

Effects of Economics Instructional Package on Secondary School Students' Attitude to Economics in Lagos State, Nigeria

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Abstract

The effects of Instructional Package on secondary school students' attitude to Economics was considered. Quasi-experimental, pretest, post-test, control research design of 3x2x2 factorial matrix was adopted. Multi-stage sampling technique was used. Six (6) schools were randomly selected from three (3) Educational Districts with 398 respondents' co-educational senior school Lagos State was used. Data were generated with Students' Attitude to Economics Questionnaire ($r=0.72$), Student's Perception to Economics Topics Questionnaire ($r=0.87$). Data analysed was computed using Analysis of Covariance at 0.5 level of significance. Results revealed a notable treatments effect on students' attitude to Economics ($F_{(2,386)}=17.41, p<0.05$). Gender and treatments intervention had no significant synergy impact on students' attitude. Attitude of students towards Economics was not significantly affected by students' perception towards Economics topics and treatments package. Gender and students' perception to Economics topics interaction did not significantly affect students' attitude towards Economics $F_{(1,386)}=1.590, p>0.05$. It was concluded that Economics Instructional Package (EcoIPac) is effective in improving students' attitude towards Economics. It is therefore recommended that students should be encouraged to use Economics Instructional Package for learning of difficult topics in Economics to improve their attitude towards learning.

Keywords: Difficult topics, Gender, Learning package, Student perception, Students attitude

Introduction

The importance of Economics to nation building cannot be underestimated. The subject was introduced into the secondary school curriculum to equip students with basic skills, knowledge of Economics principles and concepts, as well as to contribute to national development of the country. Economics, as stated in many studies, is not compulsory to students at the senior school level. Therefore, students develop different attitude to learning of Economics. Economics, as a subject in the senior secondary school, has become a challenge as a result of the abstract nature of some topics. Some students perceive Economics as a difficult subject due to mathematical calculations, tables and charts to explain Economics concept. Some others students create negative attitude to Economics because of the use of Economics principles and concepts to explain and provide plausible solution to economic challenges. Chukwuemeka and Dorgu (2019) affirmed that, method of teaching is among the factors that can result to positive or negative attitude to learning.

Economics is a practical subject invariably,

some students regard the subject to be difficult and uninteresting. This could be traced to the attitude students' exhibit during and after teaching and learning. Attitude entails emotional, biological, social and intellectual traits due to experience, and it influences one's behaviour. Education provides learning in a way that students perceive meaningful learning, to develop positive attitude to lessons (Ebiefie, 2015). Waec, Chief Examiners Report on Economics for 2021, 2022 and, 2023 years reported that, students displayed great incompetence in the application of basic Economics concepts as well as inability to interpret questions and expatiate on their points to earn maximum points. Ede and Oleabhie (2016) and Mohammed and Jimoh (2022) reiterated some reasons why student perceive some topics in Economics as difficult and develop certain attitude to the studying of Economics.

Several studies opined that student's attitude to learning is a critical factor to students' learning outcomes. This is because attitude of students has to do with their perception or interest on a

topic or subject. Thus, there is need to find out how attitude of students towards studying of difficult topics in Economics affect students' learning and their perception in the subject so as to provide good understanding to some of the students' behaviour due to their attitudes. To develop positive attitude in students towards learning, Atanda and Adegbile (2018) asserted that student-centred instructional strategies need to be employed. This is because, teachers alone cannot continue making teaching and learning teacher-centred.

Today, learning has gone beyond the classroom (Olamigoke and Iboke, 2018). It was suggested that learning in the 21st century should employ technological-based instruction for teaching and learning. It would make learning student-centred. The use of technology for education has become part of us, and examination bodies are doing all it takes to adapt it for examination and national development. Every sector of our economy has keyed into the use of technology to achieve success, and education is not left out. The use of technology in education is a global phenomenon. When technology-based instructions are employed into learning, it might create positive attitude in students to learning. In the study of Olamigoke (2021), it was reported that the use of technology significantly affected students' learning of Business studies. In another study, Ogunrinde (2023) investigated the effect of Technology Enabled Assessment for Learning Package with Feedback (TEALPF) and Technology Enabled Assessment for Learning Package with Feedback and Remediation (TEALPFR) in Basic Science junior secondary school students' learning outcomes. The finding revealed that, the treatment intervention (TEALPFR, TEALPF) significantly affect students' learning in Basic science. Omotayo (2017) affirmed that adoption of technological instructional mode of learning is significant to students' interest and retention of knowledge in a subject or topic.

Langat (2015) described attitude as more or less position that encompasses emotions, beliefs, values and behaviour which affect the way students think and observe, thereby having implications to teaching and learning. Adeyanju,

Ajayi and Lawani (2011) define attitude for Mathematics as something that, shows how students feel about the subject Mathematics. They demonstrated that, attitude and self-concept are significant indicators of Mathematics achievement. Ebiefie (2015) stated that attitude has to do with self-concept, interest, students' participation, students' perception, and motivation to the study of Economics. This means that attitude helps the students to understand the essence of studying Economics at school, using their cognitive skills and knowledge to enhance learning outcomes. Perhaps, this attitude makes some students to view Economics or some topics in Economics to be difficult, especially the topics that involve calculations or diagrams.

Ayeni and Olasunkanmi (2015), Omoniyi, Adebajo and Olurinola (2018) affirmed that, there is positive and significant relationship between students' attitude in studying Economics and learning outcomes. Therefore, continuous attention needs to be directed towards instilling positive attitude in students when learning materials are students-centred. Thus, it will make learning meaningful and interacting, especially when the teachers are not present in the classroom. Instilling positive attitude towards learning was experimented when Covid-19 struck the world, some schools engage their students using instructional media via online teaching such as, Whatsapp, Telegram, Zoom, Google meet etc. to teach and write examination. It was reported that, students did very well using technological-based instruction despite Covid-19 government restriction to have learning in classrooms.

According to Oxford Advanced Learner's Dictionary (2010) gender is described "as the fact of being male or female, especially when it has to do with social and cultural differences and not differences in biological composition". Afianty, Manogu and Marthaulina (2018) regarded gender as an identity in which the society and culture uses to represent a person either as a male or female based on the biological differences in them. They reported that there is nothing like a man is better than a woman or men

are more powerful than women. It was affirmed that God created all humans equally, having same ability and right. Osisanwo, Mabekoje, Shoaga and Iheanyichukwu (2024) posit that gender is a social possibilities of trait characterized as female or male. The essence of examining gender among other factors is to understand students' achievement in relation to software usage between male and females students. Thus, gender differences in academic achievement have been examined for some time and is becoming a major factor in literature Abubakar and Oguguo (2011), Baser (2013), (Adigun, Onihunwa, Irunokhai, Sada and Adesina 2015) and Osisanwo et al., (2024).

Some of these researchers were of the fact that there is significant differences in gender of students when it involves academic achievement in various disciplines, either males or females perform better while other researchers found no significant difference to academic achievement. For instance, Abubakar and Oguguo's (2011) research findings revealed no significant gender difference in the CGPA of students in Mathematics and Sciences. In the study of Afianty, Manogu and Marthaulina (2018) the result revealed that no difference exists towards grade IX students' cognitive learning outcome in Mathematics ability. Thus teachers should treat both male and female students equally in the process of teaching and learning.

Perception of students towards a subject or topic plays crucial role in students' attitude to learning. Adolphus and Agbesor (2008) regarded perception as the process of thought by which man derives feelings and meaning to the things they are exposed to in the environment. It is seen more as a cognitive activity that occurs in man and brings awareness about the environment. Chukwuemeka and Dorgu (2019) were of the view that lessons that involves practical activities tend to make students develop positive perception towards learning. Adolphus and Agbesor (2008) posited that perception could make students have either positive or negative views about an event or objects. This is performed through our five sense organs which help in interpreting and arranging the ideas

(Rahmania, 2020). In this study, perception refers to the way individuals' sees and/or feels over an event or thing at a given period in time. Chukwuemeka and Dorgu's (2019) study posits that, methodology employed in teaching is among the factors that yield positive or negative perception towards learning. When the right method of teaching is employed, it will provide positive perception towards students' learning. Atanda (2019) opined that conventional method of teaching places priority on students' activities in class when students are given class activities to perform, and atimes teachers are carried away to do the talking when teaching and learning are two-way process.

Ebiefie (2015) affirms that students' development of positive attitude is very crucial and can be sustained when instructional application are employed into teaching and learning. Thus, students' perception is affected by students' interest and attention towards particular subjects. Arsaythamby and Julinamary (2015) asserted that as a result of students' perception, teachers' many a times adopt different methods of teaching and strategy to enhance students' knowledge in Economics so as to sustain their interest in learning. Due to the inconsistency in Economics, some students do not have the mastery of the subject well. Therefore, Basic understanding of Economics principles and concepts is required to be able to solve economic problems. Adolphus and Agbesor (2008) opined that, mathematical operations, diagram presentations, etc. inherent in some Economics topics make students perceive subject or topics as difficult to learn; and thus, avoid attempting them during examination.

Mohammed and Jimoh (2022) reported that, in the last few years, the poor academic performance of Economics in SSCE was as a result of negative perception students had built around the subject over the years. In the study of Bichi, Ibrahim and Ibrahim (2018) students perceived Mathematics as a difficult subject and this affect Mathematics performance and other related subjects. Subsequently, methodology in presenting lessons to students needs to be

reviewed for assimilation of lesson. Teachers' knowledge on subject matter influences assimilation of lesson in a subject. Consequently, students' perception towards some topics as difficult occurs as a result of students' negative attitude to learning Economics (Mohammed and Jimoh, 2022).

Statement of Problem

Based on the abstract nature of some topics in Economics, students view the subject as mathematically inclined in nature. This makes students to develop the impression that the subject is difficult. In the last decade, academic performance of Economics at the Senior School Certificate Examination (SSCE) is inconsistent and this may be due to negative attitude of students to Economics. Literature revealed that lots of technology-based instructions have been developed for teaching and learning. In Economics, few available ones requires data connectivity and hence, inadequate to address difficult topics in Economics as a result of negative students' attitude to Economics. Therefore, this study examined the effect of Economics instructional package on senior secondary school students' attitude to Economics in Lagos State, Nigeria.

Objectives of the study are to:

- investigate how Economics Instructional Package (EcoIPac) have significant effect on students' attitude to Economics;
- determine the interaction effect of gender and treatment therapy intervention have on students' attitude to Economics;
- examine whether therapy package and student perception towards Economics topics interact to affect attitude to Economics; and
- investigate whether students' attitude to Economics are affected by the interaction of gender and students perception towards Economics topics.

Hypothesis

The following hypotheses were tested in the study.

H₀₁: There is no significant main effect of Economics Instructional Package on students' attitude to Economics.

H₀₂: Gender and Economics Instructional Package have no significant interplay effect on students' attitude to Economics.

H₀₃: Students' perception towards Economics topics and Economics Instructional Package have no significant interrelationship effect on students' attitude to Economics.

H₀₃: Gender and students' perception towards Economics topics have no significant interaction effect on students' attitude to Economics.

Methodology

The research adopted a quasi-experimental research design using 3x2x2 factorial matrix with pretest, post-test and control groups. Treatments considered at three levels - Economics Instructional Package with text and chats, Economics Instructional Package having text, chats, voice, animation, and control group. Gender was considered at two levels (male and female) and Students' Perception to Economics topics at two levels (low and high). Multi-stage sampling technique was used to select three (3) Educational Districts from six (6) Educational Districts in Lagos Nigeria. Two (2) schools each were randomly selected from the three (3) Educational Districts. The sampled population comprised 398 SSS 2 Economics students (148 males and 250 females) in co-educational senior schools in Lagos State, Nigeria.

Four instruments were used in the study- Economics Instructional Package (EcoIPac): It was executed in two phases. Phase 1- Economics Instructional Package (EcoIPac) was developed with text and diagrams only on a goggle chrome browser, no sound and animation. Phase 2- Economics Instructional Package Sound and Animation (EcoIPacSA) was built using text, diagrams, sound and animations on a web browser (goggle chrome) for learning Economics. Both packages contained Eight (8) difficult Economics topics adopted from Amao-Adeleke and Akorede's (2024) study. It has quiz items against each lesson, feedback responses regarding correct and wrong answers chosen by

the students. The launching of the package, loudness, text size, text colour, navigation of each slides (backward and forward pointers), topics in each lessons, were crosschecked to put it in perfect conditions. Both packages were validated by software experts and Economics teachers. The researcher and the research assistant used the instruments for the experimental groups.

Students' Perception to Economics Topics Questionnaire (SPETQ): It was developed by the researcher and contained 32 topic items extracted from the SSSI – II Economics curriculum. The instrument was a 2- point response format (1) Easy to Learn, and (2) Difficult to Learn. It was validated and the reliability coefficient was determined by Cronbach alpha at 0.87. The instrument was used as pretest and post-test before and after the treatment.

Students' Attitude to Economics Questionnaire (SAEQ) was adapted from the work of Atanda (2021). The original instrument contained 22 items. The final instrument has 20 modified and validated items. It has a 3- point rating scale response format ranging from True, to Almost true, and never true. The instrument was structured into two sections. Section "A" contained the demographic section, on gender, while Section "B" contained the statement items. The instrument was revalidated using factor analysis- KMO. Cronbach's Alpha was used to establish the reliability coefficient of 0.72.

Conventional Method (CM): This was developed by the researcher for the teaching of

the control group. It empowered the teacher to be the only source of knowledge to the students. Students listened to the teacher's teachings and write on their note books when they are asked to do so. Also, the control group results were compared to the treatments in the same experiment.

Procedure

The study was implemented in three phases:

Phase one: Pre-Treatment: The experimental groups was categorised into two groups - (EcoIPac) and (EcoIPacSA) as treatment and conventional method as control groups. The participants from each selected schools were randomly assigned as treatments and control group. The subject teachers in the sampled schools served as research assistants and helped to administer the research instruments to the respondents as pretest.

Phase two: Treatment: The students in (EcoIPac) and (EcoIPacSA) groups used the packages for learning of difficult topics in Economics for six (6) weeks. Respondents in the control group were taught same topics using conventional method of teaching. They were not exposed to the treatment as a result of distance in the location of each schools.

Phase three: Post Treatment: The potency of the treatment package was assessed after a period of six weeks, the treatments and the control groups were administered same instruments as post-test at eight week. The data were analysed using analysis of covariance (ANCOVA) to ascertain the main effects, pretest as covariate.

Results

Hypothesis One:

There is no significant main effect of Economics Instructional Package on students' attitude to Economics.

Table 1: Summary Analysis of Covariance (ANCOVA) on Treatment by Students Attitude

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Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	11966.612	11	1087.874	32.370	.000	.480
Intercept	3465.657	1	3465.657	103.122	.000	.211
Pretest Student Attitude	1115.059	1	1115.059	33.179	.000	.079
Treatment	1170.318	2	585.159	17.412	.000	.083
Gender	52.850	1	52.850	1.573	.211	.004
Post SPET	10.790	1	10.790	.321	.571	.001
Treatment * Gender	90.089	2	45.045	1.340	.263	.007
Treatment Post SPET	47.667	2	23.834	.709	.493	.004
Gender * Post SPET	53.420	1	53.420	1.590	.208	.004
Treatment * Gender * Post SPET	24.781	1	24.781	.737	.391	.002
Error	12972.473	386	33.607			
Total	707824.000	398				
Corrected Total	24939.085	397				

a. R Squared = .480 (Adjusted R Squared = .465)

Table 1 result showed the summary of Analysis of Covariance of students' attitude to Economics by treatment (EcoIPac, EcoIPacSA and Control group). The result revealed that, students' attitude to Economics was greatly affected by

treatment intervention ($F_{(2,386)} = 17.41$, $p < 0.05$). The intervention package showed that, there is remarkable effect of students' attitude to Economics. Hence, partial eta square (η^2) of 0.083 effect size was shown by the table.

Table 1b: Estimated Marginal Mean by Pairwise Comparisons of Treatment Groups on Students' Attitude to Economics

(I) Treatment	(J) Treatment	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
EcoIPac	EcoIPacSA	8.146	1.402	.000	4.775	11.517
	Control	10.281	2.346	.000	4.640	15.923
EcoIPacSA	EcoIPac	-8.146	1.402	.000	-11.517	-4.775
	Control	2.135	2.041	.889	-2.773	7.044
Control	EcoIPac	-10.281	2.346	.000	-15.923	-4.640
	EcoIPacSA	-2.135	2.041	.889	-7.044	2.773

*The mean difference is significant at the .05 level.

Table 1b shows that the EcoIPac participants has appreciable effect over the groups. The mean difference of EcoIPac over the EcoIPacSA and control participants were 8.14 and 10.28 with standard error of 1.40 and 2.34.

Hypothesis Two:

Gender and Economics Instructional Package have no significant interplay effect on students' attitude to Economics.

Table 2: Estimated Marginal Means of Gender and Students Attitude to Economics by Treatments

Treatment	Gender	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
EcoIPac	Male	49.532	2.100	45.403	53.660
	Female	46.126	1.487	43.203	49.050
EcoIPacSA	Male	40.138	.918	38.334	41.943
	Female	39.228	.659	37.932	40.523
Control	Male	35.799	.792	34.242	37.355
	Female	38.422	2.918	32.686	44.158

a. Covariates appearing in the model are evaluated at the following values:

Pretest = 36.32.

Table 2, revealed that, female participants in EcoIPac achieved a mean score of 46.12, standard error of 1.48, females in EcoIPacSA recorded a mean score of 39.22 standard error of 0.65 and female participants in control group achieved a mean score of 38.42, standard error of 2.91. Simultaneously, the males in EcoIPac recorded a mean score of 49.53, standard error of 2.10, male participants in EcoIPacSA recorded a mean score of 40.13, standard error of 0.91 and males in control group also recorded a mean score of 35.79, standard error of 0.79

respectively. In conclusion, table 3 indicated that, there was no appreciable impact of gender on students' attitude to Economics $F_{(2,386)} = 1.340$, $p > 0.05$. Therefore, the hypothesis which stated that gender and treatment do not significantly affect students' attitude to Economics was accepted.

Hypothesis Three:

Students perception towards Economics topics and Economics Instructional Package have no significant interrelationship effect on students' attitude to Economics.

Table 3: Estimated Marginal Means of Students' Perception and Treatment on Students' Attitude to Economics

Treatment	Students' Perception to Economics Topics	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
EcoIPac	Low	46.786	2.522	41.827	51.745
	High	48.872	.535	47.820	49.924
EcoIPacSA	Low	40.221	.917	38.419	42.024
	High	39.145	.659	37.848	40.441
Control	Low	36.142	.514	35.131	37.152
	High	40.36	5.802	28.952	51.767

a. Covariates appearing in the model are evaluated at the following values: Pretest = 36.32.

Table 3 indicated that, high perception participants in EcoIPac recorded a mean score of 48.87, standard error of 0.53, high perception in EcoIPacSA achieved a mean score of 39.14, standard error of 0.65 and high perception participants in control group recorded a mean score of 40.36, standard error of 5.80, invariable, the low participants in EcoIPac achieved a mean score of 46.78, standard error of 2.52, low perception participants in EcoIPacSA recorded a mean score of 40.22, standard error of 0.91 and low perception participants in control group also recorded a mean score of 36.14, standard error of

0.51. Therefore, table 3 showed that there was no considerable effect of treatment and students' perception to Economics topics on students' attitude to Economics $F_{(2,386)} = 0.709$, $p > 0.05$. Therefore, the hypothesis which stated that students' attitude to Economics was not significantly affected by students' perception to Economics topics. Hence, the null hypothesis was accepted.

Hypothesis Four:

Gender and students' perception to Economics topics have no significant interaction effect on students' attitude to Economics.

Table 4: Estimated Marginal Means of Gender and Perception on Students' Attitude to Economics

Gender	Student Perception	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Male	Low	42.244	1.484	39.325	45.163
	High	44.203	.674	42.878	45.529
Female	Low	39.855	1.050	37.791	41.919
	High	42.662	1.965	38.799	46.525

a. Covariates appearing in the model are evaluated at the following values:

Pretest = 36.32.

Table 4, indicated that males with low perception recorded a mean score of 42.24, standard error of 1.48 and high perception participant recorded a mean score of 44.20, standard error 0.67 while females having low perception recorded a mean score of 39.85, standard error of 1.05 and high perception recorded a mean score of 42.66, standard error 1.96. Hence, there was no significant interaction effect between treatment, gender and students' perception to Economics topics on students' attitude to Economics $F_{(1,386)} = 1.590$, $p > 0.05$. Therefore, the hypothesis which stated that gender and students' perception to Economics topics do not significantly affect students' attitude to Economics was accepted.

Discussion

The study revealed that Economics Instructional Package (EcoIPac) has remarkable effect on students' attitude to Economics. This shows that the treatment intervention groups recorded

higher mean score against the control group. Thus, the learning package is effective in improving students' attitude to Economics. This result supports the findings of Omoniyi, Adebajo and Olurinola (2018), Atanda (2021) and Olamigoke (2021) who found that treatment had remarkable effect on students' attitude to learning.

The study indicated that therapy package and gender did not notably affect attitude of students' in Economics. Even though, male participants in EcoIPac achieved higher mean score against the female participants in EcoIPacSA. But the females in control group recorded higher mean score against males in the same group. Nevertheless, the treatment was significantly effective on the experiment group than control group in terms of gender participation. Thus the females could be encouraged more to adapt to the use of computer for learning. The result corroborates the study of Ogunrinde (2023) who

reported that gender and treatment package has no relationship effect on students' dispositions to learning. But it contradicts the findings of Omotayo (2017) that collaboration effect exist between gender, treatment intervention and attitude of students to learning.

The study also revealed that students' perception to Economics topics and treatment intervention had no significant impact on attitude of students to Economics. High perception participants recorded the higher mean score than low students' perception in EcoIPac. But low perception participants recorded higher mean score than high perception participants in EcoIPacSA Economics topics. While, the high perception participants recorded higher mean score than the low perception participants in control group. The result disagrees with the submission of Chukwuemeka and Dorgu (2019) that there is positive association between students' perception and their attitude to some topics in Biology. In other words, the result indicated that students' perception to Economics topics and treatment intervention had no remarkable effect on students' attitude to Economics.

More so, the study showed that, gender and students' perception to Economics topics had no appreciable effect on students' attitude to Economics. High perception male students achieved higher mean score than low perception male students. Subsequently, high perception female students recorded higher mean score than low perception female students. The result disagrees with the findings of Rahmania (2020) that there is positive relationship between students' perception and their attitude to learning of Economics while attitude of students was not affected by their gender.

Conclusion

The study showed that Economics Instructional Package (EcoIPac) significantly had effect on students' attitude to Economics. It revealed that therapy package and gender has no significant effect on students' attitude. Also, in addition, treatment interventions and students' perception to Economics topics did not remarkably affect attitudes of students. Furthermore, the study

indicated that\ students' perception to Economics topics and gender have no appreciable effect on students' attitude. Finally, this study showed that Economics Instructional Package (EcoIPac) have a significant effect on students' attitudes to Economics, irrespective of the students' perception and their gender.

Recommendation

Based on the findings of the study, Economics Instructional Package (EcoIPac) demonstrated significant impact on secondary school students' attitude to Economics.

1. Use of ICT for learning should be encouraged to students. Students are fascinated with the contents displayed by electronic gadgets or computers. They are always marvelled to have access to it. This will change their perception and attitude to learning when learning materials are conveyed through the devices.
2. Parents and schools should encourage students to acquire computer knowledge. This will assist them to learn at their pace. This study revealed that Economics Instructional Package with text, diagrams, sound and animations recorded higher mean scored than those taught with traditional teaching method.
3. Modern computers should be provided and installed with learning packages of different subjects for learning at schools. Government alone cannot do all, parent forums, non-governmental organization, old students associations, and other corporate bodies should be encouraged to donate computers to schools. This will aid students' learning through use of computers.
4. School support unit and quality assurance needs to add to their evaluation report what learning package they use for learning, and how often the school uses computer to engage the students for learning and score their usage accordingly.

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