses were also factored in. Tables 1 to 4 displays the results of the study.

RQ 1: What are the mean achievement scores of secondary school students taught Business Studies concept using teaching aids and those taught without teaching aids?

Table 1

Mean Achievement Scores of the Post Test of the Experimental and Control Groups

Group	N	Mean	SD	SEM
Control	131	14.46	3.079	0.269



Experiment 131 15.22 2.603 0.227

Table 1 showed that the mean score of the experimental group taught using teaching aids, which is 15.22 is greater than that of the control group, which is 14.46 taught without teaching aids. This means that the use of teaching aids enhances students' achievement. The corresponding null hypothesis is stated as follows:

Ho₁: There is no significant difference in the mean achievement scores of students taught Business Studies concept using teaching aids and those taught without teaching aids

To test Ho₁, the post test data of experimental and control groups were subjected to t-test statistics to determine if there is any significant difference between the achievement of the experimental and the control group. Table 2 shows the findings.

Table 2

T-test Analysis of the Post Test Mean Scores of the Experimental and Control Groups

Group	N	Mean	df	T	P
Control	131	14.46	260	-2.167	0.03
Experiment	131	15.22			

At significance of $P < 0.05$

Table 2 with a P value 0.03 which is less than 0.05 indicating that there is a significant difference between the mean academic achievement scores of students' taught using teaching aids and those taught without teaching aids. This means that the experimental group taught with teaching aids achieved significantly higher than the control group. The null hypothesis is therefore rejected.

RQ 2: What are the mean retention scores of secondary school students taught Business Studies concept using teaching aids and those taught without teaching aids?

Table 3

Mean Retention scores of the delayed Posttest of Experimental and Control Groups

Group	N	Mean	SD	SEM
Control	131	12.50	3.674	0.321
Experiment	131	13.89	2.900	0.253

In Table 3, the mean retention scores of the experimental group taught using teaching aids 13.89 is higher than that of the control group 12.50 taught without teaching aids. This established that the experimental group retained the concept better than the control group. This finding answers research question two. The corresponding null hypothesis is stated as follows:

Ho₂: There is no significant difference in the mean retention scores of students taught Business Studies concept using teaching aids and those taught without teaching aids.

To test Ho₂, the delayed posttest data of experimental and control groups generated via BUSAT were analyzed using t-test statistics, to determine if there was any significant difference between the retention of students from the experimental and the control groups. Table 4 shows the result.

Table 4

T-test Analysis of the delayed Posttest Mean Scores of Experimental and Control Groups

Group	N	Mean	df	T	P
Control	131	12.50	260	-3.379	0.001
Experiment	131	13.89			

At significance of $P < 0.05$

The results of the t-test as indicated in Table 4, with a P value 0.001 which is less than 0.05 establishes that there is a significant difference between the mean retention scores of students taught using teaching aids and those taught without teaching aids. Therefore, the null hypothesis is rejected. This means that students in the experimental group taught using teaching aids retained the concepts more significantly than their counterparts in the control group taught without teaching aids.

Discussion of Findings

This study determined the impact of the use of teaching aids on secondary school students' achievement and retention in Business Studies among junior secondary school two (JSS 2) students of Awka Education Zone of Anambra State, Nigeria. Two research questions and hypotheses guided the study and the results obtained are discussed as follows:

Analysis of posttest scores of experimental and control groups using t-test revealed that students who were exposed to the use of the teaching aids in the teaching of Business Studies concepts significantly performed better than those not exposed to the use of teaching aids. The null hypothesis was therefore rejected. This means that the use of teaching aids in the teaching of Business Studies concepts increased students' academic achievement in the subject. These findings are in conformity with that of Fahdly (2014), Abdu-Raheem (2016), Enohuan (2015), and Olumorin et al. (2010) where it was found that teachers' use of instructional materials in teaching improved students' achievements. There are many reports about the importance of teaching aids in the teaching of Business Studies in Secondary School. Nikky (2010) outlined some features of good teaching aids as it relates to the achievement of student.

This hypothesis investigated the mean retention scores of JSS 2 students taught Business Studies using teaching aids and those taught the same concept without teaching aids.



The result of the t-test analysis revealed that the students who were exposed to the use of teaching aids in the teaching and learning of Business studies concepts had significantly higher retention ability than those in the control group not exposed to teaching aids. The null hypothesis was therefore rejected. It was observed that the use of teaching aids in teaching and learning increases students' retention ability. This finding is similar to the findings by Dur (2014) and Eze et al. (2016), which show that the use of teaching aids has the potential of enhancing the quality of teaching, arouses students' interest, clarifies concepts and stimulates their thinking.

These findings also support the propositions of Thorndike's Behavioural Theory in the use of teaching aids in teaching and learning of Business Studies to enhance students' achievement and retention in the subject. Behavioural Theory according to Thorndike indicates that human learning takes place because of collection of responses to a specified stimuli and the finite nature of knowledge. This implies that for a learner to acquire knowledge and retain it, the teacher has to make proper use of teaching aids (stimulus) to get their attention in order for the learners to acquire the desired knowledge, retain it and perform excellently in their examinations. Since teaching aids provides the students with the ability to retain and achieve excellently in the subject, it is necessary that teachers are encouraged to use teaching aids in teaching and learning to give maximum output. As a result, teaching aids should be considered as a substitute to the conventional teaching. This is in accordance with Chauhan (2009) who observed that, for teachers to improve students' memory (retention), the teacher should develop clear concepts with the help of various types of audio-visual materials.

CONCLUSIONS

The findings of the study obviously establish that the use of teaching aids in the teaching and learning of Business Studies at Junior Secondary Schools has a significant impact on the students' academic performance and their retention ability in the subject. It is therefore concluded that the use of teaching aids improves students' academic achievement and retention among students of Business Studies in Awka Education Zone of Anambra State, Nigeria.

RECOMMENDATIONS

Based on the implications to the findings of the study, the researcher makes the following recommendations:-

1. The study disclosed that the use of teaching aids enhances students' achievement and retention in Business Studies. Therefore, teachers should always teach using teaching aids. This is because when they use teaching aids, students perform better and their retention ability increases.

2. The study found that teaching aids increase students' active participation in the class. Therefore, the Ministry of Education, the school administrators, and the Parent Teacher Association (PTA) should make sure that these teaching aids are readily available in schools. In addition, workshops, conferences and seminars should be organized for proper training of teachers on the effective use of these materials.
3. Teaching aids are part of teachers' instructional design and strategy. So, teachers should always make effort to integrate instructional aids in their teaching. If not available, teachers should improvise the teaching aids. When this is properly done, it will boost students' retention ability and increase their performance on both internal and external examinations.

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