

## **EFFECT OF YOUTUBE INSTRUCTIONAL PACKAGE ON STUDENTS` ACADEMIC ACHIEVEMENT AND RETENTION IN SECONDARY SCHOOL ECONOMICS IN EDUCATION DISTRICT VI, LAGOS STATE**

**<sup>1</sup>Samuel Agozie Ezeudu and <sup>2</sup>Ramon Adisa Jolaosho**

<sup>1,2</sup>Department of Social Science Education, University of Nigeria, Nsukka

### **Abstract**

*The purpose of the study was to experimentally determine the effect of YouTube instructional package on students` academic achievement and retention in secondary school Economics in education district VI, Lagos State. Two research questions were articulated and two hypotheses were formulated to guide the study. The study employed a quasi experimental research design. Specifically, non-equivalent pretest posttest control group was used. The population for the study was 10,250 secondary school II students (SS II) of Economics in education district VI, Lagos State. Purposive sampling technique was employed to select the experimental group school. In the schools selected, two intact classes comprising of 60 students offering Economics (experimental group) and 55 students offering Economics (control group). The Economics achievement test and retention test were adopted from West African Examination Council (WAEC) past questions on concept of demand, concept of supply and utility theory. The academic achievement test and retention test instruments were face and content validated by three experts in the field of Economics education and measurement and evaluation. Using Kuder Richardson 20 (K – R 20) and test – retest, the reliability coefficient of 0.98 and 0.77 respectively were obtained on the academic achievement test and the retention test instruments. Research questions were answered using mean and standard deviation while hypotheses were tested at 0.05 level of significance using Analysis of Covariance (ANCOVA). The study found out that YouTube instructional package is effective for improving students` achievement and retention in Economics. Based on the findings, some recommendations were made.*

**Key words:** Achievement, Retention, YouTube, Social Media, and Economics

### **Introduction**

Social media has exploded as a category of online discourse where people create content, share it, bookmark it, and network it at a prodigious rate. Social media is the connection that exists between setups of people through the use of internet. Due to its ease of use, speed and reach, social media is fast changing the public discourse in society, setting trends and agenda in industries (Asur & Huberman, 2010). Since social media package such as YouTube was introduced in 2005, the online world has changed dramatically, due to the invention of social media, young men and women now exchange ideas, feelings, personal information, pictures and videos at a

truly encouraging rate. Social media is the use of Facebook, Twitter, Whats app, 2go, Eskimi, Bado, Skype, LinkedIn, Myspace, We Chat, Yahoo messenger, Palm-chat, and YouTube for sharing of ideas, sharing of photos and videos by users. The increased use of social networking websites such as YouTube has become an international phenomena.

YouTube is one of the online materials that can be used in the traditional classroom to make a passive classroom at the secondary school level turn to active classroom where all the students will be carried along in the lesson. YouTube was launched in 2005 as a site where individual and group could record and share own videos with little or no cost (YouTube, 2013). This website (YouTube) provides students with authentic situations and with everyday clips that help them to get better understanding of Economics concepts. The use of YouTube instructional package as a teaching method in Economics classroom will provide students with good knowledge and understanding of their lessons.

Various modern teaching methods have been adopted in secondary schools but social media have been neglected despite the role YouTube can help in improving student academic achievement in Economics if fully adopted by teachers in teaching Economics. Most teachers only limit the knowledge of their students to Google search engine without knowing how powerful YouTube instructional package as a teaching method can help in teaching – learning process. The power of YouTube instructional package as a teaching method for learning depends on how it is integrated into the classroom learning environment. This current study focuses on the effect of YouTube instructional package as a form of teaching method and conversation starter in Economics classroom towards promoting students` academic achievement and retention in secondary school Economics in Education District VI, Lagos State.

Additionally, learners of Economics use YouTube instructional package as a learning tool that help them in clear understanding of Economics topics, and after class they can access the Economics topic that was studied in the classroom for better understanding of the topic. Economics is the social science that studies the production, distribution, and consumption of goods and services (Krugman and Wells, 2012). Economics is a subject with two major branches namely microeconomics and macroeconomics. Microeconomics examines the behaviour of basic element in the economy while macroeconomics analyzes the entire economy and issues affecting it including unemployment, inflation, economic growth, and monetary and fiscal policy. The importance of Economics in any educational system cannot be over emphasized because its serves a useful purpose in modern life. An examination of the annual reports of West Africa Examination Council (WAEC) from 1965 to 1974 (Mathew, 2013) show that Economics was first taken in the West Africa School Certificate Examination (WASCE) as a school subject in Nigeria in 1967. Ever since Economics was first taken as a school subject in WASCE in 1967, the number of schools that teach it, and the number of candidates that registered for it in WASCE have witnessed a

phenomenal increase and various researches have been carried out on how to teach it so as to enhance student academic achievement. As of the period of this research, all the 319 senior secondary schools in Lagos State are offering Economics as a subject (Lagos State Ministry of Education, 2017). The present study is of the view that Concept of Demand, Concept of Supply and Utility Theory should be well delivered through the use of YouTube instructional package because the WAEC chief examiner's report May/June 2015, and May/June 2016 proved that students do not have good attempts in most questions set in these areas thereby affecting the students' academic achievement and retention in secondary school Economics.

Academic achievement refers to the breakeven of academic progress. Academic achievement represents performance outcomes that indicate the extent to which a person has accomplished a specific goals that were the focus of activities in institutional environments, specifically in schools, colleges, and universities. Academic achievement and retention of senior secondary school students of Economics in Lagos State through the use of YouTube instructional package is the priority of the present study. The study believed that if students could have good achievement in Economics, group of such students should be able to retain such knowledge that leads to their achievement in Economics.

Student retention is one of the more interwoven and intricate issues of senior secondary school education. Meaningful learning is a product of retention. Since the aim of teaching and learning some concepts in Economics by making use of different teaching strategies and instructional materials is to establish a behavioral object and make learning more meaningful in which this is the ultimate goal of teaching. The present study regards retention as the process or ability to retain and remember things in future. Retention occurs when experience are implied in the memory. Retention is the preservative factor of the mind (Kundu & Totoo, 2007).

Preparing senior secondary school students of Economics to participate in the information society, where knowledge is a crucial factor in social and economic development of a country is very vital. The adoption of new information, technologies and communication lead to changes in both the structure and functionality of education. From the present study observation in Lagos State, public secondary school teachers feel reluctant towards the use of modern technology such as YouTube instructional package simply because most of them did not know how to use it and the few that know how to use it are very lazy. Also, the present study observed that students who can partially use Google to search for Economics concepts cannot make use of YouTube which deals with videos. Searching for Economics contents using Google or other search engine will only give written explanation of the content while YouTube instructional package will show a video of how an instructor is addressing the problem in a simple way. Research finding has proved it that students remember what they saw through video than what a teacher just explained in a traditional classroom without audio-visual teaching aids. The present study was curious to carry-

out an investigation on how YouTube instructional package can contribute positively to the academic achievement and retention of students in secondary school Economics.

### **Purposes of the Study**

The study aims to examine the effect of YouTube instructional package on students' academic achievement and retention in senior secondary school Economics in education district VI, Lagos State. Specifically, the study sought to:

1. Find out the Mean ( $\bar{x}$ ) achievement scores of students taught Economics using YouTube instructional package and those taught with lecture method.
2. Find out the Mean ( $\bar{x}$ ) retention scores of students taught Economics using YouTube instructional package and those taught with lecture method.

### **Research Questions**

The following research questions guided the study.

1. What are the Mean ( $\bar{x}$ ) achievement scores of students taught Economics using YouTube instructional package and those taught with lecture method?
2. What are the Mean ( $\bar{x}$ ) retention scores of students taught Economics using YouTube instructional package and those taught with lecture method?

### **Hypotheses**

The following null hypotheses guided the study and were tested at 0.05 level of significance.

- Ho<sub>1</sub>:** There is no significant difference in the Mean ( $\bar{x}$ ) achievement scores of students taught Economics using YouTube instructional package and those taught with lecture method.
- Ho<sub>2</sub>:** There is no significant difference in the Mean ( $\bar{x}$ ) retention scores of students taught Economics using YouTube instructional package and those taught with lecture method.

### **Method**

The study was quasi-experimental research design. Specifically, non-equivalent pre-test post-test control group design since intact classes will be used. The use of intact classes was to avoid threat of selection bias among the students and to avoid re-arranging and re-grouping which could disrupt the normal lesson. Quasi-experimental design according to Ali (2006) is a research design which uses non-randomized group and these options occur when the researcher cannot randomly sample and assign the subjects. The study was conducted in education district VI in Lagos State. Education district VI comprised of Ikeja Local Government, Mushin Local Government and Oshodi-Isolo Local Government Area of Lagos State. This educational district was selected because of the neglect of these two local government (Mushin

Local Government and Oshodi-Isolo Local Government) by a lot of researchers using Lagos as their area of studies. The population for this study was 10,250 SSII students of the 80 public Senior Secondary Schools in education district VI, Lagos State (2016/2017 session). Out of the 80 Senior secondary schools in the district, 35 are under Ikeja Local government with 2654 male students and 2046 female students making a total of 4700 students offering Economics at the senior secondary II level, 17 are under Mushin Local Government with 653 male students and 608 female students making a total of 1261 students offering Economics at the senior secondary II level and 28 schools are under Oshodi-Isolo Local Government with 2295 male students and 1994 female students making a total of 4289 students offering Economics at the senior secondary II level in this local government. The sample size of the study was 115 senior secondary school students offering Economics. Intact classes of SSII from two public senior secondary schools were used. The nature of the study required that the sample school should have computer laboratory with internet access and this made sample to be purposively selected. Two instruments were used for data collection. They were Economics Achievement Test (EAT) and Economics Retention Test (ERT). The EAT is a 50 item multi-choice objective questions and was adapted by the researcher from West Africa Examination Council (WAEC) past questions from 1995 – 2016 and it covered concept of demand, concept of supply and utility theory based on the table of specification for EAT adapted. Also, the ERT was a 50 item multi-choice objective questions adapted from EAT but was well shuffled by the researcher to prevent students cramming of questions and answers accordingly. Three experts did face and content validation of both the academic achievement test and the retention test instruments to be sure that the retention test instrument was well shuffled since it was adapted from the achievement test. One of the experts is in Economics, while the other two are in Measurement and Evaluation, all in the faculty of Education, University of Nigeria, Nsukka. These items were subjected to thorough scrutiny and proof-reading by these experts to ensure that the contents were in line with the purpose of the study and the research questions. In order to ascertain the reliability of the research instruments, a pilot study was carried out in Ikotun High School, Ikotun and Ijegan Comprehensive High School, Ijegan, Alimosho Local Government Area of Lagos State. Two types of reliability testing were conducted to determine the internal consistency using Kuder Richardson 20 (K – R 20) and temporal stability using test – retest of Spearman Rank – order correlation. The K – R 20 gave a reliability of 0.96 for the achievement test instrument while the test – retest of Spearman Rank – order correlation gave a result of 0.77 for the retention test instrument and this shows that the Economics achievement test and retention test instrument were highly reliable.

The teacher subjected the students in both groups to pretesting before experiment. Pretest on Economics achievement test (EAT) was administered on both the experimental and the control group. The researcher collated the answer sheet

and marked them to obtain the pretest scores of both the experimental and the control group students. Treatment commenced the same week the pretest was conducted and the treatment lasted for three weeks in which another test known as posttest was administered on both the experimental and the control group students. The researcher again collated the answer sheets and marked them to obtain the posttest scores of both the experimental and the control group students. Two weeks after the conduct of the posttest, another test known as Economics retention test was administered on the experimental group and the control group to obtain the students retention test scores. After the conduct of the retention test, the answer sheets were also collated and marked by the researcher in which the three sets of scores were later subjected to statistical computation through statistical package for social sciences (SPSS). Mean and standard deviation were used to answer the four research questions. For the four null hypotheses, Analysis of Covariance (ANCOVA) was used to test each of them at  $p < 0.05$  (5%) level of significance. Hence, 5% or  $P > 0.05$  was accepted and 5% that is  $P < 0.05$  was rejected.

## Results

### Research Question 1

What are the Mean ( $\bar{x}$ ) achievement scores of students taught Economics using YouTube instructional package and those taught with lecture method? Data for answering research question 1 are presented in Table 1.

**Table 1**  
**Pre-test and Post-test Mean Scores of Experimental and Control Groups in the Achievement Test**

Group gain	N	Pre-test		Post-test		Mean
		$\bar{x}$	SD	$\bar{x}$	SD	
Experimental	60	26.83	10.98	73.47	10.57	46.64
Control	55	25.35	9.83	57.38	11.54	

\*N = Number of students,  $\bar{x}$  = Mean and SD = Standard Deviation

The data presented in Table 1 showed that the experimental group which was taught using YouTube instructional package (YIP) had a pre-test mean achievement score of 26.83 with a standard deviation score of 10.98 and a post-test mean achievement score of 73.47 with standard deviation score of 10.57. The difference between the pre-test and post-test mean for the group taught using YouTube instructional package was 46.64. The group with lecture method had a pre-test mean score of 25.35 with a standard deviation score of 9.83 and a post test mean

achievement score of 57.31 with a standard deviation score of 11.54. The difference between (mean gain) the pretest and posttest mean for the control group was 32.03. This result reveals that, the students in the experimental group taught using YouTube Instructional Package (YIP) performed better in the achievement test than the students in the control group taught with lecture method. Hence YIP is more effective in enhancing students' achievement in Economics.

### Hypothesis 1

**Ho<sub>1</sub>:** There is no significant difference in the mean achievement scores of students taught Economics using YouTube instructional package and those taught with lecture method.

**Table 2: Analysis of Covariance (ANCOVA) of the significant difference in the mean achievement scores of students taught Economics using YouTube instructional package and those taught with lecture method.**

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	17130.733 <sup>a</sup>		28565.367	231.416	.000
Intercept	28049.487	1	28049.487	757.831	.000
Pretest	9639.238	1	9639.238	260.429	.000
Method	6289.261	1	6289.261	169.921	.000
Error	4145.440	112	37.013		
Total	518264.000	115			
Corrected Total	21276.174	114			

The result in Table 2 shows that an F-cal of 169.921 with associated probability of 0.000 were obtained with respect to the difference in the mean achievement scores of students taught Economics using YouTube instructional package and those taught with lecture method. Since the associated probability (0.000) was less than 0.05 level of significance set as the bench mark for taking decision, the null hypothesis (H<sub>o1</sub>) was rejected. The inference drawn is that there was a significant difference in the mean achievement scores of students taught Economics using YouTube instructional package and those taught with lecture method.

### Research Question 2

What are the Mean ( $\bar{x}$ ) retention scores of students taught Economics using YouTube instructional package and those taught with lecture method? Data for answering research question 2 are presented in Table 2

**Table 3**  
**Posttest and Retention test Mean Scores of Experimental and Control Groups in the Retention Test**

Group gain	N	Posttest		Retention Test		Mean
		$\bar{x}$	SD	$\bar{x}$	SD	
Experimental 13.67	60	73.47	10.57	59.80	10.57	
Control 9.16	55	57.31	11.54	48.15	10.81	

The result presented on Table 3 shows that the experimental group had a mean score of 73.47 with a standard deviation score of 10.57 in the posttest and mean score of 59.80 with a standard deviation of 10.57 in the retention test leading to a posttest – retention test gain of 13.67 for the experimental group. The control group had a mean score of 57.31 with a standard deviation score of 11.54 in the posttest and a mean score of 48.15 with a standard deviation score of 10.81 in the retention test resulting to a posttest – retention test mean gain of 9.16 for the control group. This result reveals that, the students in the experimental group taught with YouTube instructional package performed better in the retention test than the students in the control group taught with lecture method. Hence the students taught Economics using YouTube instructional package displayed higher retention of learning than those taught with lecture method.

### Hypothesis 2

**Ho<sub>2</sub>:** There is no significance difference in the mean retention scores of students taught Economics using YouTube instructional package and those taught with lecture method.

**Table 4: Analysis of Covariance (ANCOVA) of the significance difference in the mean retention scores of students taught Economics using YouTube instructional package and those taught with lecture method.**

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	13976.728 <sup>a</sup>		26988.364	352.345	.000
Intercept	11.799	1	11.799	.595	.442
Pretest	10079.043	1	10079.043	508.173	.000
Method	86.872	1	86.872	4.380	.039
Error	2221.393	112	19.834		
Total	354352.000	115			
Corrected Total	16198.122	114			



The result in Table 4 also shows that an F-ratio of 4.380 with associated probability value of 0.039 was obtained with respect to the difference in the mean retention scores of students` taught Economics using YouTube instructional package and those taught with lecture method. Since the associated probability (0.039) was less than 0.05 level of significance set as the criterion for taking a decision, the null hypothesis ( $H_{02}$ ) was rejected. It was therefore concluded that there is a significant difference in the mean retention scores of students taught Economics using YouTube instructional package and those taught with lecture method.

As shown on table 1, there is difference between the mean achievement scores of the two groups of people taught Economics (Experimental/YouTube instructional package and control/lecture method). The analysis revealed that students taught using YouTube instructional package performed significantly better in Economics achievement test than their counterparts who were taught with lecture method. Result in table 2 further confirmed this finding by indicating statistically significant effect of YouTube instructional package on students` achievement in Economics. The F – cal of 169.921 with the probability value of 0.000 which was significant at 0.05 level of confidence) testifies the result. This finding is in agreement with the result of earlier study carried out by Mohammed, Samir, and Shimma (2016) who found out that YouTube was more effective than the conventional/lecture method in fostering learners` achievement in English Language and Computer. Result of data analysis on table 3 has shown that students taught Economics using YouTube instructional package performed significantly better in Economics retention test than their counterparts who were taught with lecture method. Also, the F-cal of 4.380 over an observed probability value 0.39, which was significant at 0.05 level of confidence) testifies the result. This result is in agreement with the results of Subrama, Abdullah and Harun (2013) whom study showed that YouTube improve students` retention in English oral communication. The reason for the higher performance by the experimental group may have been related to the audio – visual nature of the instruction and the fact that students were more actively involved in the YIP process which involved accessing the videos on YouTube through a computer system with internet facilities.

### **Conclusion and Recommendation**

From the foregoing findings and discussion, it could be concluded that students taught Economics using YouTube instructional package performed excellently than those students taught Economics using lecture method. This shows that YouTube instructional package is more effective than the lecture method in students` achievement and retention in Economics. The study recommended that secondary school teachers should avoid the continuous use of conventional lecture method in the teaching of Economics. This requires teachers to make efforts to

incorporate the use of YouTube instructional package into the teaching of Economics in secondary schools. As the use of YouTube instructional package have been found effective in promoting student achievement and retention in secondary school Economics and since this teaching strategy is relatively new in Nigeria, it should be emphasized and integrated into the Economics curriculum of teachers training in tertiary institutions, so as to popularize the use among the teachers more especially in this area of inclusive education.

### References

- Ali, A. (2006). *Conducting research in education and social sciences*. Enugu: Tashiwa Networks Ltd
- Ansur, B., & Huberman, A. (2010). *Predicting the future with social media*. UK: Ansurpublisher.
- Krugman, P., & Wells, R. (2013). *Economics (3<sup>rd</sup> ed)*. London: Worth Publishers.
- Kundu, C. L., & Totoo, D. N. (2007). *Educational psychology*. New Delhi: Sterling Publisher Private Ltd.
- Lagos State Ministry of Education (2010). *Lagos annual education performance report*. Retrieved on 1/1/2017 from <https://www.esspin.org/reports/.../241-file-Lagos-Annual-Education-Sector-Performance>
- Maness, K. (2004). Teaching media-savvy students about the popular media. *English Journal*, 93(3): 46-51.
- Mohammed, M. A., Samir, A. A., & Shima, A. A. (2016). Effectiveness of using YouTube in enhancing the learning of computer in education skills in Najran Univeristy. *International Interdisciplinary Journal of Education*, 5(3): 619 – 625.
- Matthew, I. A. (2013). Provision of secondary education in Nigeria: Challenges and way forward. *Journal of African studies and development*, 5(1), 1-9.
- Subramaniam, G. K., Abdullah, F. P., & Harun, R. (2013). Polytechnic students` perceptions of YouTube usage in the english oral communication classroom. *International Journal of Asia Social Sciences*, 3(9): 1962 – 1966.
- YouTube. (2013). About YouTube. Retrieved from YouTube website: <http://www.youtube.com/yt/about/> on 2/02/2017